

Universal Constructs: Essential For 21St Century Success

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During the 2010-2011 school year, the Iowa Core Network is concentrating their work on the characteristics of effective instruction and the universal constructs. As materials are developed they are being uploaded to a statewide Moodle site currently housed at Heartland AEA . Districts and schools are encouraged to contact their AEA Iowa Core Lead or DE Partner for more information.

The universal constructs were identified following an analysis of the competencies and habits of mind needed for future successes in careers, college and citizenry. A team of educators and business representatives conducted a literature review of multiple sources including the P21 Framework for 21st Century Learning, the Definition and Selection of Key Competencies by NCREL /Metiri Group, Cross Disciplinary Proficiencies in the American Diploma Project by Achieve, Global Achievement Gap by Tony Wagner, Born Digital by Palfrey and Gasser, and Describing the Habits of Mind by Arthur Costa. The universal constructs apply all aspects of an individual's life and across all curricular areas.

The next step in the process was to expand the construct definitions in order to examine their complexity and identify the embedded concepts. Given the elaborated definitions and supporting instructional and professional development materials, teachers will be able to integrate the constructs into content and instructional practice, using a new, 21st century lens.

Critical Thinking

Critical thinking is the ability to access and analyze key information to develop solutions to complex problems that may have no clear answer. It incorporates reflective and visionary processes. Critical thinking utilizes abstractions and non-rules based strategies to guide decisions, behaviors and actions. Twenty-first century critical thinking reflects:

- thoughtful questioning that challenges assumptions, promotes higher order thinking, leads
- to new insights, and validates perceptions
- metacognition that supports reflective practice
- processes that analyze, select, use, and evaluate various approaches to develop solutions
- frame critical issues to develop innovative responses
- analysis and synthesis of multiple sources and points of information
- intentional use of disciplinary frameworks to analyze complex issues and information
- suspension of judgment while collecting evidence to make determinations

Complex Communication

Complex communication is based on the successful sharing of information through multiple means, including visual, digital, verbal, and nonverbal interactions. The message is purposeful, clear and concise leading to an accurate exchange of information and ideas. Twenty-first century complex communication reflects:

- negotiation processes that generate mutually satisfactory solutions
- managing and resolving conflicts
- interacting effectively with people of different cultures
- selection and integration of various communication processes
- integration of appropriate forms of information communication technology
- understanding the interactions among modes of communication
- meaningful and engaging interactions
- focus, energy and passion around the key message
- navigation through nuances of effective communication

Creativity

Creativity incorporates curiosity and innovation to generate new or original thoughts, interpretations, products, works, or techniques. Creativity is nurtured, advanced, and modeled through numerous approaches, including inquiry-based learning, abstract thinking, and student-focused learning. Twenty-first century creativity reflects:

- a disciplined process that includes skill, knowledge, imagination, inspiration and evaluation
- capturing or collecting new ideas for current or future use
- combination of seemingly unrelated ideas into something new
- respectful exchange of ideas
- engagement in formal and informal learning experiences
- divergent thinking
- entrepreneurial thinking that encourages unique thoughts and applications
- a comfort level with open-ended challenges that reflect multiple approaches and results
- reconfiguration of current thought within a new context
- pattern recognition across disciplines resulting in an innovative outcome

Collaboration

Collaboration is working among and across personal and global networks to achieve common goals. It requires cultural competence and personal and civic responsibility in all environments. Collaboration also requires open and flexible approaches to leadership. Twenty-first century collaboration reflects:

- non-hierarchical leadership based on individual skill sets
- respect for a complex process that requires individuals to contribute and participate in meaningful interactions
- the belief that group synergy enhances productivity
- understanding and application of effective group processes to solve problems
- productive group interactions
- respectful disagreement

Flexibility And Adaptability

Flexibility and adaptability include responding and adjusting to situational needs, and changing to meet the challenges of new roles, paradigms and environments. Flexibility and adaptability include the thoughtful balance between an individual's core beliefs and appropriate reaction to change. These dispositions are nurtured through life-long learning and continuous improvement. Twenty-first century flexibility and adaptability reflect:

- engagement in innovation and creativity
- intellectual agility
- embracing change
- expecting and accepting the emotions inherent in change while supporting those involved
- respect for unique qualities of others and self
- purposeful and thoughtful response to disruptions
- acknowledging and responding to dissonance in productive ways
- reflecting on positive and negative outcomes of risk-taking
- proactive and reactive approaches to change
- acknowledging ambiguity inherent in a changing environment

Productivity And Accountability

Productivity is prioritizing, planning, and applying knowledge and skills to make decisions that create quality results in an ever-changing environment. Individuals and teams demonstrate initiative, self-direction, and personal responsibility to add value to the world around them. Individuals demonstrate accountability through efficient time management, appropriate resource allocation, personal integrity, and self-monitoring to meet the demands of productivity. Individuals and teams recognize the interconnectedness of their actions at all levels. Twenty-first century productivity and accountability reflect:

- ability to acquire new learning on one's own
- application of appropriate processes and tools to facilitate task completion
- self-sufficiency as required in a complex environment

- identification of available opportunities
- motivation and commitment to achieve
- assuming leadership roles
- building on prior learning and experience to apply knowledge and skills in a variety of contexts
- self-confidence and self-respect

Key References

Achieve. (2008). *Cross Disciplinary Proficiencies in the American Diploma Project Benchmarks*. Costa, A. (2009). *Describing the habits of mind*. In Costa, A. & Kallick, B. (Ed.), *Learning and leading with habits of mind*. Alexandria, VA :ASCD. Jerald, C.D. (2009) *Defining a 21st century education*. Center for Public Education. NCREL/Metiri Group. (2003). *enGauge 21st Century Skills*. Organization for Economic Co-operation and Development. (2003). *The definition and selection of key competencies*. Palfrey, J. & Gasser, U. (2008). *Born digital*. New York, NY:Basic Books. Partnership for 21st Century Skills. Pink, Daniel. (2006). *A whole new mind: Why right-brainers will rule the future*. New York: Riverhead Books. Secretary's Commission on Achieving Necessary Skills. (1992) Wagner. T. (2008). *Global achievement gap*. New York, NY:Basic Books.