DODEA IDEOLOGY AND EDUCATIONAL PEDAGOGY

21st Century Learning Overview

History of Education—from Industrialization to Differentiated Learning

The first public schools in the United States were established in the late eighteenth and early nineteenth centuries, represented by the iconic one-room schoolhouse. The curriculum featured the "3-Rs:" reading, writing and arithmetic for 6 years of education. These schools were sized for a local population of 50—100 students within walking distance of the school facility.

In the mid-nineteenth century, more subjects were added: science, language, music, art and physical education. Buildings were larger and provided additional outdoor facilities. By the second half of the nineteenth century, instruction was tailored to prepare students for the industrial workforce and many facilities seemed to be modeled on a factory layout. Pedagogy was primarily teacher-centered, with students on the receiving end. Classes grew to a common size of 50—60 students, with school enrollment of more than 1,000 students. School design evolved to double-loaded corridors serving classrooms equipped with fixed desks in rows facing the teacher's desk at the front of the room. Many saw this approach as standardized teacher-centric instruction forced to teach to the lowest common denominator.

Early in the twentieth century, schools included features that have remained in vogue to this day such as specialized classrooms and shared facilities for community use. Many schools today still reflect their nineteenth or twentieth century origins with rigid schedules and inflexible facilities, and fixed boundaries between grades, disciplines, classrooms, and functional roles.
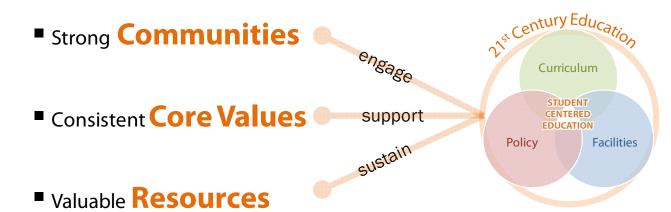
The 21st Century learning environment is evolving to support the ways that children learn best – a pedagogical system that accommodates the unique instructional needs of every learner and supports the positive human relationships needed for effective learning. These learning environments holistically include the facilities, technologies, and communities that inspire students and educators to attain relevant skills. Effective learning occurs when these three elements are creatively integrated into a seamless whole in which each reinforces the other to help children grow emotionally, socially, physically, and academically.

21st Century learning environments should address the multiple, interconnected learning needs of the whole child. Schools should foster a learning environment that enables children to be healthy, safe, engaged, supported, and challenged. In today's interconnected, technology-driven world, a learning environment can be virtual, online, or remote. It is important to remember that technology, space, time, culture, and policy are critical key elements that have even greater impact when considered collectively.

To achieve these goals, a learning environment must be an aligned, synergistic system in order to:

- Create learning practices, human support and physical environments that enable 21st Century skill outcomes.
- Support learning communities that enable educators to collaborate, share best practices, and integrate 21st Century skills into the learning environment.
- Enable students to learn in relevant, real world twenty-first century contexts through project-based assignments.
- Allow access to quality learning tools, technologies, and resources.

- Strong **Communities**
- Consistent **Core Values**
- Valuable **Resources**

engage
support
sustain

21st Century Education

Curriculum

STUDENT CENTERED EDUCATION

Policy · Facilities

- Provide spaces for group, team, and individual learning.
- Support the expanded community and global involvement to learn both face-to-face and online.

For the 21st Century learning environment, schools should be re-designed to reach beyond the traditional classrooms many adults experienced when they were young. The learning environment of the twenty-first century should encompass a rich combination of media and devices, varied cultures, and virtual and real-life relationships. Students should occupy spaces that are engaging, relevant and promote a sense of well-being and belonging.

School designs should convey a friendliness, openness, and accessibility that promotes cooperation and interaction, and reduces the tensions that can lead to inattentiveness, acting out, and bullying.

DoDEA school environments around the globe should be consistent, yet reinforce the uniqueness of the military family. For this reason, DoDEA schools should "create an environment where students know each other and know their instructors as people - not just as teachers."

Redefining Achievement
The transition from the present learning environment to the 21st Century environment can be considered as redefining achievement. There are three levels, beginning today at essentially twentieth-century learning. This learning is characterized primarily by a teacher-centered approach, with some project-based learning, team teaching, a focus on improving the graduation rate, and attempting to make students "workplace ready." Unfortunately, this is no longer viable considering that manufacturing and labor-intensive jobs are less common today.

To move from twentieth-century pedagogy to 21st Century instruction, requires both a curriculum and a facilities transformation. In some respects, facilities are now constraining the shift to a new teaching paradigm where education is focused on making students "college ready." While this is a next step, DoDEA's has a significant opportunity to leverage the Department of Defense capacities in resource deployment, leadership training, and global networking toward preparing students to engage the world.

Education beyond the 21st Century emphasizes DoDEA's unique opportunity to go beyond the school to a global learning community. This may be a longer term vision that leverages the military's rich history of leadership, global networks, and resource deployment. The network of global DoDEA schools can allow students to connect around the world with real-time, project-based learning.