

Key Ingredients for Learning member / subscriber content

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Cognitive psychology research suggests that three major factors influence how much and how well we learn: ability, prior knowledge, and motivation. Let's examine each of these in detail.

Ability

The capacity with which we were born that enables us to acquire new skills and knowledge varies among individuals. Just like height or musculature, we arrive on the scene with a certain mental (or learning) potential. It may be unfair but some of us are born taller, slimmer, more physically attractive, or able to learn more quickly than others. This general learning ability is the intellectual capacity with which we are genetically endowed. It strongly influences our overall capability to learn. Note the word "general." Those who have greater general ability grasp more quickly, comprehend more easily, and recall more efficiently than others do. They seem to get it faster and play it back or even enhance it better than those not as intellectually able.

Recently, many nuances have been added to the construct ability and its almost synonymous cousin, intelligence (usually defined as the ability to think about ideas, analyze situations, and solve problems, which is measured through various types of intelligence tests). While general ability is usually broken down into nonverbal ability, concrete reasoning ability, and abstract reasoning ability, researchers have stretched further into "multiple intelligences."⁷ Educational psychologists now view individuals as multifaceted and have created tests to measure verbal linguistic, mathematical logical, musical, visual spatial, bodily kinesthetic, interpersonal, naturalistic, and even existential "intelligences." In all cases, these appear to be considered inherent characteristics.

Obviously, like musculature, the way in which ability is fostered and trained can seriously affect how well one's cerebral (and other) capabilities grow and develop. As trainers, it is important for us to note that learners vary in their ability to learn. We have to be aware of the differences in ability and compensate for those who do not learn as rapidly as others. We also have to keep the more generally able learners constantly stimulated and challenged to maintain their focus.

Although we all possess general intellectual ability, we also are endowed with specific abilities at birth. An ear for music, a golden voice, athletic agility, and artistic talent are extremely valuable specific learning abilities that are more important than general intellectual capability in certain instances. The innate, specific abilities of Michael Jordan in basketball, Barbra Streisand in music, and Pablo Picasso in art have played enormous roles in allowing those "learners" to achieve far beyond others who may have received the same "training."

Prior Knowledge

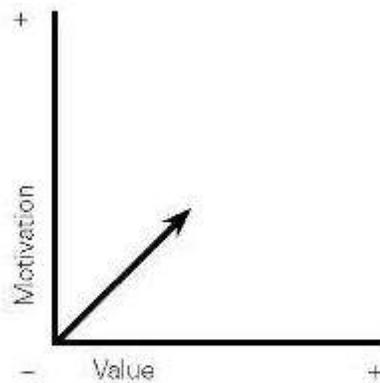
General and specific abilities greatly influence learning, but how much a person already knows about what he or she is being taught also strongly affects learning. A brilliant philosopher or mathematician may not learn as well as a less intellectually gifted carpenter when receiving some new piece of instruction about carpentry. Prior knowledge helps the learner acquire additional knowledge or skills more rapidly.

Motivation

We all have seen the power of high motivation - the desire to achieve something. We also have seen the reverse: Those who don't care, have no drive, or seem to lack interest in learning rarely achieve proficiency in new knowledge and skills. We often talk about motivation and its importance, but what is it? Motivation appears to be affected by three major factors: value, confidence, and mood.

Value. The more we value something, the more motivated we are about it. In figure 4-1, we have placed motivation on the vertical axis and value on the horizontal. Notice that as the learner attributes a greater value to what is to be learned, motivation increases. If you value being seen as someone who knows opera or football, you will become more inspired (that is, motivated) to learn about it. The higher the value attributed to what is to be learned, the greater the motivation.

Figure 4-1. Motivation Increases With Value



Confidence. If you feel totally inept in your ability to learn something, how motivated are you to try?

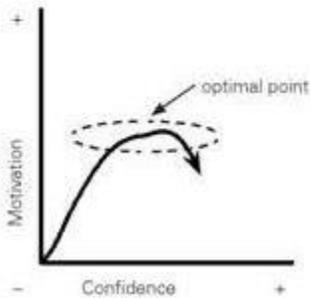
- highly motivated
- unmotivated

The answer, of course, is unmotivated. Low confidence in learning is strongly correlated with low motivation. As the confidence of the learner increases, so does the motivation, as illustrated in figure 4-2. Overconfidence, however, leads to a decline in motivation. If the learner feels that "this is so easy, I don't even need to try," motivation plummets, as shown in figure 4-3. The optimal point of motivation is where the learner has enough confidence to feel she or he can succeed, but not so much that the desire to learn declines.

Figure 4-2. Motivation Increases With Confidence



Figure 4-3. Overconfidence Reduces Motivation

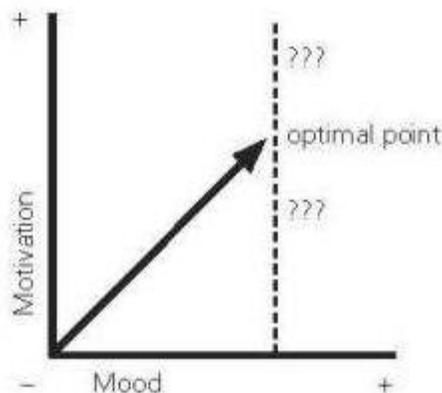


This high point of motivation is one of challenge ("I have to work at it to succeed") and security ("if I do work at it, I know I can succeed").

Mood. We all know that if we're not in the mood, our motivation to learn goes down. Personal feelings affect our mood as does the atmosphere of the learning and working environment. A positive learning-working environment tends to improve a person's mood and, hence, his or her motivation as illustrated in figure 4-4. But a frivolous or manic mood might have bizarre and unpredictable effects on motivation. A positive mood is one in which you are open and optimistic without being flighty or euphoric.

To summarize this section on the three key factors that affect learning - ability, prior knowledge, and motivation - trainers are generally content people placed in the role of helping people acquire sufficient knowledge and skills to perform something they don't know how to do.

Figure 4-4. Motivation Increases With Mood



Asking them to step outside of their area of expertise and become totally "customer focused," that is, learner centered, is a challenge. However, trainers can derive enormous satisfaction when they see that their charges "get it." By watching learners and sizing up how well they can absorb what the trainer provides, by acknowledging and shoring up prior knowledge, and by exemplifying how worthwhile it is to achieve what the trainer is helping them to attain she will experience the high that comes from their successes. If training were just a telling task, everyone would excel at everything.

This is an excerpt from ASTD's bestselling book, Telling Aint Training, which has been updated. To purchase, go [here](#).

Harold D. Stolovitch and **Erica J. Keeps** share a common passion: developing people. Together they have devoted a combined total of more than 80 years to make workplace learning and performance both enjoyable and effective. Their research and consulting activities have involved them in numerous projects with major corporations such as Hewlett Packard, Sun Microsystems, Oracle, General Motors, Bell Canada, Telecom Asia, Canadian Pacific Railway, Canadian Business Development Bank, Bank of Montreal, Rio Tinto-Alcan, Prudential, Century 21, CDW, Canadian Navy, Chrysler, General Motors, International Association of Fire Fighters, Nissan, Pfizer, Southern California Gas, The Coffee Bean and Tea Leaf, USDA as well as the military, the police, government, counterterrorism agencies, healthcare institutions, and many others.