# Beliefs About Learning in an Era 3, 21st Century World*

**What beliefs about learning should guide 21st century educational practices?**

Over the past twenty years, research in cognitive psychology and neuroscience has significantly expanded our understanding of how people learn (see, for example, Bransford, Brown and Cocking, 2000; Willis, 2006). Yet educational practice has not always kept pace with this new knowledge.

The creation of a set of beliefs about learning, based on this new research, helps schools and districts guide the development of the curriculum/assessment system and inform instructional practice and the selection of learning resources (e.g., textbooks and technology). As a means of better aligning theory and practice, schools and districts should develop or adopt a set of learning beliefs based on research and best practices. Once in place, these beliefs provide a conceptual foundation for all school reform initiatives.

The ten statements about learning, listed on the next page, taken together, suggest one possible framework for current research-based learning, along with their implications (in italics) for sound educational practice. These sample learning statements and their implications can be used to guide a discussion of what beliefs about learning should be adopted in a 21st century world, and eventually lead to significant changes in curriculum, assessment and instructional practices needed to accommodate 21st century outcomes.

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*Adapted from ten learning principles originally published in Jay McTighe and Elliott Seif, *An Implementation Framework to Support 21st Century Skills,* Chapter 7 in Bellanca and Brandt (2010). *21stCentury skills: Rethinking How Students Learn* (Solution Tree Press). p. 153. 

# Ten 21st Century Statements About Learning*

1. Learning is purposeful and contextual. *Therefore, students should be helped to see the purpose in what they are asked to learn. Learning should be framed by relevant questions, meaningful challenges, and authentic applications.*

2. Experts organize or chunk their knowledge around transferable, core concepts ("big ideas") that guide their thinking about the domain and help them integrate new knowledge. *Therefore, content instruction should be framed in terms of core ideas and transferable processes, not as discrete facts and skills.*

3. Learning is mediated and enhanced through different types of thinking, such as classification and categorization, inferential reasoning, analysis, synthesis, and metacognition. *Therefore, learning events should engage students in complex thinking to deepen and apply their learning.*

4. Understanding is revealed and demonstrated when learners can apply/transfer/adapt their learning to new and novel situations and problems. *Therefore, teachers should teach for transfer and students should have multiple opportunities to apply their learning in meaningful and varied contexts.*

5. New learning is built on prior knowledge. Learners use their experiences and background knowledge to actively construct meaning about themselves and the world around them. *Therefore, students must be helped to actively connect new information and ideas to what they already know and build on current understanding and skill development.*

6. Learning is social. *Therefore, teachers should provide opportunities for interactive learning in a supportive environment.*

7. Attitudes and values mediate learning by filtering experiences and perceptions. *Therefore, teachers should help students make their attitudes and values explicit and understand how it influences their learning.*

8. Learning is non-linear; it develops and deepens over time. *Therefore, students should be involved in revisiting core ideas and processes so as to develop deeper and more sophisticated learning over time.*

9. Feedback enhances learning and performance. *Therefore, on-going assessments should provide learners with regular, timely, and user-friendly feedback, along with the opportunity to use it to practice, retry, rethink, and revise.*

10. Learning is enhanced when a learner's preferred learning style, prior knowledge and interests are effectively accommodated. *Therefore, teachers should pre-assess to find out students' prior knowledge, learning preference and interests. They should differentiate their instruction to address the significant differences they discover, and promote individualization through choice and options.*

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