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## The Transfer of Motor Skill Practice to the Game: A Review of Transfer of Learning Theory and Applications

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**The Transfer of Motor Skill Practice to the Game: A Review of Transfer of  
Learning Theory and Application**

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Exercise and Sport Science

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## **The Transfer of Motor Skill Practice to the Game**

### **Introduction**

Becoming the star athlete is not always an easy feat; it takes much more than just drive and dedication. It demands patience, confidence, adaptability, communication skills and most importantly, a respectable coach along the way. Do those reputable coaches need a similar skillset to their athletes? How exactly do those coaches create a learning environment that is effective enough to aid in the athlete's success in competition? Although the remedy may appear simple, there are many intricate steps within the overall process that require more attention to detail and mindfulness.

Time and time again, athletes become burnt out, lose interest in their long-term goals, or deal with some type of sports-related injury during their athletic career. These inherent problems typically result from their coaches' preconceived notions of exhausting more practice as the main remedy to enhancing performance. However, several recent studies and reviews based around those issues suggest it is not wise to rely on lengthy practices and simple repetitions. One text stated, "the most effective learning occurs when a repetition activates as many of the individual components of the processing system as possible" (Schmidt & Lee, 2020).

This creates a common problem for higher level coaches that are training athletes to compete for recognition and/or awards. They need to be able to address and consider improved methods for practice design, time utilization, and positive transfer of learning to the game. Such practice should involve activating all components of the processing system and being methodical with repetitions during practice.

Time is of the essence. Conducting a worthwhile practice involves a competent coach who can appropriately maximize skill acquisition and retention. Without an adequate training regime and supporting coach, skills may not transfer to the game when it comes time to do so.

Analyzing the real purpose of practice, taking a deeper look into the theories behind transfer of learning, and focusing on the quality and structure of the repetition-based practice design can be essential for a coach. Using fundamental knowledge and major research, such as this overview, can start as an excellent guide for those coaches who are looking to properly instruct the desired skills, provide accurate feedback, and aid in the athlete's perceptual skills for the future.

### **The Purpose of Practice**

What is the real purpose for practice? The text, *Motor Learning and Performance. From Principles to Application (2020)*, textbook concludes:

Quite simply, the single most important factor leading to the acquisition of motor skill is practice. However, practice is also probably one of the most poorly understood and misused terms when applied to the concept of learning. There's no easy way around it, and as a general rule, more practice produces more learning (Schmidt & Lee, 2020)

How does the resourceful coach produce the most effective and efficient practice structure that aligns with skill acquisition and retention? What exactly are the key outcomes a coach could be hoping for?

Practice should fully prepare an athlete with the skills, knowledge, and confidence to perform exceptionally well in practice, as well as in competition. It should provide not only acquisition of the desired skill(s), but retention, transfer, independence, ownership, mastery, and

a growth mindset. Proficient performance from the athlete during practice is key, but it should then be able to be transferred to the desired circumstance(s), like competition. This will stem from practice conditions stimulating similar conditions to game-like scenarios.

### Acquisition

Before being able to retain and transfer certain motor skills, coaches should understand the stages of learning that their athlete(s) will go through to acquire a new skillset. Fitts and Posner's stages are the cognitive stage of learning, fixation stage, and autonomous stage (Kee, 2019). They were designed for perceptual-motor learning place "heavy emphasis on how the cognitive processes invested in motor performance change as a function of practice" (Schmidt & Lee, 2020).

### Retention

To understand practice deeply and fully, coaches should first dive into the key outcomes that they anticipate. One of those common leading goals of practice is skill retention. Long-term retention is likely a coaches aim when first designing practice. This long-term retention refers to the athlete's ability to perform a desired task the way they remembered it over longer periods of time. Skill retention that lasts longer can be slightly revised each practice session to prepare that skillset for changing conditions. However, to get to that point, Schmidt & Lee argue that:

long-term retention depends largely on the nature of the task—discrete tasks are forgotten relatively quickly, especially those with a relatively large cognitive component...On the other hand, continuous tasks are retained very well over long periods of no practice. Of course, the amount of original practice will have much to say about the relative amount of retention for these tasks (2020)

### Transfer

Another key element to effective practice is the transfer of the newly acquired and retained skill(s). Coaches need to organize practice to maximize this potential. Transfer is defined as “the gain or loss in the capability to perform one task as a result of practice or experience on another task. Transfer is positive if it enhances performance in the other skill...”(Schmidt & Lee, 2020). This is the part of practice where coaches need to be mindful of fundamental movement patterning, perceptual elements, strategic or conceptual elements, discrete versus serial skills, simulation, and/or physical versus psychological fidelity.

### **Transfer of Learning Theories and Models**

The main theme of this paper is to provide theories, explanations, and strategies for the best transfer of learning styles that coaches can exploit within their practices. Their thoughts and understanding of these relationships should give them adequate reason(s) to sequence their practices for the most positive transfer to competition. The relationship between practice and transfer of learning is a delicate connection, and that is why this literature may be able to influence a coach’s decision. Schmidt & Lee’s text suggests “teaching for transfer, or organizing practice, and instruction to facilitate transfer of learning, is an important goal for most instructional programs” (2020).

Transfer can be measured through something termed percentage transfer. Shown in Schmidt & Lee’s text, this is:

*“A means of doing this to provide an estimate of the total amount of improvement of the group that had no prior practice on any task, and then compare that to the initial*

*performance of the group that had the type of practice being evaluated. Simply taking the initial performance score of the no-practice group and subtracting the final performance score shows...% transfer (2020).”*

This is one way that coaches can account for their practices being effective or not. Depending on the sport or activity at hand, the coach can determine pre and post retention tests to determine if they are doing their job correctly.

One recognized transfer model is the similarity-based, but not all similarity methods are widely used by Motor Behavior researchers and authors. One is the idea that transfer of learning between two tasks increases as the similarity between them increases. One idea was that of identical elements, according to which learning certain elements in one situation transferred to another skill because the second skill used the same elements (Schmidt & Lee, 2020)

The main concern here is that the concepts of “similarity and identical elements are never explicitly defined” (Schmidt & Lee, 2020). On the other hand, common movement patterning (using the same joints and muscles to perform transferrable movements), common perceptual elements (reacting to certain cues in the environment(s)), and common strategic or conceptual elements (similar rules/guidelines) help increase positive transfer for similarity-based approaches (Schmidt & Lee, 2020).

Other ways of determining transfer may be through ‘specific transfer.’ Sometimes, “learners are trained to be proficient at a specific task with a limited range of variations...Many closed tasks share these characteristics” (Schmidt & Lee, 2020). Measuring learning can be different for each coach, based on the goals of their acquisition experiments. Therefore, specific transfer could potentially just be used to measure the performers’ ability to do this skill in general.

Under generalized transfer, near transfer is “the extent to which the practice transfers to different, yet very similar settings in the real world” (Schmidt & Lee, 2020). On the other hand, “sometimes instructors want to train learners to develop more general capabilities for a wide variety of skills, only a few of which are actually experienced in practice. This is usually termed far transfer...” (Schmidt & Lee, 2020). Moreover, these generalized transfer types are not the typical transfer of learning that coaches first think of. Instead, they can be measured through the practice skills that transfer to a different type of activity.

Another model explaining transfer of learning is through **specificity of learning**. This is essentially when “...transfer of skill from practice to another context (e.g., testing or competition) can be facilitated if the individual has practiced under conditions that replicate the target context as closely as possible” (Fisher & Fairbrother, 2020). Sensory feedback during the original practice plays a key role here if similar sensory feedback is available during competition.

For example, suppose a lacrosse team is hosting first round playoffs at their school, playing at 8:00 PM, and already sold out the stadium seat tickets. The coach should have his/her athletes practice on their playing field around the same time, have parents come watch or play recordings of people cheering/yelling in the stands. This would provide the similar sensory and perceptual input as the circumstances under which they learned the tasks/skills. Researchers Fisher and Fairbrother showed “sensory integration is thought to result from all the senses working in cooperation to create an individual's perception of an experience, which in turn influences the extent to which a specific and contextualized skill is learned (2020).

Research by Willey and Liu (2018) explored generalized motor programs and how the schema theory can be a way to help enable athlete’s retention with their varied motor

programming and skill variations for different circumstances. They basically had different groups use varied versus constant practice to determine if their throwing GMP would give them the skills to use in an instance where they must throw different distances. They proved, “our data still supports the idea that a varied group may develop a better generalized motor program for more difficult distances than the specific group, at least after a short retention period” (Willey & Liu, 2017). Their varied group, who was able to originally practice throwing different distances performed more accurately. They also mentioned, “training at two distances as compared to one reduced the systematic errors across distances at posttest” (Willey & Liu, 2017).

### **Quality and Structure of Practice**

When it comes to practice, repetitions are recognized a valuable source of learning. Although previously mentioned to be thought as not very effective, repetition does not always lead to burnout and injury. Then, how should one organize their practice to be the most efficient while paying close attention to timing, repetitions, and keeping the task directly related to their practice goals? Plenty of coaches and athletes are well-aware of just how frustrating it is to increase repetitions in hopes that they improve, but they don't. However, they don't always understand how to fix this problem. Here is where evidence of manipulating the structure and content of practice repetitions will promote a positive transfer of learning to better game performance.

Firstly, the order of repetitions is a vital component for how well the overall skill retention and transfer is. A good way to look further into the order is by analyzing blocked versus random practices. Blocked practice is essentially when a coach needs to teach an athlete a

skill that requires multiple tasks to be performed. The practice is set up where the athlete works on the first task and repeats it until they perform better in practice. Then, they work on the second, then the third tasks, or however many tasks at hand. Random practice (in the same situation) would call for a mixed variation of task order. They may be given task one, three, then two, and then it could be entirely different for the next round of trials.

Research has been conducted around these types of repetition-based practices to decipher which style is more effective in transfer, not just acquisition. Research created and analyzed by Fazeli, Taheri, and Kakhki (2017) presented that:

*“Variety in random practice provides an opportunity for the learner to compare and contrast various conditions and thereby develop a rich mental representation of task variety, creating more distinctive and detailed memories (Fazeli et al., 2017).”*

Their findings supported the groundbreaking experiment that the 1979 Shea and Morgan Experiment created. They found random practice to have a higher contextual-interference effect on practice and learning transfer. Those researchers:

*“Argued that changing the task on every random-practice trial made the tasks more distinct from each other and more meaningful, resulting in more elaborate memory representations...The blocked-practice participants, on the other hand...talked of running off the performances more or less automatically and without thinking much about the movements (Schmidt & Lee, 2020).”*

Moreover, with ample evidence, random practice of repetitions creates more durable and long-term distinct memories. Acquisition might not look like it is working, but if the goal is transfer of this learning to a competition, it is the best route to use.

Variability and spacing of repetitions can also be altered to increase transfer of learning. Constant-practice is where athlete(s) perform only a single member of a class of tasks. Variable-practice is where the athletes practice several members of a class of tasks. “The two groups have the same amount of practice and differ only in the amount of practice variability they receive” (Schmidt & Lee, 2020). It is believed that the variable practice group of athletes have enhanced schema learning. To prove this, research was conducted by a group of scientists and authors who wanted to find out more about this schema theory and what memory consolidation had to do with it as well.

These examiners discussed, “people learn new things easily by incorporating new information into meaningful and orderly patterns in preexisting knowledge structures called schemas” (Hasan et al., 2019). Their results showed:

*“The standard model of memory consolidation asserts that systems level consolidation occurs after learning, the interaction of hippocampal and neocortical ensembles can sometimes be very rapid when consolidation involves the interaction with activated associative schemas stored in the neocortex (Hasan et al., 2019).”*

Variability-based practice maximized generalization, allowing the performer the ability to “apply past learning to actions not specifically experienced before in practice” (Schmidt & Lee, 2020).

### **Skill Instruction in Practice**

These above concepts and research might make sense theoretically, but how does one express those elements to their athletes? How can a coach communicate their instructions properly? Trainers and scholars may understand the information previously stated, but it takes on a different form when it needs to be converted to lay terms and directed in different ways.

Essentially, practice can be designed in the most supported sequence. However, after one decides the appropriate practice design, they should then explore the best ways to teach the performers. For example, a coach may want to provide demonstrations, verbal cues, and/or directed attention to keep the athletes in tune with what they are trying to learn.

### Demonstrations

Verbal explanations are not always effective means for illustrating the proper technique.

According to Schmidt & Lee:

*“Visual aids, such as images, videos, and live demonstrations by an instructor or by the learners themselves (sometimes called modeling) are often used. This procedure comes under the general heading of observational learning, in which the learner gains information by watching another’s performance (2020).”*

This is upheld by research completed by Ghorbani and Bund (2016). Their study suggests that video demonstrations or point-light modeling are better for transfer of the of the technique. They believed:

*“Relative motion information available in a demonstration could be more effective in the first stage of motor skill acquisition, in which the learner attempts to assemble the efficient coordination pattern of the to-be-learnt movement (2016).”*

### Verbal Cues

Verbal cues are another way coaches can connect to their players, communicate proper technique and/or possible timing features. Verbal cues could be anything from ‘lower,’ ‘higher,’ ‘jump as high as possible,’ ‘down,’ ‘remember to flex knees,’ ‘weight shift,’ etc. Coaches should be aware that prior research stated, “Verbal cues influence the specificity and manipulability of various plyometric type movements” (Louder et al., 2015).

Performing plyometrics, with cues, was then used in research to determine whether similar cues aided in their skill acquisition and transfer. The researchers stated:

*“The clinical relevance of these observations is that professionals may potentially utilize extrinsic cues to better target the development of various components of functional strength including reactive strength and concentric muscle power (Louder et al., 2015).”*

Utilizing verbal cues could be used in addition to the observational learning. However, it is most likely best used following the modeling/demonstrations and when using extrinsic and intrinsic cues. This would allow players to grasp what they believe the task/movement to be but reinforcing some of those things as they’re performing it too.

### Attentional Focus

One area of concern for athletes can be where their focus is at. As a coach, one should hold the capability of redirecting the player’s attentional focus. It may be of importance to be able to pinpoint areas within the task/skill that might be of concern to focus on, using internal or external cues. To better facilitate athlete independence will assist in their ability to perform their skills effectively in competition. One way to instruct the athlete to direct their attention to is through internal or external cues.

Broadly, external cues and focus of attention is where an athlete focuses their attention upon the environment that their body is going to influence. Whereas internal cues and focus of attention is where the athlete focuses on the changes in their body like (e.g., weight shift). For example, when instructing lacrosse players to pass the ball, a coach could say ‘think of where the ball should land,’ instead of them thinking about how close together their hands are. Schmidt & Lee explained:

*“A leading explanation of attentional focus effects on performance was offered by Wulf, McNevin, and Shea (2001), termed the constrained action hypothesis. The underlying idea was that a conscious, moment-moment type of movement control is typical of less-skilled performance, and that a more free-flowing, automated type of movement control is typical of skilled performance. They theorized that consciously controlled movements were typical of an internal focus of attention and that automated movement control was used in externally focused performances (2020).”*

### External Attentional Focus

This is crucial to the ongoing studies based around internal versus external attentional focus. When constructing new research, Milley and Ouellette prompted their basketball participants “to “be aware of what you are doing” and “pay close attention to the mechanics of your shooting process”” (Milley & Ouellette, 2021). These are good forms of internal cues/phrases. However, the most reputable for maximizing retention and transfer to competition is by external cues. These researchers used imagery recordings to have their players consider environmental elements and end results instead of their body movements. Part of their imagery included:

*“You take a deep breath and begin your free throw routine. As you do your routine, your attention remains focused on the net. As you release your shot, you visualize it going in the basket. You watch the ball soar through the air and drop perfectly through the netting. The sound indicates it was a swish (Milley & Ouellette, 2021).”*

Proven by their results, external cues won again. Their “findings demonstrate that imagery techniques can be implemented within a sport practice environment and support the contention that an EFA is beneficial over an IFA for sport performance” (Milley & Ouellette, 2021).

Another research that backs up the standpoint the constrained action hypothesis on external cues over internal is by Halperin, Williams, Martin, and Chapman (2016). They reported:

*“External focus of attention promotes an automatic motor response, that is, in line with the desired outcome, whereas internal focus of attention directs participants to be conscious of their movements, which disrupts the automatic control of the involved motor systems. Particularly, it can be speculated that internal instructions led athletes to focus on just one component of a complex movement that is typically completed by an integration of many muscles and body parts. Thus, internal focus of attention may degrade the overall contribution of other body parts and muscles leading to suboptimal performance. In contrast, the external focus of attention encourages athletes to organize all the relevant contributors around the task (a) without omitting any one of the contributors and (b) allowing greater automaticity of the movement (Halperin et al., 2016).”*

This is what the leading research consists of. There is nothing necessarily wrong about using internal cues, but if the goal of a coaches practice is to bring about positive transfer of learning and more end results than acquisition, this may be of help. "Participants who adopt an external focus of attention showed superior motor skill performance and/or learning" (Zarghami et al., 2012).

### **Instructional Feedback**

Another area fueled by investigation around improved learning and transfer is feedback. As coaches, it should be known when to provide feedback, what type of feedback to provide, and

just how much is needed. Nonetheless, it is not always as simple as that. How exactly do the performers receive and use supplemental feedback? Do they need positive feedback, information about their errors or something else?

Augmented feedback is feedback that a coach or instructor gives back to a performer. “...it can be given or not given, given in different forms, and given at different times to influence learning” (Schmidt & Lee, 2020). Inherent feedback is what the athlete doing the task feels and naturally has by evaluating themselves after performance. When a coach gives no feedback, they are leaving the performer to their inherent feedback to make necessary changes (or not). If they do decide to provide feedback, it will always be in addition to what the performer already inherently knows too.

One research in particular shed light on some of the benefits of both types of feedback together. They found a person’s involvement in their own feedback (inherently) is important, but it is difficult to separate it from the augmented. That is likely due to:

*“After receiving feedback on performing a movement, the individual would compare performance with criteria in detecting errors, and then use the information to amend subsequent movements. Those who had the capability and opportunity to self-estimate errors were able to make comparisons and perform more appropriate future actions (Lee et al., 2021).”*

It is safe to say inherent feedback happens regardless of if the athlete’s receive augmented feedback as well. Thus, it can be left up to the athlete, but works better in unison because a performer can’t always detect their own errors. However, with both, they will be able to better analyze the environment and themselves for future engagement.

Timely feedback is usually given right after a task is performed. However, it is possible to delve into before, during, or after movement feedback as well. It is all dependent upon when the coach believes the student needs it most. Feedback is not always fed back after a task is completed. When providing feedback in the beginning of a task, it is essentially just modeling and instructional cues that the coach gives to their athlete. Concurrent feedback is provided during the task at hand. An example of this would be guidance devices. They “provide feedback in the form of physical restriction during movement execution” (Schmidt & Lee, 2020). After movement feedback is what most coaches think of delivering for their athletes because it is often the most common. There are two types termed knowledge of performance and knowledge of results.

Knowledge of performance (KP) is verbal feedback about the movement parameter. Knowledge of results (KR) is related to the movement outcome. Both can influence the transfer of learning, often they should either be given together or just with knowledge of performance. That is because knowledge of results can be like inherent feedback. Granted, a coach may tell them something they did not criticize themselves on already. Thus, the recommendation of using both.

Though, most research suggests knowledge of performance as being superior. The advised the same information previously stated that KP is better than KR, and a combo of KP and KR together is better than just KR. The authors also argued:

*“...feedback content should be somewhat prescriptive to direct a learner towards regions/solutions of the movement space that are likely to contain goal-relevant solutions. These findings can help practitioners designing their feedback interventions and improve the learning process (Oppici et al., 2021).”*

Feedback can be detrimental to a performer's transfer of learning, or it can be encouraging. Coaches must be effective, efficient, and precise in the way that they give feedback. Another good way to make sure coach educators and/or their coaches are prepared to do this is to look at the differences when comparing bandwidth versus summary feedback to apply accordingly. The bandwidth feedback method has two general rules:

*“First, precise feedback indicating the amount and direction of the error is given only when performance falls outside a range of acceptability. Second, if performance lies within the bandwidth of acceptability, then no feedback is given—the learner being told ahead of time to interpret the absence of feedback as meaning that performance was essentially correct (Schmidt & Lee, 2020).”*

In research by Lee and Kong, they used visual feedback as part of their bandwidth to illustrate the error tolerance. Their reporting's found positive learning from “effects of online-bandwidth visual feedback on force control and found more reduction of task error” (2020). Normally, novice players will need more feedback than the more skillful due to falling outside of their error tolerance band. Coaches will provide less and less feedback as the athlete progresses because most errors will be within the error band, making it correctly performed.

Summary feedback is delayed feedback. Coaches could potentially wait until all trials are finished to summarize the entire performance. Though it may seem ineffective, it is more powerful for learning than giving feedback every single trial. It lessens the chances of dependency upon their coach for receiving feedback each trial, creates no basis for movement change each time, and encourages independency on their own inherent feedback. They are overall better at self-critiquing. One of the studies that proved this point was written and formed by Stan, Mehta, Sternad, Petit, and Hillman (2017). These investigators concluded:

*“Group variability (standard deviation) was lowest in the Summary feedback group during both retention days, lending further support for the beneficial effect of reduced feedback on short- and long-term retention (2017).”*

## **Psychological Skills**

Preparing athletes mentally is critical to their development and readiness for competition. Their independence and confidence could be the primary determinant of success in competition, independent of their learning transfer. Reduced anxiety and increased intrinsic motivation may stem from their development of psychological skills.

### *Intrinsic Motivation*

These skills can be byproducts of an effective practice design using the transfer of learning framework from the previous sections. First thing’s first, a good way to initiate these is through motivation for learning. Learners are sometimes unmotivated and lacking enthusiasm, which can result in a lack of transfer of learning. So, how should a coach emphasize mental coaching too?

Intrinsic motivation is largely determined by three basic needs: autonomy (control of one’s own destiny), competence (mastery of the skill), and relatedness (being accepted within a social context) (Schmidt & Lee, 2020). A technique commonly used to increase a learner’s intrinsic motivation, participation, and excitement is through teachback conversations. Research shows, regardless of knowing the students thought process beforehand:

*“Teachback dialogue is not only useful in individual encounters between teacher and student, it can also be useful to establish these dialogues between the teacher and a*

*group, with the same aim of reaching a final consensus, this time with all the students (Aliberas et al., 2021)."*

### Team Development

Another way to increase motivation and relatedness could be through team development. Aside from the physical skills being learned during practice, it is important to incorporate team building exercises into some of those as well. Team cohesion will ultimately lead to reduced anxiety during game time because they feel comfortable with their teammates and surroundings. One study expresses:

*"There is a wide array of approaches to implement a team building intervention in sport. Common team building approaches have typically involved the implementation of one or more of four approaches identified in the organizational psychology literature, including the improvement of goal setting, problem solving, interpersonal relationships (e.g., cohesion), and role development (Bruner, 2020)."*

This means, the individuals or as a team, will be more prepared to solve problems together and work toward their own goals. Thus, this can improve autonomy indirectly as well.

### Goal Setting

Goal setting can be done in practice, facilitated by the coach. It does not have to be something the teammates do on their own. It has been recognized that goal setting is one of the most frequently used mental skills in sports, and Goal Setting Theory has been the most prominent theoretical framework upon which goal setting interventions are based (Jeong, 2020). If specific goals are recorded for future reference, it can allow an individual's motivation to meet those goals increase. Not only will their motivation increase, but practice and competition will

both be considered friendly competition by the athletes. Whenever their goals are met, their confidence will subsequently increase also.

### *Self-regulated Practice*

A powerful way for learners to transfer what they practice is to feel ownership over part(s) of their practice, like the environment. In essence, they will have some say in the organization of their practice(s), when they receive augmented feedback, and/or how much practice they will decide to accept (Schmidt & Lee, 2020). Exploration of self-regulation and learning is exploited in a study with results that “showed positive associations between self-monitoring and deliberate practice amounts, which is consistent with the view that self-monitoring is central to self-regulated learning” (Bartulovic et al., 2018).

### **Conclusions**

Conducting effective practices that give athletes the ability to acquire, retain, and transfer their learning to competition should be the overarching goal of every coach. It should at least be in their frame of thought for philosophical reasons or for the improvement of themselves as mentors. This review should give insight to supportive research for motor learning theories that opens the possibility of creating a more thoroughly designed and structured practice.

It turns out, after reviewing all the listed theories, models, concepts, and advantages to certain ones, that coaches should in fact, possess the same skillsets as their athletes. That is, they should both certainly be patient, confident, adaptable, driven, dedicated, with exceptional communication skills. If coaches follow the models that they hold themselves to and their players are just as devoted, there will be a positive transfer of learning.

To avoid miscommunication, burnout, injury, and/or lack of learning and transfer, the elements and theories in this paper should be highly considered. There are a multitude of perceptions people have around instructing others or designing practice the 'right' way. However, not all of them are proven. Using research listed in this literature, may lead to new and improved hypotheses that show a new method/theory is better. Currently, though, this is an excellent starting point for coaches and athletes to have the upper hand.

There are so many things to keep in mind when structuring a practice, it can certainly be difficult to keep up with it all. Continuing education around national coaching requirements and keeping up with new studies is another way to stay updated following finding this text. Some things may stick out, and that is the purpose; this is a resource to continue coach and athlete development. Coach educators and coaches should always keep their specific goals in mind, while remembering the real purpose of practice.

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