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# Connecting the Dots: Insights into Millennial Students from Learning Research

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# Connecting the Dots: Insights into Millennial Students from Learning Research

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# Motivation and Context

- Characterizations of Millennial students frequently focus on:
  - Multi-tasking
  - Technology
- Less attention to:
  - How cultural, parental and educational trends may shape students' readiness for learning

# 1. Seven Core Traits of Millennials

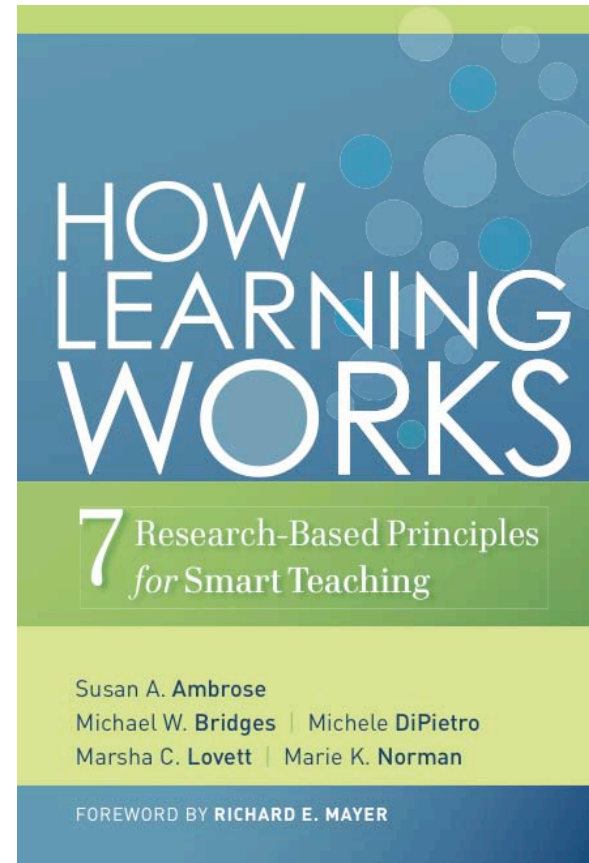
- Special
- Protected
- Team-oriented
- Trusting Optimists
- Conventional
- Achieving
- Pressured

Howe, N. & Strauss W. (2000).

*Millennials Rising: The Next Great Generation.* Random House: New York.

## 2. Seven Learning Principles

- Joint work with former Carnegie Mellon colleagues
- Synthesis of 50 years of research
  - Constant determinants of learning
  - Principles apply cross-culturally
    - Being translated in Chinese and Korean



## 2. Seven Learning Principles

1. Students' **prior knowledge** can help or hinder learning.
2. How students **organize knowledge** influences how they learn and apply what they know.
3. Students' **motivation** determines, directs, and sustains what they do to learn.
4. To develop **mastery**, students must acquire component skills, practice integrating them, and know when to apply what they have learned.
5. Goal-directed **practice** coupled with targeted **feedback** enhances the quality of students' learning.
6. Students' current level of **development** interacts with the social, emotional, and intellectual **climate** of the course to impact learning.
7. To become **self-directed** learners, students must learn to monitor and adjust their approaches to learning.

Ambrose, S., Bridges, M., DiPietro, M., Lovett, M., and Norman, M. (2010).

How learning works: Seven research-based principles for smart teaching. Jossey-Bass.

# 3. Interactions

- Do the seven generational traits facilitate or complicate the learning process for Millennial students?

	Prior Knowledge	Knowledge Organization	Motivation	Mastery	Practice and Feedback	Development and Climate	Metacognition
Special					<b>A</b>		
Protected						<b>B</b>	
Team Oriented							
Trusting Optimists							
Conventional							
Achieving			<b>C</b>			<b>D</b>	<b>E</b>
Pressured							



# 4. Implications for learning

- A. Feedback
- B. Independence
- C. Risk-taking, failure and creativity
- D. Intellectual development and epistemological beliefs
- E. Metacognitive skills

# A. Feedback

- Habituated to positive reinforcement
  - What gets praised? Effort, Product, Ability?
- Can be very different from the kind of constructive feedback necessary for learning

*“Less skilled payers will get more playing time...Parents will cheer for all the kids at a game”*

-- Rules of the Massachusetts Youth Soccer Association

## B. Independence

- Close relationship with parents
- May fail to seek guidance from appropriate sources
- Parental interference
- Little experience in independently dealing with:
  - challenges or difficulty
  - solving problems
  - making decisions
  - managing time / life

*“I hardly think it’s appropriate for six-year-olds to be making decisions about which [Pokémon] cards to trade.”*

--a mother upset because her son’s school allowed him to trade a valuable Tauros for a mere Dodrio, The Wall Street Journal

# C. Risk-taking

- Focus on performance and credentialing rather than learning
  - less intrinsic motivation
- Failure as something to avoid at all costs
  - little experience with failure
  - difficulty met with a team of tutors, coaches, specialists, etc.
  - Innovation and creativity carry higher risk of failure

*Giles: This is the SATs, Buffy. Not connect the dots. Please pay attention. A low score can seriously harm your chances of getting into college.*

*Buffy: Gee, thanks. That takes the pressure right off.*

*--Buffy the Vampire Slayer*

## D. Intellectual development and epistemological beliefs

- Less developed understanding of knowledge
- Less sophisticated view of the role of instructor
- Uncomfortable with ambiguity
- Fact-driven experience acts as default strategy
- Difficulty in seeing context, the big picture or the role of evidence

“In college, I hope to gain the ability to deal better with people different from myself. I also want to become a better student and concentrate more time on my education. I would also like to dye my hair blonde.” –New first-year.

Erickson, B., Peters, G., and Strommer, D. (2006) “Teaching College Freshmen (2<sup>nd</sup> ed.)”  
San Francisco: Jossey-Bass.

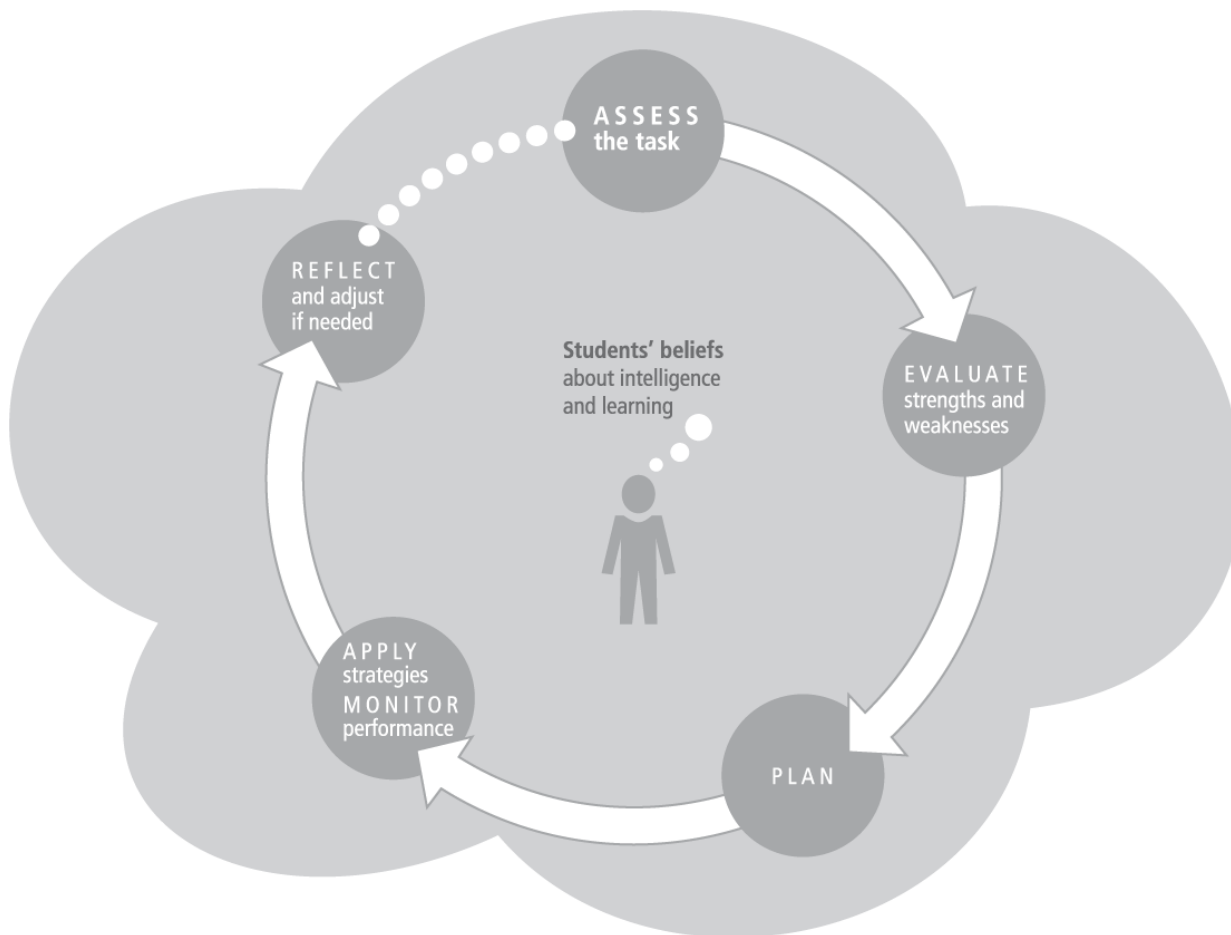
# E. Metacognitive skills

- Multitasking history
- Fact-driven educational experience
- Little opportunity to practice higher-level cognitive functions, such as planning, monitoring, evaluation, and reflection

*“I don’t think notes are necessary in math, because it’s all in the book.”*

Carnegie Mellon sophomore focus group

# The metacognitive cycle



From Ambrose, S., Bridges, M., DiPietro, M., Lovett, M., and Norman, M., (2010) *How Learning Works: 7 Principles for Smart Teaching.* San Francisco: Jossey-Bass.

# Generative Principles

- Intellectual development and epistemological beliefs
  - Make uncertainty safe
  - Resist a single right answer
  - Demonstrate that personal opinion alone is insufficient
  - Probe for evidence
  - Identify and challenge inaccurate beliefs about knowledge
  - Set expectations about instructor's role in the learning process
  - Set realistic expectations about the role of effort, practice and ability



# Generative Principles

- Metacognitive skills
  - Give assignments that focus on strategies, planning or methods of preparation rather than implementation
  - Provide checklist, rubrics or other heuristics to monitor progress
  - Provide opportunities for self-assessment
  - Provide opportunities for reflection

# Generative Principles

- Risk-taking / fear of failure / creativity
  - Model how you deal with problems, difficulties or challenges.
  - If risk-taking and creativity are desired, make them explicit learning objectives
    - Reward them
  - Help student think about “failure” in a formative way

# Generative Principles

- Independence
  - Institutions can educate parents about independence and set appropriate expectations
  - Leverage parental concern into a collaborative partnership to develop independent adults
  - Use FERPA to manage parental interference
  - Institutions can provide broader life skills workshops (time management, conflict resolutions, etc)
  - Set appropriate expectations among students regarding personal responsibility

# More Information

- Anderegg, D. (2003) *Worried All the Time : Overparenting in an Age of Anxiety and How to Stop It*. Free Press: New York.
- Baxter-Magolda, M. (1992) *Knowing and Reasoning in College : Gender-Related Patterns in Students' Intellectual Development*. Jossey-Bass.
- Belenky, M., Clinchy, B., Goldberger, N., and Tarule, J. (1986) *Women's Ways of Knowing: The Development, of Self, Voice, and Mind*. Basic Books.
- Henderson, V. L., & Dweck, C. S. (1990). Motivation and Achievement. In S. S. Feldman & G. R. Elliott (Eds.), *At the Threshold: The Developing Adolescent* (pp. 308–329). Cambridge, MA: Harvard University Press.
- Howe, N. & Strauss, W. (1992) *Generations: The History of America's Future, 1584 to 2069*. Harper Perennial: New York.
- Howe, N. & Strauss W. (2000). *Millennials Rising: The Next Great Generation*. Random House: New York.
- Howe, N. & Strauss W. (2003). *Millennials Go to College*. AACRAO & LifeCourse Assoc. : Great Falls.

# More Information

- McGuire, S. & Williams, D. (2002) *The Millennial Learner: Challenges and Opportunities*. In D. Lieberman and C. Wehlburg (Eds.) *To Improve the Academy*, 20, 185-196. Bolton, MA: Anker.
- Nathan, R. (2005). *My Freshman Year: What a Professor Learned by Becoming a Student*. Cornell University Press: Ithaca.
- Perry, W. (1968) *Forms of Intellectual and Ethical Development in the College Years: A Scheme*. Holt, Rinehart and Winston.
- Schommer, M. (1990). Effects of beliefs about the nature of knowledge on comprehension. *Journal of Educational Psychology*, 82 (3), 498-504.
- Schommer, M. (1994). An emerging conceptualization of epistemological beliefs and their role in learning. In R. Barner & P. Alexander (Eds.), *Beliefs about text and instruction with text* (pp. 25–40). Hillsdale, NJ: Erlbaum.
- Sterns, P. (2003). *Anxious Parents: A History of Modern Childrearing in America*. New York University Press: New York.
- Strauss, W. & Howe, N. (1997). *The Fourth Turning: An American Prophecy*. Broadway Books: New York.