

A Curricular Method for 21st Century Learning

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Abstract

The integrated curriculum is an ideal method for educating 21st century learners. Integrated curriculum incorporates three main foci: consideration of the real world, authentic connections among content areas, and negotiation of content with students. These are most suitable to the provision of a foundation for the features typically associated with 21st century learning, most notably integrating technology into student centered learning and enhancing subject specific and cross curricular competencies.

Keywords: 21st century skills; integrated curriculum; curriculum planning; curriculum implementation; best practices; secondary education; College-Work Readiness Assessment

For decades, we have heard the cries of everyone from university professors to employers that students are not prepared for the rigors of college or the workplace. Often times the accusatory finger is directly pointed at the school system, the administrators and the teachers that run them. Educators and politicians over the years have tried to satisfy these demands by instituting many different types of reform programs. Most of these reform programs, while they may have been well intentioned, tend to be either overly simplistic in nature or too severe. Too often these programs did not take into consideration the complexity of the many cultures and economic differences that exist in the United States. The result of these reform programs has often created unintended consequences, such as systemic cheating by teachers and administrators or implementation resistance (Schmoker, 1999; Greenberg & Barron, 2000; Cuban, 2011). For example, in the case of No Child Left behind (NCLB) a culture of high stakes testing grew out of the need to measure the success or failure of the program.

The unintentional result of high stakes testing has led to the creation of an economic monster of testing that is feeding on the perceived failure of the public schools. This new testing monster is reminiscent of another monster that President Eisenhower warned against during his farewell address in 1961 “rise of the military industrial complex” that grew out of the fear of the old Soviet Union during the Cold War. President Eisenhower was warning of the potential danger of the relationship between the government and the military acting in an interdependent self-interest (Eisenhower, 1961). In a similar way, we have seen the rise of the business of school, which shares an interdependent self-interest between government agencies and testing organizations (Nanna & Moses, 2007). The Fox media mogul Rupert Murdoch stated that he saw the American public school system as a potential \$500 billion-dollar market opportunity (Glass & Welner, 2011). How can we trust that these businesses are truly acting in the best interest of students and not in the best interest of profits and shareholders? Especially when the entire business concept is based on the idea that schools are failing.

The history of education in the United States is littered with failed education reform. It is more than apparent that as a nation we believe that education is important and that it needs to change. The question is, how do we change it? I think that it is important to understand the history behind the current system of school as it exists today.

Sugata Mitra (2013), during a TED talk, proposes that the school system we currently use was developed over 300 years ago by the British Empire. This school system was created to run a global empire that relied on paper and boats to communicate around the world. The British created a “global bureaucratic administrative computer” made up of thousands of human components that were manufactured in schools. Mitra suggests that these factory schools needed to produce people with exact and transferable skills that could be easily replaced and interchangeable.

The human components to this “global bureaucratic administrative computer” needed to do three things: they must have neat handwriting, be able to read and do addition, subtraction, multiplication and division in their head. Mitra goes on to say that the school system that the British designed, and the United States adopted, is not broken, it has just become obsolete (Mitra, 2013).

As the demands of our world change, so should the goals of education. Over the last 300 years our world has moved from the Agrarian Age to the Industrial Age and now to the present Knowledge Age (Trilling & Fadel, 2009). Each one of these eras had specific educational goals. For example, during the Industrial Age, job specialization, industrial engineering and worker contribution to a production and distribution network were paramount skills needed in the workplace. Employers request that schools teach their potential labor force basic literacy, numeracy skills, trade and industrial job skills (Trilling & Fadel, 2009). As we enter the Knowledge Age, the types of skill that students will need in the future, I think, are best summed up by this quote, “We are currently preparing students for jobs that don’t yet exist... using technologies that haven’t been invented... in order to solve problems we don’t even know are problems yet... Richard Riley Secretary of Education” (Trilling & Fadel, 2009). That is why it is of the utmost importance that we examine, and then address, what are those skills that students will need to compete in the 21st century and what is the best curricular method to provide students with those skills. Mathison and Freeman, (1998) said the work place of the next century will demand students to have these new competences to be successful.

We must first examine and understand what are 21st century skills? Voogt and Pareja Roblin (2012) consider the following eight skills as 21st century skills: creativity, critical thinking, problem solving, communication, collaboration, digital literacy, social and cultural skills and self-regulation. After reviewing these eight terms, the immediate reaction by most educators is, we already do all this, or that’s nothing new. According to Dede (2009), “21st century skills are different than 20th century skills primarily due to the emergence of very sophisticated information and communications technologies” (p. 1). According to Trilling & Fadel (2009) at the center of 21st century learning are three elements: 1. Learning and innovation skills, which include critical thinking and problem solving, communication and collaboration skills, creativity and innovation applied imagination skills.

2. Information and media technology skills, which includes information literacy skills, media literacy and information and communication technology skill. 3. Life and career skills, which include, flexibility and adaptability skills, initiative and self-direction skills and social and cross-cultural skills.

Figure 1: was developed as a conceptual frame work after of careful research of 21st century skills (Mohr & Welker 2017)

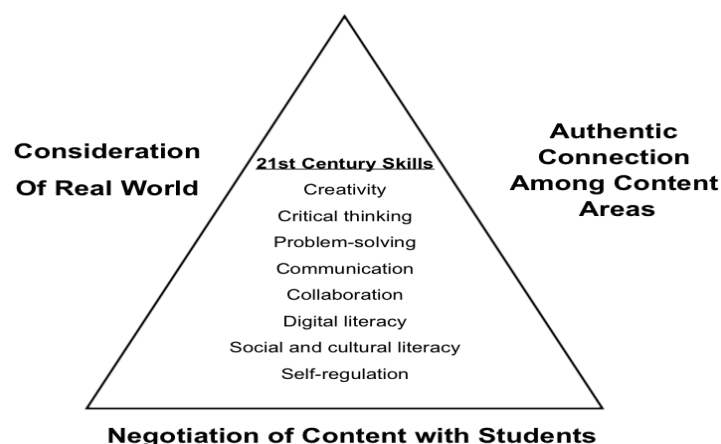


Figure 1: Conceptual Framework

After developing a strong understanding of what are 21st century skills, the next step is to determine what curricular theory would best fit these skills. The idea that there needs to be a “novus” curriculum theory to address education in the Knowledge Age is not necessary. The skills outlined as 21st century skills are a perfect fit for a holistic curriculum theory. Specifically, I believe that an integrated curriculum is the best curricular platform for 21st century skill obtainment. Integrated curriculum has three key elements that make it a perfect to teach 21st century skills 1) consideration of the “real world” 2) authentic connections among content areas and 3) negotiation of content with students. Other benefits of an integrated curriculum include an increase in student motivation and enthusiasm (Bishop & Berryman, 2009; Fraser, 2000), focus on the transferability of specific content (Baker & Daumer, 2015; Beane, 1997; Draghicescu et al, 2013), improvement on standardized tests (Vars & Beane, 2000; Fraser, 2000) and alignment with Common Core State Standards (Petroelje & Frambaugh-Kritzer, 2014).

Trilling & Fadel (2009) state that “one of education’s chief roles is to prepare future workers and citizens to deal with the challenges of their times” (p. 6). As educators, we need to be on the forefront of this exploration into interrelationships between 21st century skills and integrated curriculum. Education professionals must take back the mantle of expertise from politicians and their rhetoric, lobbyists and their special interest and slay the economic monster that has arisen from the culture of high stakes testing. Educators must act as the catalysts of change. We must bring about a paradigm shift in education that focuses on the real world needs of students and the other stakeholder within the society as a whole.

The knowledge age is here and moving at an incredibly fast pace. The jobs of the industrial age are going away and not returning. I find it ironic that I am writing about this after a presidential campaign where the rhetoric on both sides, Democrats and Republican alike, were pandering to their constituencies about bring back jobs, specifically manufacturing jobs. This type of political rhetoric is complete and total nonsense. The jobs they are talking about are gone for good, they have either been automated, or soon will be or sent overseas never to return. This kind of pandering is akin to a buggy whip manufacturer pining for the good ole’ days before the proliferation of the automobile. Ellis and Fouts (1997) characterized the traditional curriculum in the United States public schools as not realistic in that the students often struggle to correlate their learning to the real world. With the type of hyperbole coming from our elected leadership, it is clear that they are out of touch with the changing world. Therefore, it is more important than ever that educators exercise their integrity, take back the mantle of leadership and shake off the yoke of subjugation and passivity.

I have learned through my experience as a teacher, and in my studies as a doctoral student, that the successful implementation of a program of change is dependent upon stakeholder buy in. Politicians and bureaucrats are working in isolation, many of which have never set foot in a classroom, or if they have it’s been a staged event. These are the people determining the direction and what is in the best interests of education. These policy makers are often either politically motivated or are highly influenced by the lobbyists. This scenario hardly looks like it has the best interest of students in the forefront of the decision-making process. Often times this top down approach to change leads to resistance, partial implementation or outright cheating by those tasked with carrying out this agenda. The successful implementation and sustainability of 21st century skills with an integrated curriculum will, in most cases, will be a monumental shift in the way that most schools go about their business. It will be important to understand that we must approach each school as an individual entity, with its own unique culture. Taking the time and learning to work within that culture is a key to mitigating resistance, and gaining enthusiastic acceptance. It is also important to understand that autonomous control at the local level and a sense of local ownership will lead to a more successful implementation and, eventually, better obtainment of outcome goals. The success of a program is predicated on all stakeholders being involved, seeing the value in the program, having a vested interest in student outcomes and its sustainability, both academically and financially.

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