
Six Steps for Implementing 21st Century Skills

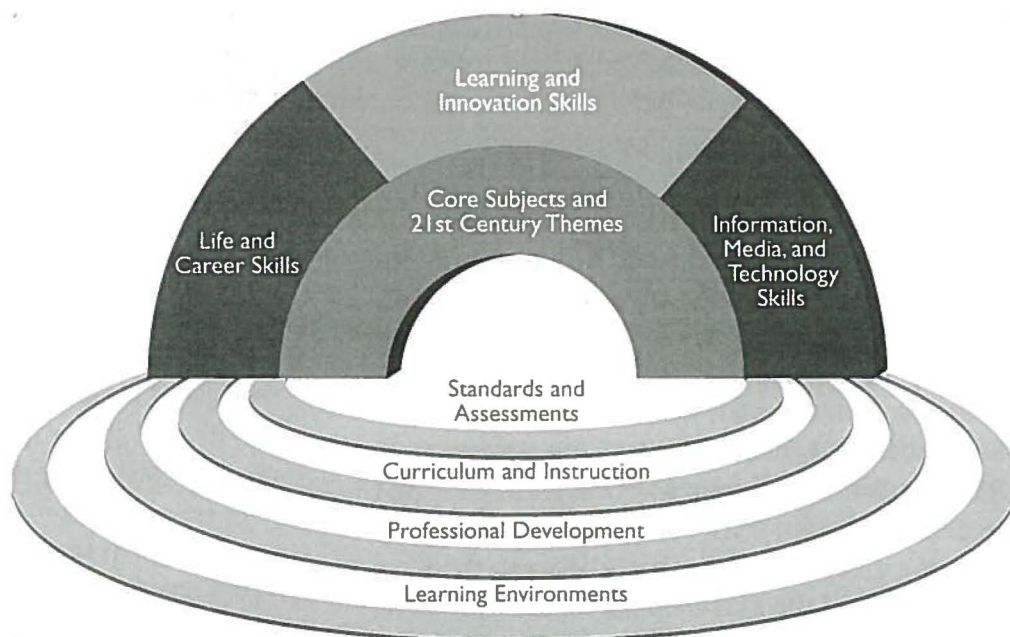
Jeff Craig

It seems like it's been a constant criticism throughout the history of education that the education establishment is not doing a good enough job preparing students for the future. Perhaps education is a "half-empty" proposition by its nature. Nevertheless we constantly face such criticism. Despite the constant criticism there does seem to be an emerging voice that addresses the needs of our world to educate our students differently and more successfully than we have in the past: 21st Century Skills.

The fact that our world is changing at an ever-accelerating rate is probably self-evident, however it has been detailed in a great number of places. Books such as *The World is Flat* (Friedman, 2005) have done a great deal to describe a world that is unlike any we have known in our past. In *The Global Achievement Gap*, Tony Wagner described the changing world and the subsequent educational deficiencies in dramatic fashion (2008). The history of educational "catch-up" is efficiently chronicled by Trilling & Fadel (2009). These accounts, and many others, basically tell us that our students need a new set of skills in order to be successful in a different and constantly evolving future. It seems that a consensus is now emerging as to what our students need for success in the future: 21st Century Skills.

It's probable that by now you've heard about the Partnership for 21st Century Skills (P21) and you may have also learned about the framework that the Partnership has constructed to illustrate the 21st Century Skills. You've likely seen the rainbow in concentric pools icon that is associated with 21st Century Skills. The rainbow part of the graphic is intended to show the things we want our students to know, be able

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to do, and be like – *the student outcomes*. The rainbow includes content, interdisciplinary connections, various literacies, and skills. The rainbow is supported by the foundation of curriculum, assessment, instruction, and professional development that are all needed to teach the qualities described in the rainbow to our students – *the support systems*. The *support systems* are the conditions necessary to attain the *student outcomes*.

There are some misconceptions that should be addressed before we more closely examine the 21st Century Skills. From experience, many under-informed people seem to think that 21st Century Skills are all about technology. This is not true; technology is just a small part of 21st Century Skills. In fact, Ken Kay, President of the Partnership for 21st Century Skills, recently issued this tweet: “One of the biggest misunderstandings is those who equate technology with 21st century skills (personal communication, 2010).” It’s tempting to paint 21st Century Skills with the technology brush. After all, technology and Web 2.0 are altering our landscape at breathtaking speed. It’s hard to keep up with all that is changing. Yet, technology is just a small part of the story.

Other misconceptions are that 21st Century Skills are new things that high-tech companies are forcing on us (Sawchuk, 2009), or that the liberal and classical western education that made our country great will be lost in the haste to make way for 21st Century Skills (Ravitch, 2009). Ravitch labels 21st Century Skills as a fad similar to those that have come and gone throughout the 20th century. A careful examination of 21st Century Skills, at least as defined by the Partnership for 21st Century Skills, indicates that this simply is not the case. 21st Century Skills are many of the same skills we have desired for our students for generations and generations.

21st Century skills are the things that students need to know, be able to do, and be like in order to succeed in the 21st Century. It is important to note that these things aren’t any different than the things that students needed to know, be able to do, and be like in the 20th Century. Remember the SCANS (Secretary’s Commission on Achieving Necessary Skills) report? What about the Universal Skills that are detailed in New York State’s CDOS Standard 3A? There is a great deal of similarity between these documents and the 21st Century Skills. They all de-

scribe the skills our students need in order to succeed in college or career. Most of these things did not change or suddenly become important when the calendar was flipped to a new century. Rather, these are the skills, attitudes, and dispositions that our students have always needed – it’s just that here we are in the 21st Century and our students still don’t have them!

Although there are many different lists of skills (see Bill Coplin’s article in this issue), each is an attempt to make explicit the things that our students should be able to do. If the skills are explicit it is far more likely that they will be included in curricula and programs. The most accepted list of skills is the Framework from the Partnership for 21st Century Skills – that rainbow that is increasingly used to symbolize attention to skills. That framework (detailed elsewhere in this issue, also) lists the knowledge, skills, and expertise that students should master to succeed in work and life.

If schools and districts are truly committed to college, career, and citizenship readiness, an active and deliberate effort must be undertaken to ensure that 21st Century Skills are at the heart of our educational programs. This is no easy task; most of our schools are organized around content and not skills. There are some steps that can be taken, though, to accomplish this formidable yet vital realignment.

How is a district to deliberately implement 21st Century Skills? Based loosely on the partnership for 21st Century Skill’s “Six Steps to Build Momentum,” the Onondaga-Cortland-Madison BOCES Instructional Support Services division has identified “6 Steps to Implement 21st Century Skills.” These six steps are detailed here:

Step 1: Increasing Awareness

It is important that all members of the educational community understand and believe in a vision of 21st Century Learning. An understanding of our changing world and the changing postsecondary landscape is critical. There is no shortage of voices arguing for changes in the way we prepare students.

In this first implementation step, a variety of activities, strategies and tools can be used to create the broad support needed for change. Activities can

be done at the team, school, or district level. Indeed, a combination of these is probably most likely to build awareness throughout the organization. Activities, too, should be done with parents, community, and business leaders in order to increase awareness about 21st Century Skills and to build a critical mass of support and urgency. There are many reports and white papers that can be used to create a sense of urgency, but a good starting point is to begin with these three questions (Partnership for 21st Century Skills, 2010):

1. What are the two or three biggest changes in society in the last 25-30 years?
2. What are two or three skills that students need to address the changes in society you described?
3. Looking at the skills listed above, how intentional is your school in helping students develop those skills?

Invariably, responses to these three questions suggest that there is a mismatch between the curricula and the programs in our schools. It becomes evident that our content-based orientation of school is not sufficient to prepare students for their (and our) future.

Step 2: Assessing Your Current State

Once awareness has been established, the next step is to take stock of your present condition. Districts can use a variety of tools, including some on-line tools, which will provide specific information about the implementation of 21st Century Skills in schools and districts. It is important to look within the district to describe the level of skills implementation and it is also important to reach out to the educational and business community for their input. These data provide a starting point for districts.

A helpful assessment tool is the MILE Guide from the Partnership for 21st Century Skills. The MILE Guide allows schools and districts to examine their program against the P21 Framework. Other tools are being used by districts, including the *College and Work Readiness Assessment Project*, the *21st Century Skills Assessment*, and the *iCritical Thinking Assessment*. These tools provide districts with specific evidence about the implementation of specific 21st Century Skills (usually the ITC skills of information and technology literacy). While there are not as many

assessment tools that assess skills as there are tools that assess student achievement, there are tools that can provide concrete skills assessment data.

One of the challenges that arises in schools is that sometimes educators think that they are “already doing that.” This can occur because the definitions of the skills can have multiple interpretations. For example, teachers can think that they are teaching critical thinking to students. Yet, a thorough examination might indicate that there is no deliberate, systems-wide approach to the teaching of critical thinking. The classic checkerboard metaphor can be applied to this situation. As students move through their years of education, some students will be in a classroom where critical thinking skills are addressed more than in others. Each year, as a student moves to another classroom, the same situation exists with some classrooms paying more attention and being more deliberate about critical thinking skills than others. So, as a student progresses from year to year and different class to different class (the checkerboard), the critical thinking skills work that one child does will vary considerably from the experience and learning of other children. Some will have been in classrooms where critical thinking skills were very deliberately addressed every year, while other children might have never had a lot of work with critical thinking skills – all depending on an arbitrary path across the checkerboard. The experiences of other students will be somewhere between these two extremes. It is important that a district have data about the implementation of 21st Century Skills in order to know how to proceed.

Step 3: Narrowing to a Manageable Number of Skills

Chances are that the assessments used to measure intentional implementation of 21st Century Skills in a district or school will indicate that many skills need to be deliberately addressed. Indeed, different lists of skills that have been offered by organizations and groups are quite lengthy. The Partnership for 21st Skills has identified twenty-five skills that should be addressed, in addition to core subjects and 21st century themes (Partnership for 21st Century Skills, 2007). Bill Coplin has identified 38 skills necessary for career, college, and citizenship readiness (Coplin, 2003). The NCREL/Metiri/Learning Point Associates list of skills, enGuage, lists 22 skills (North Central Regional Educational Laboratory,

2003). The Buck Institute for Education actually prepared a crosswalk of ten different models of skills. No matter which list of skills one employs, the list is a long one -- too long, in fact, to be useful for implementation. Prioritization is an absolute must. Alison Zmuda suggests that districts identify a “manageable handful” of skills to begin with (personal communication, 2010). Ken Kay suggests that a district choose two or three, or even a single skill, to begin with (personal communication, 2010).

The skills a district should include in their “manageable handful” depend on a number of things. First of all, the data from the assessment are the beginning point. These data alone, however, are not enough. They should be compared with all of the current district initiatives and efforts that are already planned or already underway. Districts should consult their Professional Development Plan, School/District Improvement Plans, Board of Education goals, and any other documents that describe change efforts that are already underway. It is best to choose the few skills to begin with based on a juxtaposition of all of these data sources. It is a good idea to make this step in the process very transparent; otherwise stakeholders could see the effort to deliberately focus on skills as another new thing, subject to initiative fatigue. It is important during this step, as in all the steps, to point out how these skills are not new things, are not controversial things – they are just the things that we’ve been saying all along are important; we just haven’t been focusing on them and attending to them deliberately like we should have been.

Step 4: Planning

By this point in the process districts have built awareness of 21st Century Skills and the need to be deliberate about their instruction. By this point districts have assessed the state of skills implementation. And, by this point, districts have identified that “manageable handful” of skills with which to start. The next step, then, is to focus in on that handful of skills in order to begin to overtly and explicitly include them in the curriculum.

Successful implementations begin with a common set of definitions. Using a protocol developed by Allison Zmuda, stakeholders work collaboratively to define their identified, manageable handful of skills

(personal communication, 2010). For example, the Virginia Beach City Public Schools used this process to define, for themselves, information literacy. This is the definition they created: “Use digital technology (networks, databases, and print materials) in an ethical manner, to identify relevant sources, evaluate validity, synthesize, analyze, and interpret information.” (Zmuda, 2010) Teachers then use the definition as they plan lessons and units and as they write curriculum. This definition, as succinct as it may be, is still open to multiple interpretations. A variety of learning opportunities could be aimed at the goal of achieving this skill for students – each of which would vary in its expectations and difficulty. Therefore, another level of specificity is necessary in order for the definition to become an effective operational definition.

Once the definition is agreed upon, four levels are written at the district level to describe a continuum of skill levels. For example, consider these descriptions of skill levels from Virginia Beach:

Novice

Explore simple questions through the completion of a given procedure that requires location and collection of information through navigation of digital sources and/or text features in order to share information with others.

Emerging

Generate questions, locate and evaluate digital and other sources that provide needed information, analyze information to verify accuracy and relevance, categorize information using a given organizational structure, and report findings.

Proficient

Use an inquiry-based process that requires the development of questions, identification and evaluation of a range of digital and other sources, analysis of information and point of view, identification of significant information and any conflicting evidence, categorization of relevant information using a self-selected organizational structure, and production and presentation of a verifiable synthesis of re-

search findings that lays the groundwork for conclusion(s) drawn.

Advanced

Use an inquiry-based process that requires the generation and refinement of specific questions to focus the purpose of the research, evaluation of digital and other sources from a variety of social or cultural contexts based on accuracy, authority, and point of view; resolution of conflicting evidence or clarification of reasons for differing interpretations of information and ideas; organization of information based on the relationships among ideas and general patterns discovered; and combination of information and inferences to draw conclusions and create meaning for a given audience, purpose, and task. (Zmuda, 2010).

Once the levels in the continuum have been described, schools and teacher teams can analyze their lessons and units employing the traditional gap analysis procedures during which time they compare their present state with the desired state for these skills. The product of the gap analysis might show that certain levels in the continuum are being adequately targeted by existing learning opportunities but that other levels of the skill are never targeted. So, concrete suggestions for addressing gaps (or overlaps and redundancies) can be addressed.

Step 5: Implementation

Based on their skill definitions, continua, and gap analyses, districts can now identify the appropriate action steps for their district within their context and long-range plans. It is impossible to suggest precisely what action steps are best for a district to take until all of the previous steps have been taken. It is likely that an action from this list, or combination of actions, are the next steps for a district:

- School Leadership Development, including administration and teacher leadership
- Professional Development
- Curricula development including scope and sequence delineation, curriculum mapping, and unit writing

- Instructional practice adjustment, such as a greater application of project based learning
- Adjustments to assessment practices, such as greater emphasis on performance assessment and electronic portfolio preparation
- Revising learning environments to more closely reflect modern-day college and career settings
- Partnership development with nearby businesses
- Changes to instructional technology acquisition, training, and application in order to shift technology use from teachers to students
- Alignment of the evaluation and supervision processes

Actions from this list when used to implement the prioritized skills will result in changes that have to be monitored and assessed.

Step 6: Evaluation and Continuous Improvement

After the implementation steps have been in motion for several years it will be time to make adjustments to the direction and process of skill implementation. Progress will be made on the implementation of the prioritized handful of skills, so it will be time to start the process all over again. This process, when used regularly and when a part of the operational culture of a district, will have an impact of all aspects of operations; continuous improvement will be a part of the fabric of the district. Thus will all aspects of the organization benefit from this step-by-step plan to implement 21st Century Skills. More important than the cultural shift of the organization, though, will be the increased student achievement and the increased college, career, and citizenship readiness of every student.

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