Understanding Athletes' Learning Style

Dr Lynn Owens, Craig Stewart

Introduction

Coaches are responsible for maximizing individual athlete's performance by consideration of numerous variables. Understanding team members' physical, emotional, social, and cognitive needs is one of the more demanding challenges facing a coach. However, as coaches mature in experience, they often accept that knowledge of the 'total athlete' will, more than likely, enable them to enhance both individual and team success. Athletes' learning styles are an important component of the total athlete, and knowledge of those idiosyncrasies will assist a coach in preparing players and teams to their maximum potential. That knowledge will also help the coach facilitate practices where each athlete is cognitively challenged to learn. Additionally, it can assist coaches in providing practice sessions that will translate into improved performance and success on the field, court, or arena. By understanding individual learning styles, coaches may be better able to maximize their athletes' performance both in practice and in the game and also address development changes in their players as they mature through adolescences to adulthood.

Literature review

Researchers refer to the study of how people learn in several ways. Williams, Anshel, and Jin-Jong (1997) suggested that cognitive style consists of psychological, emotional, physiological and behavioral dispositions that reflect an individual's perceptions, interactions, and responses to the current environment. Other researchers stated that because cognitive styles reflect individual differences in a learning situation it is often referred as learning style (Cawley, Miller, & Milligan, 1976; MacGillivary, 1981; Pargman, 1993; Schmeck, 1988).

There are five major variables that affect individuals learning styles (Dunn, Dunn & Price, 1987) that are derived from individual needs. The variables are the immediate environment (light, sound, design, temperature), physiological needs (perceptual mode, time of day, intake, mobility), psychological needs (type of reasoning, brain hemisphere functioning), sociological needs (parents, teachers, coaches, peers, self), and emotionality (motivation, responsibility, persistence).

In the coaching/teaching environment, one of the most important of these variables is preferred perceptual mode - that is, how athletes take in and process information or learning style. Researchers have suggested that while people utilize multiple ways to process information, there is no one preferable way. Four modes of input are most likely for information processing and should be considered when designing instructional input for practice and game situations. These four are vision, auditory, kinesthesis, and thinking (Braden & Zeitlick, 1991; Kolb. 1985; Semple, 1982; Barbe & Swassing, 1979). Typically, one of these modes is used more than the others even though individual learners use all modes to some degree. This is referred to as modal strength and is broken down into four types of learners. These include visual learners, auditory learners, kinesthetic learners, and thinkers.

While considering these modes, coaches should also consider that with maturity, players will often change which modes are more utilized. They is also evidence to suggest that learning styles are task specific, that is, the approach players use in the classroom may not be the same as they use on the practice field (Coker, 1995).

Learning Styles

Visual Learners

Singer (1980) suggested that visual perception is probably the most important source of information when performing sport skills. Visual learners' primary source of information is received through their eyes. The visual learner learns best by watching a demonstration or model. Seeing another player demonstrate a movement, noting visual cues that reinforce key concepts of skill performance, and looking for visual reference points are helpful tools for the enhancement of learning. Coaches using
visual aids to supplement their instruction, feedback, and discussions will enhance the visual learning athlete's ability to process information. Studying pictures, analyzing videotape, viewing charts, and accessing diagrams are all useful tools to enhance the learning process of visual learning athletes. However, a coach cannot assume that a player, especially a beginner, will automatically know what to watch, much less be able to know the difference between what she/he the beginner's attempt looked like and what the model actually did. The coach's role, especially with the beginner, is to assist or cue the young athlete as to what input is important.

**Auditory learners**

An athlete who is an auditory learner focuses on sounds and rhythms to learn movement patterns along with verbal description of the movement (Coker, 1996). Auditory learners learn best through the use of language including lectures, group discussions and audiotapes (Dakin, 2002). To enhance understanding of athletes who are auditory learners, coaches should provide opportunities for athletes to talk through plays, movements, skill cues, and game strategies with other team members and/or coaches. Coaches can also tape record team talks, instructional cues, and keys to enhanced performance so that their auditory learners could listen repeatedly over time.

**Kinesthetic Learners**

Kinesthetic learners learn by doing. Information is actually processed and learned when the performer is provided an opportunity to move. Coaches have been instructed historically to get their players into 'game like' situations as soon as possible. All learners have a need to touch things and try their new skills. But, the athlete who is a kinesthetic learner needs to know what the movement feels like. Eventually, the correct feeling becomes the frame of reference with which to compare all subsequent performances (Coker, 1996). In order to accommodate this learning style, coaches need to provide game and skill simulations along with opportunities for repeated practice. Recognizing that replicating movements are the key for the kinesthetic learner, coaches should pay careful attention to both the accuracy and form of the movement. The coaching cliché that 'Practice does not make perfect, it makes permanent' has a basis in scientific theory. Through repeatedly practicing a skill, play, and movement sequence, the kinesthetic learner is developing a frame of reference based on what the movement feels like. It is the coach's responsibility to ensure that the correct movements are emphasized and reinforced while incorrect ones are identified and eliminated.

**The Thinker**

The thinker represents the athletes whose learning styles is best described as a movement scientist (Coker, 1996). These athletes require information that they can analyze for understanding movement concepts, principles, plays, skills, and strategies. The thinker athlete is stimulated to find solutions to movement problems by being allowed to ask questions and solve movement problems creatively. Coaches can maximize the performance potential of these athletes by providing opportunities to process information in multiple ways. Coaches can use scientific articles, thought provoking discussions, and analysis of skill performance and game strategy to utilize this athlete's preferred method of processing information.

**Suggestions for Coaches**

Within any team, there will be athletes with various learning styles. To maximize the team potential, coaches need to both understand these styles and accommodate them in their instruction and feedback during both practice and game situations. Even when recognizing the four distinct styles, coaches and teachers tend to instruct using the perceptual mode through which they prefer to learn (Dunn et al., 1989). In other words, a coach who is a visual learner will use more visual cues than one who is an auditory learner. Therefore, it is suggested that coaches identify their own learning style first. Coker (1996) suggested that this can be determined by taking a learning styles inventory (Kolb, 1985) or by reflection, videotape analysis, or informal observation. Examples of simple inventories can be found at Learning Style Inventory (http://pss.uvm.edu/pss162/learning_styles.html) and Learning Style Scales (http://www.engr.ncsu.edu/Learningstyles/ilsweb.html). These are relatively simplistic tools by which a coach can begin to identify his/her own approach to problem solving.

Coaches can implement several basic instructional strategies to accommodate visual, auditory, kinesthetic, and thinker learners. To accommodate visual learners, coaches should enhance their verbal
communication with written words, diagrams, visuals, and videotapes. The visual learner's performance is enhanced when watching demonstrations to understand how a movement is performed. They then are able to compare their current movement with that which they watched.

Sound and words are most relevant for auditory learners, therefore coaches should pay attention to specific auditory performance cues and repeat them. In-depth verbal descriptions of movements, skill performance, and game strategy along with attention to rhythmic patterns and sound cues also help enhance learning for athletes who prefer auditory learning.

By providing an opportunity to touch and manipulate equipment, feel the ball, and experience movements, skills, and game sequences, coaches provide their kinesthetic learners the best opportunity for enhancing performance. By utilizing a guided discovery style that instructs athletes through movement sequences, coaches can also enhance their kinesthetic learning athlete's ability to perform.

Coaches should provide a series of analytical questions and movement problems for the thinker athlete. By so doing, the coach will tap into those athletes' need to analyze knowledge to improve performance. Before practice and instruction, coaches can develop "why" and "how" questions for these learners. This method will assist these athletes in understanding performance challenges and movement patterns, and, hopefully, improve performance.

Coker (1996) suggested using specific language terms to accommodate all types of learners.

<table>
<thead>
<tr>
<th>Learning Style</th>
<th>Terminology</th>
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<tbody>
<tr>
<td>Visual learner</td>
<td>See, look, imagine, focus, view, watch, observe, visualize</td>
</tr>
<tr>
<td>Auditory learner</td>
<td>Rhythm, hear, pace, cadence, tempo, pulse, beat</td>
</tr>
<tr>
<td>Kinesthetic learner</td>
<td>Feel, experience, stimulate, move, do, demonstrate, practice</td>
</tr>
<tr>
<td>Thinker learner</td>
<td>Analyze, examine, investigate, compare, assess, explore, understand</td>
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Summary

According to Williams, et al (1997), the area of cognitive or learning style in athletes has been relatively unstudied, yet it has significant implications in learning and performing athletic skills (Williams and Anshel, 2000). Understanding learning styles and providing appropriate instruction utilizing strategies for each learning style (visual, auditory, kinesthetic, and thinking) can enhance a coach's ability to improve individual and team performance. By paying careful attention to the design of practice and providing opportunities to learn for all types of learners, coaches will increase the likelihood that all of their athletes are striving to their potential.

References

Leadership, 46 (6), 50 - 58.


