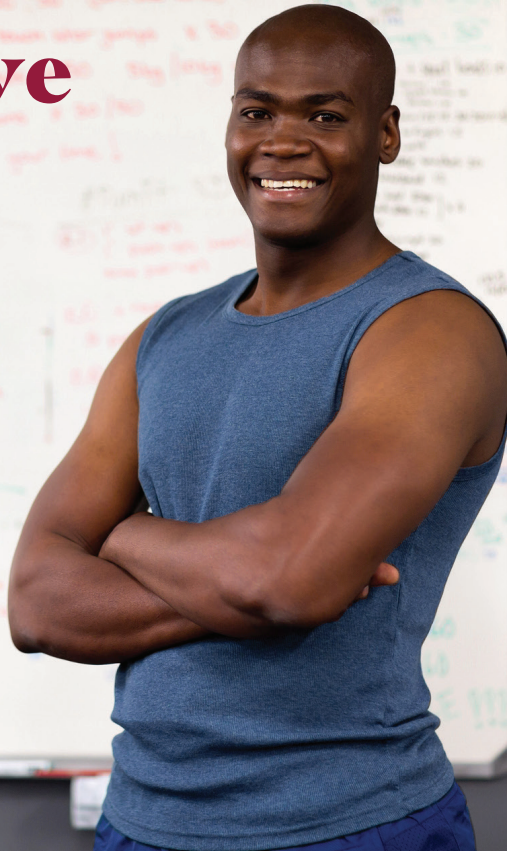# Applying Social Cognitive Theory in Coaching Athletes:
The Power of Positive Role Models

By Graeme J. Connolly

> *When it comes to sport, good behavior can't be modeled too frequently. Success in sport is derived to a great extent from doing the right things at the right time and doing them right all the time.*
>
> **(Huber, 2013, p. 157)**

In the classic sports movie *Remember the Titans* (2000), Denzel Washington starred in the true story of a newly appointed high school football coach in his first season at the helm of a racially integrated team. It illustrated how one person can shape the behaviors and attitudes of young athletes under his direction by modeling behaviors and beliefs he hopes to see in others. This inspiring and uplifting story is, in fact, a great example of applying specific principles of psychology to the coaching process. More specifically, the work of Albert Bandura (1977, 1986) and his social cognitive theory are reflected in the movie and form the basis for this article. By exploring and developing a better understanding of the basic tenets of social cognitive theory and its applications, coaches can add to and enhance their "coaching toolbox," and ultimately improve their practice.

This article begins with a brief overview of Bandura's social cognitive theory (Bandura, 1977, 1986). It then examines four types of behaviors worthy of imitation and provides practical examples of each. Thereafter, the article defines and outlines various models that coaches need to be aware of and describes the power of modeling. It concludes with an examination of four processes of observational learning and, most importantly, the actual practical application of Bandura's social cognitive theory as it relates to coaching athletes.

Overview of Social Cognitive Theory

The process of learning through observation and imitation is known as social cognitive theory. This theory refers to a psychological model of behavior that emerged from the work of Albert Bandura (1977, 1986). It was initially developed with a focus on the acquisition of social behaviors and continues to highlight that learning occurs in a social context and that much of what is learned is gained through observation. Social cognitive theory is often described as the "bridge" between traditional learning theory (i.e., behaviorism) and the cognitive approach because it focuses on how mental (cognitive) factors are involved in learning.

According to Bandura (1977), much of social learning results from imitation — a process called observational learning — and the best way to understand how learning occurs is through considering operant conditioning principles. Observational learning is regarded as a cognitive form of learning because learners are required to pay "attention, construct and remember mental representations . . . of what they saw, retrieve these representations from memory later and use them to guide behavior" (Sigelman & Rider, 2006, p. 39).

According to Bandura (1977), one can summarize observational learning with two statements (as outlined by Huber, 2013):

1. "Much of human learning is a function of observing and imitating the behaviors of others or of symbolic models such as fictional characters in television programs and books. From a Skinnerian point of view, imitative behavior can be considered an operant, which is a response not elicited by any known or obvious stimulus"

Creating opportunities for athletes to observe "memorable" events, such as great training sessions and competitive performances, may promote retention.

(p. 153). In simple terms, the person chooses to make the response.

2. When imitative behaviors result in positive contingencies or in the removal or prevention of adverse contingencies, they become more probable (Masia & Chase, 1997). Again, from an operant conditioning (Skinnerian) perspective, a reinforcer increases the probability that a response (i.e., behavior) will occur.

Unlike Skinner, Bandura (1977) believes that humans are active information processors who think about the relationship between their behavior and its consequences. Observational learning could not occur unless cognitive processes were at work. These mental factors mediate (i.e., intervene) in the learning process to determine whether a new response is acquired. Therefore, individuals do not automatically observe the behavior of a model and imitate it. There is some thought prior to imitation, and this consideration is called the mediational process. This process occurs between observing the behavior (stimulus) and imitating it or not (response).

Four Types of Behaviors Worthy of Imitation

In his recent book titled *Applying Educational Psychology in Coaching Athletes*, Huber (2013) outlined four types of behaviors that are worthy of imitation — social, learning, motor, and champion behaviors — and emphasized that "coaches of excellence consciously control the team environment by understanding observational learning and using this knowledge to influence different types of acceptable athlete behaviors" (p. 155). Whether it is having their athletes imitate good sportsmanship (social behavior), attentiveness to the coach (learning behavior), correct technique (motor behavior) or competitiveness (champion behavior), successful coaches facilitate observational learning so that their young athletes learn all types of acceptable behaviors from watching individuals who model good behavior. Table 1 summarizes these key behaviors and provides practical examples of each.

All the aforementioned behaviors and examples illustrated in Table 1 can be modeled. So, what, or rather *who*, are the models?

Models and Modeling

A model refers to an actual person whose behavior serves as a stimulus for an observer's responses. In society, children are surrounded by many influential models, such as parents within the family, characters on children's television shows, friends within their peer group, and teachers at school. These models provide examples of behaviors to observe and imitate. Similarly, athletes are constantly observing their coach, their teammates, an opponent, or an athlete they admire and look up to, and they are ready to imitate some of their observed behaviors.

Historically, modelling was considered to be nothing more than imitation of behavior. However, it is now recognized to be more sophisticated and has been described as the cognitive,

Table 1. Behaviors Worthy of Imitation with Examples

Behavior	Example
Social Measurable influence on others, particularly younger athletes	Respecting teammates and coaches
	Respecting opponents
	Being a gracious winner
	Accepting defeat with class
	Setting a good example
Learning Accelerates the learning curve through closer and more effective athlete–coach interaction	Attending to coaching instructions
	Remembering and following coaching instructions
	Asking questions when instructions are unclear
	Making eye contact with the coach
Motor Critical components of motor performance success	Throwing motion in football
	Pitching motion in baseball and softball
	Kicking motion in soccer
	Shooting motion in basketball
Champion Separates the perennially great teams and the not-so-great teams; the intangibles, the difference makers	High effort
	Persistence
	Dedication
	Work ethic
	Positive attitude
	Focus
	Competitiveness

Table 2. Behaviors Worthy of Imitation and Examples of Primary Models

Behavior	Primary Models
Social	Coaches, older athletes, parents, team administrators
Learning	Coaches, athletes
Motor	Coaches, successful athletes, symbolic models (books and magazine characters, video/audio of other athletes, pictures/diagrams, written instructions)
Champion	Coaches, older athletes

behavioral and affective changes that occur as a result of observing models (Schunk, 2004). Different forms of modeling exist and can be broadly classified under three headings: 1) a live model (which involves an actual individual demonstrating or acting out a behavior), 2) a verbal instructional model (which involves descriptions and explanations of a behavior), and 3) a symbolic model (which involves real or fictional characters displaying behaviors in books, films, television programs or online media; Bandura, 1977). Table 2 highlights the primary models that may influence athletes in relation to the four types of behavior worthy of imitation: social, learning, motor and champion behaviors.

Coaches who understand the application of social cognitive theory become more aware of the various models illustrated in Table 2 and the potentially positive (or negative) influence modeling can have on their program. Modeled behavior also has to do with what Brewer and Wann (1998) considered the power of the model. Models who possess expertise, experience, success and other similar defining attributes are considered to have power, and therefore, they attract the attention of the observer. As is apparent in the following section, the more power or value a model possesses, the more likely it is that athletes will imitate that model's behavior. The concept and importance of a model for athletes are discussed in more detail next.

Four Key Processes of Observational Learning

As proposed by Bandura (1977) and outlined more recently by Huber (2013), four mediational processes occur during observational learning. These processes are the attentional process, the retention process, the motor reproduction process, and the motivational process.

Attentional process

This process simply involves the extent to which a person is exposed and/or notices a behavior. For a behavior to be imitated, it has to grab a person's attention. This is obviously important because if an athlete does not notice the modeled behavior, he or she will not be able to imitate it. Many behaviors are observed on a daily basis, and many of them are not noteworthy and are often ignored as a result. Attention is therefore extremely important in whether a behavior has an influence on others. Several factors can influence the attentional process and greatly determine whether or not an athlete will attend to and imitate a particular behavior. These factors have to do with the characteristics of the modeled behavior and characteristics of the observer, as outlined in Table 3.

Retention process

This process refers to how well the behavior is remembered. The behavior may be attended to but is not always remembered, which obviously prevents imitation. It is important, therefore, that a memory of the behavior is formed to be performed later by the observer. According to Bandura (1977), two types of mental representations exist: visual and verbal. So, once an athlete observes a modeled behavior, they can store a visual sequence of the action, perhaps remind themselves verbally of key elements of the action, and then mentally rehearse (visualize) the action. Much of social learning is not immediate, so this process is especially vital in those cases. Even if the behavior is reproduced shortly after seeing it, there needs to be a memory to which to refer. Therefore, as Huber (2013) wrote, "It is also important to let your athletes observe great athletes not only in great performances, but also

Table 3. Factors Influencing the Attentional Process

Characteristics of the Modeled Behavior	
Factor	**Influence**
Distinctiveness	Behavior must have noticeable differences to be singled out from other behaviors that are similar.
Affective Valence	Behavior must have some type of emotional appeal that is attractive to the athlete.
Complexity	If the behavior is too complicated to be fully observed, the athlete may not attend to it; if it is too simplistic, it may not be interesting enough to capture attention.
Prevalence/Frequency	Behavior must be modeled multiple times to ensure athlete has enough opportunity to adequately attend to the appropriate behavior.
Functional Value	If the behavior has no significance or usefulness to the athlete, the athlete is not likely to attend to it; if significance or usefulness is high, the athlete is likely to pay close attention.
Characteristics of the Observer	
Factor	**Influence**
Arousal Level	Athlete who is bored or uninterested is likely to miss or ignore the modeled behavior.
Sensory Capacity	Athlete must be in position to functionally observe the entire behavior from start to finish.
Perceptual Set	Athlete must be in the appropriate mind set to mentally process the modeled behavior.
Past Reinforcement	Athlete who has received reinforcement previously for observing a modeled behavior is likely to observe it again in the future.

in great practices... Athletes can directly observe the types of day-to-day practice behaviors that ultimately lead to great competition performances" (p. 159). Indeed, creating opportunities for athletes to observe "memorable" events, such as great training sessions and competitive performances, may promote retention.

Motor reproduction process

This process is the ability to perform the behavior that the model has just demonstrated. Once athletes have observed the behaviors, the coach and the athletes must work hard to refine and shape behavior until it resembles the desired observed behavior. Athletes see many behaviors on a daily basis that they would like to be able to imitate but are not always able to. According to Bandura (1977), to achieve the desired observed behavior, the individual must possess the physical capability to imitate the behavior, receive accurate feedback during the learning process, and monitor attempts at reproduction. First, the coach cannot expect athletes to imitate a certain behavior without the prerequisite level of fitness or technical proficiency to imitate the behavior in the first place. Second, coaches need to fully understand what they are teaching to avoid providing inaccurate feedback to their athletes. Third, coaches should carefully monitor each repetition of a task to move toward proficiency and protect an athlete's safety and well-being when learning new and difficult movements.

Motivational process

This process may be the most important of the four processes of observational learning and refers to the will to perform a behavior. Without motivation, the observer is unlikely to be swayed to imitate the behavior. Motivation can be seen as the key component in all four stages or processes of observational learning. For example, during the attentional process, the model must possess enough emotional appeal to motivate the athlete to pay attention. And the athlete must be alert and interested (arousal level) enough to spend valuable attentional capacity observing the model. Next, the athlete must be further motivated to arrange and cognitively remember the information in the retention process and further motivated in the motor reproduction process to practice the observed behavior. Furthermore, if the perceived rewards outweigh the perceived costs (if there are any), then the behavior is more likely to be imitated by the athlete. Moreover, if the vicarious reinforcement is not seen as important enough by the athlete, then he or she will not imitate the behavior.

Applying Observational Learning Theory in Coaching

The aforementioned principles and concepts related to Bandura's social cognitive theory have limited value, particularly to coaches, if they cannot be directly applied to the motor learning and coaching processes. Therefore, this section presents specific ways in which coaches can apply those ideas related to behaviors, models and observational learning to improve and further

> *The development of a well-rounded and competent athlete, therefore, requires the coach to encourage athletes to imitate good social, learning and champion behaviors as well.*

develop their coaching toolbox, enhance athlete performance, and cultivate program excellence. Six of these important applications (as outlined by Huber, 2013) are summarized next.

1. **Be aware of your athletes' sources and types of reinforcement for imitative behavior and control who they are observing as role models.**

Positive role models and an abundant source of reinforcement are pillars of a successful program. Coaches need to utilize operant conditioning principles to reward good models and athletes' imitation of good behavior. Conversely, coaches need to consistently recognize and reprimand poor models and athletes' imitation of inappropriate behavior. This is exemplified in the following anecdote shared by Huber (2013) that relates to the purposeful action taken by the coach of a National Collegiate Athletic Association (NCAA) diving team with regard to his highly decorated team captain:

> Our team captain was very talented and narrowly missed winning a conference title the year before (he was also an NCAA All-American the year before), but he was not a model for dedication, effort, and commitment. After many meetings with him I decided to change things on my part. The next day I went over to him and, knowing it might eventually cost me my job, I told him to clear out his locker. I then went over to my walk-on freshman diver who was the worst diver on the team, but the hardest worker and most dedicated, and told him he was my new team captain. It was a jaw-dropping moment for all three of us. The former captain was shocked that he no longer was a member of the team, the freshman was shocked to suddenly become the team leader, and I was shocked at my actions and secretly wondered if I would still have a job at the end of the season. Well, fortunately, I did keep my job and by substituting a new team captain (i.e., model) and providing reinforcement for team members imitating the new model, our team eventually found success through hard work, dedication, determination, and commitment. Four years later we were crowned national team champions. (p. 165)

2. Be aware of 'invisible' sources of reinforcement and modeling and manage these sources so that no hidden curriculum exists in your program.

In some instances, the source of reinforcement can be hidden. This can result in athletes being indirectly rewarded, and the coach may or may not know who the model is or where the reinforcement is coming from. Moreover, secondhand (vicarious) reinforcement can lead athletes to engage in behaviors — even ineffective or inappropriate behaviors — for extended periods of time despite a lack of any direct reinforcement. Bandura's (1962) seminal study examining the behavior of three groups of children who observed three different models is illustrative of these important coaching applications. In this study, all three models behaved aggressively toward an inflated doll. The first model was rewarded for aggressive behavior. The second model was punished, and the third received no consequence for their behavior. Next, the three groups of children were allowed to interact and play with the doll. As a result, the group that observed aggressive behavior being rewarded was significantly more aggressive in play with the doll than the other two groups. Therefore, a coach must be wary and receptive to the models and sources of reinforcement that affect athletes' behaviors.

3. Model good behaviors that you hope to witness in your own athletes.

Athletes take their cues from their coaches. So, the coach's own behaviors should reflect the behaviors he or she hopes to see in athletes. The coach serves as an important model and an influential source for direct reinforcement. If the coach is passionate about the sport, athletes will be passionate. If the coach perseveres when things get tough, the athletes will learn to persevere. If the coach demonstrates good sporting behavior, the athletes will demonstrate it too. If the coach models a positive attitude and an optimistic approach, so will the athletes. If the coach shows compassion toward others, athletes will do the same. The same sentiments can be illustrated by the example set by a parent for his/her children. Indeed, many parents often find themselves unconsciously muttering inappropriate words that reflect their frustration with other drivers when transporting their children to school every morning. It should come as no surprise, then, to hear a child blurt out, "Damn!" every time the traffic does not behave as expected. The lesson is clear: The child had simply observed the parent and decided to imitate that behavior. Again, the power of a good role model and leader cannot be understated.

4. Observational learning and reinforcement should include the four types of behaviors worthy of imitation.

In coaching, an obvious point of emphasis is motor learning and performance. The coach wants his or her athletes to learn fundamentally sound techniques that can be performed well, both in practice and in competitive situations. Movements such as a throwing a football, pitching a softball, kicking a soccer ball, and shooting a basketball are important for athletes to observe. However, observational learning and reinforcement should not be limited to just motor skills and movements. The development of a well-rounded and competent athlete, therefore, requires the coach to encourage athletes to imitate good social, learning and champion behaviors as well.

5. Acknowledge and remember that observational learning has powerful and far-reaching effects.

Observational learning can affect not only the behavior of current athletes but also the behavior of those who come next. Therefore, it is worth the time and effort to reinforce appropriate models and imitative behavior now so that future generations of athletes obtain these same behaviors. New athletes and older athletes are more inclined to continue the "tradition of excellence" and imitate appropriate behaviors once good role models and reinforcements are present and accounted for. For example, the author has observed programs in which teams from generation to generation resembled one another. This similarity can be a good or bad thing, depending on the program and the behaviors being modeled. Some programs are built on a clear vision and embody the same core values that are steeped in tradition and are personified by each generation of athletes. In contrast, other programs have a reputation for being unsportsmanlike and lacking in discipline, and this reputation is passed on to each successive generation. It is therefore important to be aware of the power of observational learning and to ensure that the coach establishes and maintains a vibrant, flourishing and respected program that will leave an enduring positive footprint and legacy.

6. Expose a talented young athlete to an established and accomplished athlete who models good social skills, leadership, mechanics and work ethic.

This model may be a more experienced and successful athlete on the team, or it could be someone else such as a former athlete or an athlete playing at a higher level of competition. For example, the author asked Garrett, one of his athletes in his sophomore year, to study and imitate Lionel Messi, the famous Argentine professional soccer player and five-time World Player of the Year. He would study Messi's scoring plays for hours and then try to imitate his movement and shooting mechanics. On a regular basis (utilizing the myriad of Internet sites and media sources now available), he would view Messi's goal-scoring exploits at home (on television), in the author's office (on the computer), and even on the go (on his cell phone) and go out to the practice field and imitate what he saw. He not only imitated Messi's play but also Messi's mental toughness, competitiveness and disciplined approach to soccer. Garrett went on to have his most successful high school soccer season recently, with significant improvements evident in all aspects of his performance. Undoubtedly, observational learning accelerated Garrett's motor skill development, as well as his emotional and mental toughness. This real-world example highlights the need for coaches and athletes to take advantage of rapid technological advances. Indeed, numerous platforms are now easily accessible (e.g., social media, on-demand programming, ESPN/FOX and other sports networks/sites, and news publications/media) to observe, share, process and ultimately imitate

athletes' behaviors that are worthy of imitation. The ease with which a coach can target the sport or athlete of his or her choice and highlight the importance of their exemplary social, learning, motor and champion behaviors is remarkable, as is the appealing nature and content of these platforms to the younger generation of athletes for which coaches are now responsible. With that being said, the successful application of the social cognitive theory now and in the future will be somewhat reliant upon the effective mobilization and utilization of these aforementioned platforms by coaches and athletes alike.

Many young athletes instinctively gravitate toward and expose themselves to certain athletes: the young football player who dreams of becoming the next famous National Football League player he idolizes and imitates Cam Newton's every move; the young tennis player who watches every match and analyzes every shot made by Serena Williams; the aspiring golfer who has every instructional video and highlight real produced by Jordan Spieth. If athletes do not have a model, the coach can help them select one. If they have an inappropriate model (the model is not right for them because of inferior, odd or hard-to-imitate technique; body shape or type; or inappropriate social and champion behaviors), the coach can help them select a more appropriate model.

Conclusion

Bandura's social cognitive theory has the potential to have a profound effect on coaching, athletes and sport programs. By taking a social cognitive approach to coaching, coaches can help their athletes through the processes of observation, imitation and reinforcement of acceptable social behaviors, learning behaviors, motor behaviors and champion behaviors. The realization that athletes are scrutinizing everything that coaches do can be quite daunting. However, it can also be exciting and thought-provoking to think that a coach has the ability to teach, influence and inspire athletes simply by having them observe his or her behavior and the behaviors of others who are an integral part of the program. Coaches have the potential to make a difference in the lives of their athletes on a daily basis, and by embracing the ideas and applying the concepts associated with the social cognitive theory, coaches will be well on the way to improving the athletic experience for all athletes, on and off the field.

References

Bandura, A. (1962). Social learning through imitation. In N. R. Jones (Ed.), *Nebraska symposium on motivation*. Lincoln: University of Nebraska Press.

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Brewer, K. R., & Wann, D. L. (1998). Observational learning effectiveness as a function of model characteristics: Investigating the importance of social power. *Social Behavior and Personality, 26*, 1–10.

Bruckheimer, J. (Producer), Oman, C. (Producer), & Yakin, B. (Director). (2000). *Remember the Titans* [Motion Picture]. United States: Walt Disney Studios.

Huber, J. J. (2013). *Applying educational psychology in coaching athletes*. Champaign, IL: Human Kinetics.

Masia, C. L., & Chase, P. N. (1997). Vicarious learning revisited: A contemporary behavior analytic interpretation. *Journal of Behavior Therapy and Experimental Psychology, 28*, 41–51.

Schunk, D. (2004). *Learning theories: An educational perspective* (4th ed.). Upper Saddle River, NJ: Pearson.

Sigelman, C. K., & Rider, E. A. (2006). *Life-span human development* (5th ed.). Melbourne, Australia: Thomson.

Graeme J. Connolly (gconnolly@augusta.edu) is an associate professor and graduate program coordinator in the Department of Kinesiology at Augusta University in Augusta, GA.