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# Learning in the Twenty-First Century: What Is the Literature Telling Us?

Over time, educators have created a lexicon of buzzwords that any etymologist would be proud to study. Similar to the dialect of a teenage clique, teacher jargon confuses the outsider (and often the insider) and changes so rapidly that those who do not use the language daily can get lost over time. Words like *rigor* and *engaged*, concepts like *high expectations* and *disabled* are thrown around by educators as if everyone had a clear and agreed-upon understanding of their exact meaning. Educators hear these terms being used by peers and, in order to remain part of the club and to sound as though we know what we are talking about, we sling the same terms around. Typically, the sad reality of the education world is that teachers easily use new vocabulary, but they are not talking about anything new.

The notion of twenty-first-century learning is not necessarily a breakthrough in the evolutionary process of K–12 education, but it does remind

## **Reflecting . . .**

*Critical thinking* is one of the buzzwords (or phrases) associated with twenty-first-century learning. It has been defined as “self-directed, self-disciplined, self-monitored, and self-corrective thinking” (Critical Thinking Community, 2010). Collaboration with others in order to solve problems is also considered a twenty-first-century learning skill. Interestingly enough, Plato and Xenophon created examples of the Socratic method, obviously named for Socrates, in Socratic dialogues around 400 BCE.

Is twenty-first-century learning something new, or has it just taken educators until the year 2011 to realize that they failed to incorporate the foundational and fundamental practices for *thinking* and learning that Socrates and Plato tried to teach so long ago?

us of our philosophical roots in the art of teaching. The importance of this emerging concept is that it points out some foundational practices that appear to have escaped the education world over the past 2,400 years and applies those practices to the skills needed in the modern workplace.

After many years in education, Kevin readily admits his father was right. Readers no doubt can empathize with how difficult that can be to say. His father, a longtime educator in public schools, used to lecture all his high-school-age children that “the problem with the education you are receiving is that it does not include classes in philosophy.” No one was teaching Kevin and his siblings how to *think* about the content they were learning. The Socratic method, for example, was not a strategy that they were taught in high school—and it is not being taught in most public schools currently. Today, we will take Kevin’s father’s concern about the lack of philosophy in the schools a step further. As educators, our initial charge should be that we are to teach our students how to *think*, and then we should use content (English, math, science, social studies, the arts, etc.) as a venue through which to teach thinking. In order to make that cultural shift, educators will have to retreat from an educational philosophy that shaped the current system more than 120 years ago and engage themselves in twenty-first-century learning.

### Sharing Perspectives On Twenty-First-Century Learning

Think about trying twenty-first-century learning so you can model examples for teachers and colleagues:

Before reading any further, do some of your own research regarding twenty-first-century learning, call some colleagues and ask them about their understanding of the concept, develop your own conclusions, read our findings below with a critical eye, and then log your own definition. This process makes the definition *yours*—and you do not depend on anyone else to give you *the answer*.

There was a time when “one right answer” or a lockstep philosophy was appropriate, but twenty-first-century learning calls for more flexibility and imagination. Think about how your students might take ownership of their own learning when provided with this same type of opportunity in your classrooms. Think about how long they will remember that definition as opposed to memorizing one provided to them by the teacher or read in a textbook.

Then take these recommendations and turn them into a professional development activity for your teachers. Engage them in developing a definition for twenty-first-century learning in your own school.

### **Reflecting . . .**

As you read through the rest of this chapter and learn more about the skills associated with twenty-first-century learning, think about the educators you know and ask yourself if they are using those twenty-first-century learning skills to develop lesson plans, create assessments, analyze student achievement data, choose curricula, and so on. If your answer is no, then think about how you can model those skills in order to have them replicated in your schools.

## **Defining Twenty-First-Century Learning**

If schools aren't teaching twenty-first-century learning skills now, then what century's skills are they teaching? Heidi Jacobs (2010) discusses the ramifications of the National Education Association's Committee of Ten. In 1892, it was appointed to study and make curriculum recommendations, taking into consideration the Industrial Revolution. The committee recommended that all students be taught the same curriculum, regardless of their academic prowess. In addition, the committee recommended that schools be developed like factories, where students attend school for eight hours a day, 180 days a year; that a student's education would last twelve years; and that the purpose of elementary schools was to prepare students for the curriculum at the high-school level. Interestingly enough, various groups at this time debated whether students should memorize pertinent content information of the time, acquire critical thinking skills, and/or undertake Latin and Greek studies. If the reader is a current educator, then the answer to how this debate finished is clear. Please know that the authors are not suggesting that everything taught in public schools today based on the recommendations of the Committee of Ten is all bad or that the mandates enforced in 1892 were inappropriate for the time. Rather, we suggest that our public schools currently have only part of the equation right—and they are well past the due date for a change.

Much as the Industrial Revolution inspired awareness that the educational system needed a major overhaul in the late 1800s, there is a technological revolution today that calls for an equivalent change. Technology today has two characteristics that should create a sense of urgency in educators to call for change. First, and foremost, technology is shrinking the globe. Citizens of the United States and of almost every other country are interacting within virtual

communities every day. Teachers *must* prepare their students to be ready to compete in a global market. The second characteristic of technology that calls for immediate attention is its ever-changing state. Because the transformations of technology shift both the speed at which people can communicate with each other and the mode in which they communicate with each other, future generations will have to be able to adapt to a rapidly changing world environment.

Tony Wagner's *The Global Achievement Gap* (2008) communicates an inspiring vision for twenty-first-century learning. Wagner's work is referenced numerous times on Internet sites and in books that pop up among the 23 million hits on a Google search for "twenty-first-century learning." A video interview of Wagner, located at SchoolChange.org (Wagner, 2010), reveals valuable insight into the skills students will need in college and their careers and what educators need to do in order to meet those needs.

During the interview and in his book, Wagner focuses on the changes in work, learning, and citizenship in the United States. He discusses the changes in the workplace as factory positions move to other countries. His description of the change in the types of jobs prevalent in the United States clearly denotes that the findings of the Committee of Ten are obsolete. So, if schools shouldn't operate like factories or prepare students to work in factories, then how should they operate, and what are students supposed to be learning?

Below are seven skills for twenty-first-century learning that Wagner references, with a short description or explanation of each, that K–12 students and adults need to acquire in order to be successful in the twenty-first century:

### 1. Critical Thinking and Problem Solving

Reason effectively:

- ◆ Use various types of reasoning (inductive, deductive, etc.) as appropriate to the situation

Use systems thinking:

- ◆ Analyze how parts of a whole interact with each other to produce overall outcomes in complex systems

Make judgments and decisions:

- ◆ Effectively analyze and evaluate evidence, arguments, claims, and beliefs
- ◆ Analyze and evaluate major alternative points of view
- ◆ Synthesize and make connections between information and arguments

- ◆ Interpret information and draw conclusions based on the best analysis
- ◆ Reflect critically on learning experiences and processes

Solve problems:

- ◆ Solve different kinds of unfamiliar problems in both conventional and innovative ways
- ◆ Identify and ask significant questions that clarify various points of view and lead to better solutions (Partnership for 21st Century Learning Skills, 2010)

## 2. Collaboration Across Networks and Leading by Influence

In order to be effective citizens and to achieve common goals in a democracy, adults and students alike need to be able to exert their influence and leadership skills on diverse groups of people in their respective communities (Wagner, 2010).

## 3. Agility and Adaptability

Adults and students need to learn to adapt to an ever-changing work environment in order to be successful in the future.

## 4. Initiative and Entrepreneurialism

Manage goals and time:

- ◆ Set goals with tangible and intangible success criteria
- ◆ Balance tactical (short-term) and strategic (long-term) goals
- ◆ Utilize time and manage workload efficiently
- ◆ Work independently
- ◆ Monitor, define, prioritize, and complete tasks without direct oversight

Be self-directed learners:

- ◆ Go beyond basic mastery of skills and/or curriculum to explore and expand one's own learning and opportunities to gain expertise
- ◆ Demonstrate initiative to advance skill levels toward a professional level
- ◆ Demonstrate commitment to learning as a lifelong process
- ◆ Reflect critically on past experiences in order to inform future progress (Partnership for 21st Century Skills, 2010)