

## What I Believe Part 2

**Belief 1**

*Background knowledge is essential for integrating new learning and is a predictor of how quickly and deeply a learner can acquire new information.*

I still believe this to be true. A study by Bransford and Johnson demonstrated that having meaningful background knowledge about a topic makes remembering new information and comprehending information easier.

“Bransford and Johnson found that students who knew the topic recalled about twice as much as those who were unaware of it.”  
(Schunk, pp. 194-195)

However, it is important to note that use of background knowledge to better understand new information does not occur automatically. Rather, student must be guided to access related background knowledge.

“Even when students have studied related material, they may not automatically link it with new information. Often the links need to be made explicit.”  
(Schunk, p. 194)

Schunk, D. H. (2012). *Learning Theories: An Educational Perspective* (6th ed.). Boston, MA: Pearson Education, Inc.

Furthermore, the background knowledge must be perceived as useful for the purpose in order for the individual to access it.

“Prior knowledge is used to establish boundary constraints for identifying the similarities and differences of novel information. Not only must the knowledge itself be stored in memory but the uses of that knowledge as well. Specific instructional or real-world events will trigger particular responses, but the learner must believe that the knowledge is useful in a given situation before he will activate it.”  
(Ertmer, p.52)

Ertmer, P., & Newby, T. J. (2013). Behaviorism, Cognitivism, Constructivism. Comparing critical issues from an instructional design perspective. *Performance Improvement Quarterly*, 26(2), 43-71.

**Belief 2** combined with **Belief 4** and **Belief 5**

*-Learners must incorporate new information into a pre-existing schema before analyzing or drawing conclusions about that information.*

*-Fact memorization is a skill of the past, while critical thinking, analysis, and creative problem-solving are 21<sup>st</sup> Century skills needed for success today*

*-A grasp of facts and information is the necessary base before critical thinking and analysis can occur.*

Change to:

*The mind of the learner is capable of processing information in a variety of ways depending on the need of the learner for that particular type of information.*

I am modifying this statement because of studies done on attention which show that some analysis of the importance of inputs is done subconsciously before we are even aware of the input. Analysis and drawing of conclusions may occur with inputs that are not yet stored in long-term memory, which means that the pre-existing schema I mentioned above is not necessary for analysis of information. If we can conduct analysis and evaluation of inputs before we are even aware of them, then it is clear that we do not need to have information stored before we analyze it.

Treisman and Gelade's feature-integration theory attempts to explain how preattentive processes work to help the learner determine what to focus on.

"Sometimes we distribute attention across many inputs, each of which receives low-level processing... Information inputs initially are subjected to different tests for physical characteristics and content."

(Schunk, 2012, p. 172)

Schunk, D. H. (2012). *Learning Theories: An Educational Perspective* (6th ed.). Boston, MA: Pearson Education, Inc.

Additionally, the idea that facts are useless in today's world is not valid. Facts are essential as the base for understanding at a novice level, while increasing expertise with a subject area requires higher-level thinking skills.

"[A] behavioral approach can effectively facilitate mastery of the content of a profession (knowing what); cognitive strategies are useful in teaching problem-solving tactics where defined facts are rules are applied in unfamiliar situations (knowing how); and constructivist strategies are especially suited to dealing with ill-defined problems through reflection-in-action."

(Ertmer, 2013, p.60)

Ertmer, Peggy and Newby, Timothy J. (2013). Behaviorism, Cognitivism, Constructivism: Comparing critical features from an instructional design

perspective. *Performance Improvement Quarterly* 26(2), 43-71.

### **Belief 3**

*Learners need repeated exposure to ideas to incorporate them fully into their schemata.*

I stand by this statement. In order to incorporate information into long term memory, repetition and elaboration of the new information aids in the process of “consolidation” of the memory networks and strengthening of neural connections.

“With repetition, these [synaptic] connections increase in number and become strengthened, which means they occur more automatically and communicate better with one another.”  
(Schunk, 2012, p. 47)

Schunk, D. H. (2012). *Learning Theories: An Educational Perspective* (6th ed.). Boston, MA: Pearson Education, Inc.

### **Belief 6**

*Most adults are only paying attention part of the time when reading or listening to information.*

I will modify this belief to a more complex understanding of attention.

*Attention can be focused when the learner is motivated and directed to give attention through various tactics including perceived importance, novelty, intensity and movement* (Schunk, p.43).

“Cognitive theories emphasize that motivation can help to direct attention and influence how information is processed.”  
(Schunk, p. 23)

Schunk, D. H. (2012). *Learning Theories: An Educational Perspective* (6th ed.). Boston, MA: Pearson Education, Inc.

### **Belief 7** combine with **Belief 11**

*-Learning occurs best when a person is feeling positive, open, welcome, nourished and respected.*

*-Adults shut down learning and do not tolerate boredom or frustration resulting from poor product design or instructor incompetence.*

Although it is possible for adults to set aside emotional distractions or basic needs in order to learn when motivation is high, adults learn best when they feel

respected.

“Adults respond positively when the learning environment is comfortable and safe” (Cercone, p.145)

“Adult learning requires a climate that is collaborative, respectful, mutual, and informal” (Cercone, p.158)

Cercone, K. (2008). Characteristics of adult learners with implications for online learning design, *AACE Journal*, 16(2), 137-159.

### **Belief 8**

*Individuals instinctually hold onto beliefs even when faced with contrary evidence in order to protect their view of themselves as reasonable beings.*

I still believe this is true, though it is difficult to find a good quote to support the idea. What I found is that adult learners can be resistant to deep changes in how they approach learning. This quote speaks to the difficulty instructors may have in convincing adult learners to take authority over their own learning and become self-directed, rather than allow the instructor to direct their learning.

“Adult students are not all automatically self-directing merely by virtue of being adults, or even easily trained to become so. Educators seeking self-direction from their adult students are not merely asking them to take on new skills, modify their learning style, or increase their self-confidence. They are asking many of them to change the whole way they understand themselves, their world, and the relationship between the two.”  
(Kegan, p.51)

Kegan, Robert. (2009). What “form” transforms? A constructive-developmental approach to transformative learning. In K. Illeris (Ed.), *Contemporary Theories of Learning: Learning theorists... in their own words* (pp. 35-52). London: Routledge.

Another quote that supports the idea that we see the evidence that we want to see comes from the Schunk chapter on perception. The idea is that our perception of information is impacted by our previously held views and expectations. This means we are not truly objective learners, but that our expectations and prior knowledge must be understood in order to aid true learning.

“We often perceive what we expect and fail to perceive what we do not expect.” (Schunk, p.179)

Schunk, D. H. (2012). *Learning Theories: An Educational Perspective* (6th ed.). Boston, MA: Pearson Education, Inc.

**Belief 9**

*Mindset impacts learning: individuals with a growth mindset believe that they can learn and are more likely to take risks and try again.*

Carol Dweck and her colleague David Yeager wrote about studies in which they taught students about growth mindset and then measured the impact that had on academic achievement. They found that when students were taught to think of intelligence as malleable rather than fixed, they showed improvement in their learning over time. To summarize their findings:

“Our research and that of our colleagues show that if students can be redirected to see intellectual ability as something that can be developed over time with effort, good strategies, and help from others, then they are more resilient when they encounter the rigorous learning opportunities presented to them.”  
(Yeager, p. 306)

Yeager, D., & Dweck, C. S. (2012). Mindsets That Promote Resilience: When Students Believe That Personal Characteristics Can Be Developed. *Educational Psychologist*, 47(4), 302-314.  
doi:10.1080/00461520.2012.722805

**Belief 10**

*Adult learners thrive on competitive games, especially if they know it is leading to learning.*

Change to:

*Some adults, depending on their personality, skills and the context, are motivated by competitive games, while others are stressed by them.*

Although it comes from a study on the impact of competition versus training on performance and perceptions of golfers in a putting task, I believe the conclusions about the effect of competition can hold true for other areas. When individuals are placed in a competitive context, they tend to feel more pressure/tension, higher enjoyment and often feel they put forth a better effort than if they are simply training. The impact of competition depended on whether a person was disposed to be “task-involved” or “ego-involved.” A more “ego-involved” person is someone who is interested in comparing their skills to others to show they are superior. This type of person may be more likely to thrive on competition when they are winning but shut down during competition when they are losing.

“Our finding that competition promoted both enjoyment and tension is in line with previous research (e.g. Cooke, Kavussanu, McIntyre, & Ring, 2011). However, previous findings also indicate that competition can both

undermine (e.g., when perceived as controlling; Deci, Betley, Kahle, Abrams, & Porac, 1981) and promote (e.g., when perceived as challenging; Senko & Harackiewicz, 2005; Tauer & Harackiewicz, 2004) intrinsic motivation. Hence, our participants may have perceived the competition as challenging, which, in turn, may have positively affected their task interest/enjoyment.”  
(van de Pol, p. 801)

van de Pol, P. C., Kavussanu, M., & Ring, C. (2012). The Effects of Training and Competition on Achievement Goals, Motivational Responses, and Performance in a Golf-Putting Task. *Journal Of Sport & Exercise Psychology, 34*(6), 787-807.

### **Belief 12**

*Adults value learning strategies that are high-yield and efficient.*

Change to:

*Learning strategies vary in effectiveness depending on the learning styles and preferences on the learner. Strategies must be selected carefully and used appropriately and in the correct contexts in order to be effective.*

This quote is not from a scholarly journal, but since the author is Robert Marzano himself, I thought you would allow it. Marzano wrote this article to combat the misuse of his high-yield strategies in schools. He wanted to ensure that instructors are aware that there is a right way to use the strategies and that misuse or overuse of the strategies could negatively impact learning.

“there are a wide variety of variables that determine whether a particular strategy is going to produce positive results in any given situation. The lesson to be learned is that educators must always look to whether a particular strategy is producing the desired results as opposed to simply assuming that if a strategy is being used, positive results will ensue.”  
(Marzano, pp. 34-35)

Marzano, R. J. (2009). Setting the Record STRAIGHT on "High-Yield" Strategies. *Phi Delta Kappan, 91*(1), 30-37.

### **Belief 13**

*Humans are social creatures and this trait can be leveraged for motivation.*

The wording of this belief could be modified to be more specific to the concept of peer-feedback and its impact on the learning process. In general, people are influenced by their peers and instructors can use collaboration and peer feedback to motivate learners. Peer interaction can be uncomfortable, but sometimes being uncomfortable is what leads to growth.

“Peer assessment is said to enhance student learning (Davies, 2002). More specifically, using peer assessment helps students to develop certain skills in the areas of, for example, communication, self-evaluation, observation, and self-criticism (Dochy & McDowell, 1997).”  
(van Gennip, p. 41)

van Gennip, N. E., Segers, M. R., & Tillema, H. H. (2009). Peer assessment for learning from a social perspective: The influence of interpersonal variables and structural features. *Educational Research Review*, 4(1), 41-54.  
doi:10.1016/j.edurev.2008.11.002

#### **Belief 14**

*Adults are attuned to power dynamics and search for clues to determine who is in power in a learning setting before deciding whether to comply.*

I will maintain that this belief holds true based on theories of modeling from the Schunk text. Individuals look for signs of competence and prestige in the person they choose to model their behavior after.

“An important attribute is prestige. Models who have gained distinction are more apt to command attention than those of lower prestige. Attendance usually is higher at a talk given by a well-known person than by one who is less known. In most instances, high-status models have ascended to their positions because they are competent and perform well.”  
(Schunk, p. 134)

Schunk, D. H. (2012). *Learning Theories: An Educational Perspective* (6th ed.). Boston, MA: Pearson Education, Inc.

#### **Belief 15**

*Individuals can be motivated in a different way depending on their values.*

This is true, but it should say that adults can be motivated in different ways depending on internal factors, which can include values but also includes many other factors.

“The fifth assumption of andragogy is that ‘adults are motivated to learn by internal factors rather than external ones’ (Merriam & Caffarella, 1999, p. 272). Some factors that motivate adults include the promise of increased job satisfaction, self-esteem, and quality of life.”  
(Cercone, p.145)

Cercone, K. (2008). Characteristics of adult learners with implications for online learning design, *AACE Journal*, 16(2), 137-159.

## Bibliography

- Cercone, K. (2008). Characteristics of adult learners with implications for online learning design, *AACE Journal*, 16(2), 137-159.
- Ertmer, Peggy and Newby, Timothy J. (2013). Behaviorism, Cognitivism, Constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly* 26(2), 43-71
- Kegan, Robert. (2009). What "form" transforms? A constructive-developmental approach to transformative learning. In K. Illeris (Ed.), *Contemporary Theories of Learning: Learning theorists... in their own words* (pp. 35-52). London: Routledge.
- Marzano, R. J. (2009). Setting the Record STRAIGHT on "High-Yield" Strategies. *Phi Delta Kappan*, 91(1), 30-37.
- Schunk, D. H. (2012). *Learning Theories: An Educational Perspective* (6th ed.). Boston, MA: Pearson Education, Inc.
- van de Pol, P. C., Kavussanu, M., & Ring, C. (2012). The Effects of Training and Competition on Achievement Goals, Motivational Responses, and Performance in a Golf-Putting Task. *Journal Of Sport & Exercise Psychology*, 34(6), 787-807.
- van Gennip, N. E., Segers, M. R., & Tillema, H. H. (2009). Peer assessment for learning from a social perspective: The influence of interpersonal variables and structural features. *Educational Research Review*, 4(1), 41-54.  
doi:10.1016/j.edurev.2008.11.002
- Yeager, D., & Dweck, C. S. (2012). Mindsets That Promote Resilience: When Students Believe That Personal Characteristics Can Be Developed. *Educational Psychologist*, 47(4), 302-314.  
doi:10.1080/00461520.2012.722805