EDTC 607 Assessment Four

Underserved Curricular Issue: Cultivation of Aptitudes of Resilience, Flexibility, and Adaptability in Preparation for the 21st Century Workplace

Deborah Nagler

The 21st Century workplace has been widely acknowledged as messy and unpredictable (Hamilton, Carbone, & Gonsalvez, 2015). An aging population and slow growth of the work force are contributing factors (www.centerforpublic education.com), as well as rapidly accelerating changes in technology. Hamilton (2015) suggests that some of these challenges are due to evolving technologies. Expertise in today’s socio-technical practices will not guarantee expertise in tomorrow’s “ (Facer, 2012, p.100). Twenty-first century workers need to be able to quickly adjust to market-demand with a combination of transferable skills and aptitudes that accommodate change. The focus of this paper will be the role of education in cultivating three specific 21st Century competencies that prepare the individual for the challenges of a change in the workplace: resiliency, flexibility, and adaptability.

Internationally, there have been extensive discussions about 21st Century skills and competencies over the past ten years. Summarizing these Voogt and Roblin (2012) identify 21st Century competencies as “transversal (i.e. they are not directly lined to a specific field, but are relevant across many field), multidimensional (i.e. they include knowledge, skills and attitudes), and associated with higher order skills and behaviors that represent the ability to cope with complex problems and unpredictable situations” (p. 301). The OECD (2004) and Law, Pelgrum, and Plomp (2008) further conclude that these skills are actually lifelong learning competencies that will be required of every worker in a competitive workforce.

There are numerous competencies or skills that have been identified as 21st Century and some, specifically communication, collaboration, critical thinking and creativity, are frequently referenced as benchmarks for curriculum development. This discussion will highlight resiliency, flexibility, and adaptability as skills that are not often mentioned, but will play an equally important role in each child’s future (Brusic & Shearer, 2014).

Partnership for 21st Century Learning (P21, 2015, p.6) lists these competencies under the heading “Life and Career Skills” and describes them as:

## Adapt to Change

* Adapt to varied roles, jobs responsibilities, schedules and contexts
* Work effectively in a climate of ambiguity and changing priorities

## Be Flexible

* Incorporate feedback effectively
* Deal positively with praise, setbacks and criticism
* Understand, negotiate and balance diverse views and beliefs to reach workable solutions, particularly in multi-cultural environments

Hamilton (2015) quotes an unidentified business leader as saying “it all comes back to that willingness to learn” (p. 34). These competencies are facilitators of the kind of “life-long learning” that will be required as each worker strives to remain competitive and employable.

Resiliency has been defined as “ the ability to cope with stress” and some researchers suggest that it is the process that enables flexibility and adaptability (Thornton & Sanchez, 2010). Resiliency, often paired with *grit*, includes the willingness to take risks, persist, and *fail-forward* (Stanford University, 2014; Pappano, 2013). Jain (2013) suggests that resiliency is actually a cognitive style, which is defined by the individual’s reaction to adversity, belief set, and consequences. Studies done by Gillham and Reivich (2007) at the University of Pennsylvania show that resiliency can be developed through proper training. In other words, resiliency, which has been described as a critical success factor (Harsh & Mallory, 2013) can and should be part of every student’s preparation for the 21st Century workforce, but is that happening?

Advocates of the ubiquitous Common Core States Standards (CCSS) describe it as a set of desired outcomes, with the actual methodology left in the hands of the teacher (Hughes, 2015). Laudably, CCSS addresses many important 21st Century skills, such as problem solving and critical thinking. Where the CCSS falls short is in the area of change related competencies. Fink and Geller observe that the CCSS “lack a specific focus on teaching moral and performance character, and the social-emotional skills that help students develop the stamina and self-discipline to grapple with more rigorous curriculum to truly become college, career, and *civic* ready”(Elias, 2014, para. 3). Change-related competencies are left to the discretion of the school and the teacher. As one Assistant Superintendent observed: “In many classrooms, resiliency and perseverance are often discussed early in the school year, but the emphasis goes away over the course of the year” (Dolge, 2014).

In addition, the current emphasis on standardized tests is an even more serious detraction from the cultivation of change-related aptitudes. When government policies attach “high stakes assessment” to funding, the end result is teaching to the test (Trybus, 2013). This win or lose environment leaves little room for the trial and error or failing-forward that are the foundation of resiliency, adaptivity, and flexibility. Although newer assessment models, including those of the Partnership for Assessment of Readiness for College and Careers (PARCC) and the Smarter Balanced Assessment Consortium, promise performance tasks that “demonstrate an array of research, writing, and problem-solving skills” (<http://www.smarterbalanced.org/k-12-education/teachers/>, 2015, para. 2), they fail to adequately address many other critical 21st Century competencies.

Better integration of change-related competencies in K-12 curricula and learning can result from attention to the following two areas: support for learning approaches that foster student engagement in authentic and complex tasks (Voogt & Roblin, 2012) and teacher training.

Authentic Learning focuses on “real-world, complex problems and their solutions…prepar(ing) students for the skills and knowledge demanded by universities and the workplace”(NMC Horizon Report K-12, 2014, p. 20). As Fogarty suggests, “project-, performance-, and problem-based learning creates situations in which students own their learning”, where learning is relevant and identifiable as “real world”; in this context 21st Century skills can flourish (Trybus, 2013 p. 13). It is also reasonable to suggest that Personalized Learning, which tailors instruction to the needs of the learner (Bray & McClaskey, 2015), would also offer a rich medium for the cultivation of change-related competencies.

Schleicher (2012) observes that the school systems are giving teachers mixed messages about the skills they say they would like students to learn and those they truly value, as expressed by the emphasis on assessment. Teachers need training and support if they are to foster the development of these skills. In this regard, the United States has much to gain from a global perspective. Singapore, a country widely recognized for its achievements in education, is known to honor education. Their slogan is “teach less, learn”, meaning that student engagement is primary (Trybus, 2013). Denmark, along with other Nordic countries, has made it priority to “elevate the status of the teaching profession” and incorporate the teaching of life and career skills in K-12 education.

For the most part, schools in the United States are still content-centric and content-siloed.

This may be a path to achievement in the current iteration of standardized tests, but it does not reflect the type of real world education that students need to succeed in the workforce. Twenty-first Century learning should be at least somewhat messy and unpredictable including real-world tasks that require students to “deal with the messiness of real or simulated settings, purposes, and audience (as opposed to a simplified and “clean” academic task to no audience but the teacher-evaluator) (Wiggins, 2014). In this type of learning environment, guided by well-trained teachers, students will learn from failures, frustrations, and over-coming obstacles and will be prepared for the challenges of an unknown future.

References

Bray, B. & McClaskey, K. (2015). *Make learning personal: The what, who, wow, where, and why.* Thousand Oaks, CA: Corwin.

Brusic, S. A., & Shearer, K. L. (2014). The ABCs of 21st century skills. (cover story). *Children's Technology & Engineering, 18*(4), 6-10.

Dolge, A. (2014). Resiliency key to students’ success in Common Core. *Education Daily.*  Retrieved from http://www.scholarcentric.com/resiliency-key-students-success-common-core/

Elias, M. (2014). How are social-emotional learning and the Common Core connect?. *Edutopia.* Retrieved from http://www.edutopia.org/blog/how-common-core-social-emotional-learning-connected-maurice%20elias

Facer, K. (2012). Taking the 21st century seriously: Young people, education and socio-technical futures. *Oxford Review of Education, 38*(1), 97-113. doi:10.1080/03054985.2011.577951

Gillham, J., & Reivich, K. (2007). Resilience in Children: The Resilience Project. *Positive Psychology Center, The University of Pennsylvania.* Retrieved from http://www.ppc.sas.upenn.edu/prpsum.htm

Hamilton, M., Carbone, A., & Gonsalvez, C. (2015). Breakfast with ICT employers: What do they want to see in our graduates?, *17th Australasian Computing Education Conference Proceedings.* pdf*.*

Harsh, S., & Mallory, M. (2013). The future of education: Building capacity for success. *Delta Kappa Gamma Bulletin, 80*(1), 16-25.

Hughes, E. (2015). Ed Hughes on the Common Core. *Common Core Standards, Madison Metropolitan School District*. Retrieved from https://www.madison.k12.wi.us/common-core-state-standards

Jain, R. (2014). Teaching students the ABC’s of resilience. *Edutopia.* Retrieved from http://www.edutopia.org/blog/teaching-the-abcs-of-resilience-renee-jain

Johnson, L., Adams Becker, S., Estrada, V., & Freeman, A. (2014). *NMC horizon report 2014 k-12 edition.*

Law, N., Pelgrum, W. J. and Plomp, T. (2008) *Pedagogy and ICT use in schools around the world. Findings from the IEA SITES 2006 study* (CERC Studies in comparative education). Hong Kong: Comparative Education Research Centre, The University of Hong Kong, and Dordrecht: Springer.

Organization for Economic Co-operation and Development [OECD] (2004) Lifelong learning. *Observer*. Retrieved from [http://www.oecd.org/dataoecd/](http://www.oecd.org/dataoecd/17/11/29478789.pdf) [17/11/29478789.pdf,](http://www.oecd.org/dataoecd/17/11/29478789.pdf)

Pappano, L. (2013). 'Grit' and the ` character education. *Education Digest, 78*(9), 4-9.

Partnership for Learning in Education. (2015). P21 framework definitions. pdf.

Schleicher, A. (2012). *Preparing education systems for the 21st-century* Education Publishing Worldwide Ltd.

The Smarter Balance Assessment System. (n.a.). Teachers. *Smarter Balanced Assessment Consortium.* Retrieved from http://www.smarterbalanced.org/k-12-education/teachers/

Thornton, B. & Sanchez, J.E. (2010). Promoting resiliency among Native American students to prevent dropouts. *Education, (131)* 2.

Trybus, M. (2013). Preparing for the future of education--equipping students with 21st century skills: An interview with Dr. Robin Fogarty. *Delta Kappa Gamma Bulletin, 80*(1), 10-15.

Voogt, J., & Roblin, N. P. (2012). A comparative analysis of international frameworks for 21st century competences: Implications for national curriculum policies. *Journal of Curriculum Studies, 44*(3), 299-321. doi:10.1080/00220272.2012.668938

Wiggins, G. (2014). 27 characteristics of authentic assessment. *Teachthought.* Retrieved from *http://www.teachthought.com/learning/27-characteristics-of-authentic-assessment/*