



Learning New Skills Through Coaching Techniques:

A SPORT NEUROPSYCHOLOGY PERSPECTIVE

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In order for a gymnast (or any athlete) to learn new skills, information must be brought into the brain through various channels. The brain is a complex structure with various lobes and neural circuitries which function differentially for each person. The catch is some of these channels work better than others. Every athlete has a learning preference or unique style which allows them to learn the most optimal manner. Some gymnasts may be visual learners and respond best to learning by seeing. Others prefer to hear and use language as the primary channel to learn and get information into their brain. Finally, some individuals respond best to kinesthetic or tactile learning, where they can feel or sense the movements required for a task. Most young athletes learn best through a combination of these approaches which pair teaching techniques together.

An effective coach creates an environment and the opportunity for all of their athletes to learn through their

preferred style. They also tailor their approach to coaching based on how the athlete will learn best. Whether it is instructional information of how to perform a novel movement or providing technical feedback to perfect a Level 9 beam skill, effective communication is an important skill for coaches to possess.

Here are a few pointers for gymnastics coaches in learning "how" to teach based on an athlete's particular learning style (based on neuropsychological theory):

Visual learners: Visual based learners encode information best through pure visual presentation. For these individuals, direct observation of another gymnast completing a novel task and/or video feedback where they watch someone else or themselves doing the right skill are most effective. Using video to reinforce corrections and new skills can truly benefit a visual learning gymnast.

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Verbal/language-based learners: Verbal learners can make sense and process information best through explanation and language-based presentation. An ideal approach to learning would involve verbal explanation of desired task then have the athlete communicate back to the coach the sequence of steps in their own words. Presentation should be done one-on-one and coaches should always check for understanding by having athlete repeat or verbally rehearse the message.

Kinesthetic or Tactile learners: Kinesthetic learners learn best when they can feel through their body what movements are desired. For these individuals, having them perform or walk through the desired series of movements is ideal. If learning a new skill, a coach could break the skill down into multiple smaller body movements and have the gymnast slowly progress through each movement to understand how it should be put together. Corrections should be done "hands on" and while the athlete is performing the skill.

Paired Modality Coaching: To maximize the process of learning most people respond best to a combination of these approaches to learning. Information presented and processed by three different channels is more efficient and has a higher learning potential than a single channel can allow. Coaching through various techniques and combining these techniques would maximize learning.

An example of how to teach a new skill to your group: verbally explain the sequence of movements required to perform a new skill (verbal learning). Show the gymnast

someone else perform the movement or a videotape of the movement (visual learning). Have the gymnast slowly and sequentially perform the series of body movements in the desired order so they can feel the body positions for the new skill. Finally, an example of coaching a correction might include having them explain the movements while performing the task or have them activate the kinesthetic movements while watching a video of someone else perform the movement in slow motion.

It is important to understand that a coach cannot have only one coaching style for only one group of gymnasts. A combination of teaching "methods" can enhance multiple learning styles for a wide developmental range of athletes. Remembering that any "competition anxiety" can disrupt an individuals' learning process should be a reminder for the use of mental training skills (e.g. relaxation and imagery training). This article will help you to understand that the cognitive components of learning are essential to the learning of new gymnastics skills. Sport psychology and

neuropsychology can offer wonderful knowledge to help any gymnastics coach to improve his or her coaching style....Good luck! ✖

