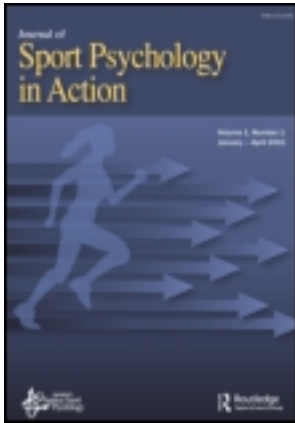


This article was downloaded by: [Michigan State University]

On: 11 September 2013, At: 06:46

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Journal of Sport Psychology in Action

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/uspa20>

Seeing the Difference: Developing Effective Imagery Scripts for Athletes

Sarah E. Williams^a, Sam J. Cooley^a, Elliott Newell^a, Fredrik Weibull^a & Jennifer Cumming^a

^a School of Sport and Exercise Sciences, College of Life and Environmental Sciences, University of Birmingham, Birmingham, UK

Published online: 11 Jul 2013.

To cite this article: Sarah E. Williams, Sam J. Cooley, Elliott Newell, Fredrik Weibull & Jennifer Cumming (2013) Seeing the Difference: Developing Effective Imagery Scripts for Athletes, *Journal of Sport Psychology in Action*, 4:2, 109-121, DOI: [10.1080/21520704.2013.781560](https://doi.org/10.1080/21520704.2013.781560)

To link to this article: <http://dx.doi.org/10.1080/21520704.2013.781560>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

Seeing the Difference: Developing Effective Imagery Scripts for Athletes

SARAH E. WILLIAMS, SAM J. COOLEY, ELLIOTT NEWELL,
FREDRIK WEIBULL, and JENNIFER CUMMING

*School of Sport and Exercise Sciences, College of Life and Environmental Sciences,
University of Birmingham, Birmingham, UK*

This article provides guidelines for coaches and applied practitioners to create effective imagery scripts for use with their athletes. Supported by the imagery literature, we describe the planning, writing, delivering, and evaluating stages of script development. We explain the importance of considering the five Ws (Who, Where and When, Why, and What) in the planning stage, and use our own case study to provide specific examples of how we considered these when writing our own script. Finally we discuss different ways of delivering and evaluating the imagery script to ensure it is effective and continues to be over time. An example imagery script is provided along with a checklist coaches can use when developing their own script.

KEYWORDS *imagery content, imagery function, imagery perspective, visualization*

Imagery, sometimes referred to as visualization, is a popular mental technique used by athletes and suggested by coaches to achieve sporting success. Support for its effectiveness is provided by many anecdotal reports and research studies (for review see Cumming & Williams, 2012). U.S. gymnast and double Olympic Gold Medalist at the London 2012 Games Gabby Douglas explained to ESPN the importance of imagery in her success: “I listened to some (music) to pump me up and visualized the floor set I wanted to do. Then I went out and hit the best floor routine of my life . . . I was so proud, and it proved to me just how powerful my mind can be” (June 14, 2012).

Address correspondence to Sarah Williams, School of Sport and Exercise Sciences, College of Life and Environmental Sciences, University of Birmingham, Birmingham, UK, B15 2TT. E-mail: S.E.Williams@bham.ac.uk

Athlete imagery typically involves mentally creating an experience, typically from memory, which imitates a real experience in one or more sensory modalities. As illustrated in the earlier quote, a gymnast can see herself performing her floor routine in her mind's eye whilst hearing the music in her mind's ear. Consequently, imagery is a more appropriate term than visualization which implies imagery is only a visual process. Over 20 years of research has collectively shown that deliberately imaging these types of sporting experiences can help athletes to enhance their performance, either directly by improving their skills and strategies or indirectly through enhancing motivation, regulating arousal, and modifying cognitions such as self-confidence (for a recent review, see Cumming & Williams, 2012).

Like any physical skill, to fully benefit from this type of mental rehearsal, the recommendation is for imagery to be systematically incorporated into athletes' training regimes and competition preparation. However, despite being widely used, imagery is not always utilized correctly or effectively. This can unfortunately result in no benefit or sometimes even harmful outcomes for the athlete (Nordin & Cumming, 2005). For example, Nordin and Cumming (2005) found that individuals who imaged a poor dart throwing performance experienced a reduction in their actual performance of the task.

To ensure its correct use and gain most from using imagery, athletes can be guided through their imagery experiences with a script. However, it is often not very clear to practitioners, coaches, or athletes how a script should be developed and implemented. Drawing from the imagery literature as well as the authors' own applied experiences, the aim of this article is to provide a clear, concise, and practical set of guidelines for how to plan, deliver, and evaluate an effective imagery script. This article will address the complete process of script development, from what factors need to be considered before writing the script, to advice on how it could be written, recorded, implemented, and evaluated. It will do this using an example of a slalom canoeist named Fin. A sample imagery script is provided in Appendix A.

PLANNING AND WRITING THE SCRIPT

Before writing an imagery script, careful planning is important. We recommend making the following considerations: (a) *Who* will use the script; (b) *Where* and *When* will the script be used; (c) *Why* is the script being used; and (d) *What* will be imaged. Addressing these 5 Ws will provide ample information to develop a script that is personal and meaningful to the athlete. In our experience, we have found that taking the time to gather these details at the outset has led to athletes being more receptive to the process and motivated to use the script. An Imagery Script Checklist is provided in Appendix B for use when embarking on the planning stage. Each of the Ws will now be explained in detail.

Who

It is important to consider particular athlete characteristics that can influence how best to write a script. Firstly, you must decide whether the script will be used for an individual or a group of athletes as this might influence the content described. Secondly, background information on the athlete(s) should be obtained. For example, how old is the athlete(s)? Age may impact what types of imagery might be more or less effective for achieving desired goals. For younger athletes, metaphors such as imaging oneself “being strong as a bull” or “quick like a cheetah” can help generate certain feelings or emotions. However, older athletes may find these images hard to relate to, or prefer more explicit descriptions to image. The type of sport (e.g., team or individual) and the competitive level of the athlete are similarly important. Does the sport involve directly competing against an opposition? Are the skills open or closed? How skilful is the athlete? Considering such information at the planning stages will help make the script content more accurate and realistic, as well as ensure the athlete is imaging skills and scenarios that are appropriate and relevant to him/her. It is also important to consider personality characteristics of the individual which may also influence what content is included in the script. For example, are they very anxious, or extremely ego orientated when they participate in their sport? For examples of how the imagery may differ depending on these characteristics see Table 1.

TABLE 1 Athlete Characteristics to Consider in Developing Imagery Scripts

Who	Possible Imagery Script Differences
Individual or team scripts	Individual: More specific personalized content Team: More generic/open content for athletes to personalize
Age	Children: Use of metaphors Adults: More explicit descriptions
Sport	Team: Detail about teammates Individual: Detail about individual
Competitive level	Novice: Imagery with more basic movements, scenarios reflective of level (e.g., successfully completing a routine) Expert: Imagery with more complex movements, scenarios reflective of level (e.g., successfully winning a championship)
Motivational tendencies	Ego-oriented people: Other-referenced comparisons Task-oriented people: Self-referenced comparisons
Anxiety and confidence	High anxiety: Regulate anxiety
Imagery ability/preferences	Good imagery ability: Greater number of sensory modalities/details and longer imagery duration Poor imagery ability: Smaller number of sensory modalities/details and shorter imagery duration Uses preferred visual perspective: External visual imagery versus internal visual imagery Uses a combination of visual and kinesthetic imagery

A final point to consider is the athlete's prior experience with imagery and listening to imagery scripts. Is this done frequently or do they find certain images particularly difficult to perform? Research has shown that athletes who find it easier to image are likely to image more frequently (e.g., Williams & Cumming, 2012). Therefore, if your athlete has not previously engaged in deliberate imagery they might find it initially difficult to use the script. We follow Terry Orlick's (2007) recommendation for shorter, higher quality imagery sessions that can gradually be increased in length as the athlete becomes more accustomed to imagery and using scripts as imagery does improve with repeated practice. We recommend that athletes new to imagery start with a short imagery script (e.g., 1–2 minutes in length). As they begin to find it easier, the script can be lengthened with additional details. As well as the level of detail to include, the athlete's imagery ability is likely to influence which senses they can image (e.g., sights, feelings, sounds), and whether they have a perspective they prefer to view images from. Some individuals find it easier to view images from a first person perspective (1PP) which is when the individual views the image through his/her own eyes as if they were actually performing the movement. Others prefer watching the image from someone else's point of view which is known as a third person perspective (3PP). Studies show that imagery is more effective for athletes when they find it easier to image the content described to them (e.g., Moritz, Hall, Martin, & Vadocz, 1996; Robin et al., 2007). Therefore it is important that scripts are tailored to meet the athlete's capabilities and play to their imagery strengths.

For example, Fin prefers a 1PP; therefore our script (Appendix A) includes the line "you see the course in front of you" Had our athlete preferred a 3PP, we may have used the line "You see yourself in the start pool." Also considered when writing the script is that Fin is a 16-year-old male athlete who is part of his nation's elite development squad. He is quite an anxious individual whose symptoms intensify prior to competition. He also lacks confidence in competitive situations and often experiences self-doubt before important races. He uses imagery fairly often and demonstrates a somewhat good ability to image. A more detailed description of Fin's characteristics is outlined in Figure 1.

Where and When

Secondly, you should consider "where and when" the athlete will perform the imagery (i.e., the location and situation). This can include before, during or after training or competition. For example, an athlete imaging to facilitate performance of a particular skill or strategy may image each day during training. It can also be conducted in an athlete's own time when away from the sport environment such as in bed before falling asleep. As well as

Imagery Script Checklist	
Who	
Gender:	Male <input checked="" type="checkbox"/> Female <input type="checkbox"/>
Age:	16
Sport:	Slalom canoeist (C1)
Competitive level:	International development squad
Sport characteristics:	Self-paced, individual, high risk
Imagery experience:	Imagery use: Never ----- X ----- All the time Imagery ability: Poor ----- X ----- Very good IPP <input checked="" type="checkbox"/> 3PP <input type="checkbox"/> Combination <input type="checkbox"/>
Other details/characteristic to consider: <i>Although some use of imagery this is not systematic (more spontaneous in nature). A fairly anxious individual. Fin tends to lack confidence when competing and often experiences worry and self-doubt.</i>	
Where and When	
Where:	At competition venue, in the canoe, in the warm-up pool
When:	Training <input type="checkbox"/> Competition <input checked="" type="checkbox"/> Away from training/performance <input type="checkbox"/> (Before) / During / After
Frequency:	Before every competitive run
Other details to consider: <i>Imagery to take place just before the warm up when he reports his nerves and drop in self-confidence to impact on him the most.</i>	
Why (e.g., learn/improve skills/strategies, increase confidence, control arousal/anxiety etc)	
<i>To help Fin cope with "pre-competition nerves" and enhance feelings of self-confidence. Fin reported symptoms of somatic anxiety such as muscle tension and butterflies in the stomach which he thinks lead to a poor performance and thus these symptoms are viewed by him as having a negative impact on performance.</i>	
What (Content tailored to the "who", "why", "where and when")	
<i>Descriptions of the environment, the moments immediately prior to a competitive slalom run, the slalom run itself (including execution of successful skills), and the end of the run. Thoughts, feelings and symptoms experienced during this time (e.g., muscle tension and butterflies) but interpreted in the image as having a positive thing leading to a good performance.</i>	
Important sensory modalities:	Visual <input checked="" type="checkbox"/> Kinesthetic <input checked="" type="checkbox"/> Auditory <input checked="" type="checkbox"/> olfactory <input type="checkbox"/> other.....
Personalized details:	<i>The environment in the start pool, other competitors and feelings experienced before competition</i>

FIGURE 1 Sample imagery script checklist.

where the imagery will occur, how frequently the athlete will perform the imagery is important to think about (e.g., once a week before competition, or everyday at training). Imagery can be used by athletes during the pre-season, competitive season, and offseason. The reason for imaging (e.g., the why) will usually influence where and when the imagery should be performed and how frequently it is used.

For example, while Fin often engages in various images throughout the year, he wants to deliberately employ imagery to cope with his pre-competition nerves. Therefore he plans to image before each competition. Through discussions with this athlete, it was decided that the most effective time to listen to his script was sitting in his canoe on the water before his warm up, as close to actual performance as possible. However, it is important Fin first practices using the script away from the competitive environment so he can get used to the script and the imagery he is performing. This is discussed in more detail in the “What” section.

Where the athlete uses the imagery script will likely influence how the script is delivered. This can be done through a number of ways including being read by, or to, the athlete, through an audio device, accompanied with music or video clips, or a combination of these approaches. For example, a written script read by the athlete might be more appropriate if imaging prior to competition in sports where video and audio equipment are not allowed during competition. In our experience, athletes, including Fin, tend to prefer a script recorded on their personal music device to allow them to play it back and listen independently to the scenario being described.

If using an audio script, the voice, clarity, the tempo, tone, enunciation, and pronunciation should all allow the athlete to focus and engage in, rather than detract from the imagery. If pauses are inserted into the script to allow time for the athlete to generate an image, these should not be so long that the athlete loses focus or disengages from the imagery. Music can be incorporated into an audio script to enhance the athlete’s focus and the outcomes of imagery use (Pain, Harwood, & Anderson, 2011). However, it is important that the music is carefully chosen to ensure it elicits emotions and arousal levels reflective of the athletes’ optimal performance and that the music compliments the intended outcomes of the imagery. For example, if the script is written to increase arousal levels, it should not be accompanied by relaxing music.

Why

An important thing to consider is why you are creating the script for the athlete and what benefits they are hoping to gain from the imagery. Paivio’s (1985) original framework, which was later extended by Hall et al. (1998), identified that athletes use imagery for reasons that can be broadly categorized into five functions. These are (a) cognitive specific functions (i.e., images of skills); (b) cognitive general functions (i.e., images of strategies, game plans, and routines); (c) motivational specific functions (i.e., images of process, performance, and outcome goals); (d) motivational general-arousal functions (i.e., images of affect, mood, and emotions); and (e) motivational general-mastery functions (i.e., images of mastery

cognitions such as enhancing confidence). Images can serve a number of these benefits simultaneously (e.g., improve performance and confidence). Finally, is the purpose of the imagery to provide more immediate benefits or more long term goals? The latter will likely mean the imagery script should be edited and revised as the athlete progresses towards the goal. Understanding the athlete's reasons for imaging allows you to create script content that best suits his/her requirements.

To facilitate imagery in achieving its intended outcome(s), various techniques can be employed to enhance the imagery process (Cumming & Williams, 2012; Holmes & Collins, 2001). Although deep breathing is sometimes beneficial to help the athlete maintain focus, this can also detract from the desired arousal state required to image effectively. Other techniques used to create the appropriate physiological state include incorporating physical aspects of the imagery such as adopting a stance or performing subtle body movements, as well as holding equipment or wearing similar clothing to that featured in the imagery. Consequently, the most appropriate technique is likely to depend on why the imagery is being used.

Fin requested a script to help him cope with what he termed "pre-competition nerves" and enhance self-confidence. This is a long term goal that aims to alter his pre-competition nerves over the course of the season. It was also decided that Fin would listen to the imagery script seated in his canoe in the warm up pool whilst wearing the clothing and equipment he competes in and holding his paddle.

What

Finally, you should consider "what" the athlete will image. This is the content of the imagery script, which should be carefully tailored and written in a way to serve the intended function (i.e., why the athlete is imaging). Studies have shown that different images can mean different things to different individuals (e.g., Nordin & Cumming, 2008). Therefore, an image might not serve the same benefits for one athlete as it does for another. An athlete might image themselves performing a gymnastic routine perfectly to improve his actual performance, but another athlete uses the same image to improve her confidence. To make the imagery meaningful and effective for the athlete, the length and specific content of a script should also be aligned with the characteristics and imagery preferences of the person (i.e., who is imaging) and the location of the imagery (i.e., where and when).

For example, including content relating to skills that Fin is unable to perform may lower his confidence and increase his anxiety. This is because our athlete is quite an anxious individual and these feelings increase prior to competition. Being reminded of things he is not yet capable of performing immediately before he competes may therefore increase his pre-competition

nerves and anxiety even more than usual. Additionally, the script may need to be shorter in duration than one used at another time or place to ensure our athlete does not lose focus or become distracted from the upcoming competition.

A benefit to scripts is that they can include temporal and situational markers to help the athlete know what they should be imaging and when. This can include the athlete's whereabouts or what they are doing in the situation (e.g., "You are in the starting pool . . . as you make your way over to the start gate you know you have around 60 seconds before you begin your run . . ."). Scripts can also refer to different sensory modalities to create a richer and often more realistic imagery experience and guide the athlete in when to focus on specific modalities that they are more likely to be incorporated into the imagery scenario (e.g., "You notice the familiar tension in your muscles and butterflies in your stomach . . ."). However, the senses incorporated should only be those that are the most appropriate and beneficial, and not ones that may distract from the main focus of the script. It is important not to overwhelm the athlete with too many senses, particularly if they have little experience of deliberate imagery use. The two imagery modalities most typically used by athletes are visual (i.e., what is seen during the imagery) and kinesthetic (i.e., what is felt during the imagery), and these are usually prioritized over the other senses. However, some athletes may prefer additional modalities to help them experience other content more realistically. For example, a swimmer might wish to hear the sound of the water and the start buzzer to help create an image of a race scenario.

The imagery should also incorporate familiar feelings, situations and/or environments so the athlete can more easily recall these details from memory, resulting in a clearer or more vivid scenario (e.g., details of the competition venue or descriptions of the warm-up). Research suggests that emotive imagery can access memory networks and result in increased arousal and physiological responses reflective of the actual situation (Lang, 1979). When these responses are included into a script, greater performance benefits can be expected (Smith, Holmes, Whitmore, Collins, & Davenport, 2001). Therefore it is important to personalize the emotional responses in the imagery scripts as much as possible. Consequently, the athlete should be involved in selecting the content used and how this is written/the terminology used. This will also ensure that the script does not elicit negative thoughts or feelings detrimental to performance as the athlete can veto information or phrases they are not comfortable using. The athlete's input could be provided by discussing ideas with them beforehand or writing the script with the athlete present. For a script to be effective, it is important that the athlete can relate to the script and its content.

Our script, which was written following a discussion with Fin, uses words he is comfortable with and includes a range of sensory content related to the environment in which he competes. For example, the script refers to

details such as, “You see the other competitors . . .”; “You hear the busy noises around . . .”; and “Feel the paddle in your hands . . .”. The content will likely assist Fin in generating an imagery experience that mimics the real life experience as closely as possible.

The personalized content included will depend on whether the script is for one athlete or a group of individuals, and whether the athlete needs the content to be explicitly specified. With a group, what is realistic and accurate for one individual may not be the same for another (e.g., two athletes may perform different warm up routines before a competition). To ensure the script is meaningful for all athletes, certain content can be specific while other content is left open for the athletes to insert their own personally meaningful responses. For example, a script could include a generic description about the competition environment or moments prior to competition (e.g., “You go through your final preparations”) to which different athletes could image the final preparations specific to them. Alternatively, the script could refer to things such as the feelings associated with a good performance without specifying what these are.

Our example script uses some interpretive content such as “You notice how you think and feel in this moment,” as we want Fin to include the specific thoughts and feelings he usually experiences when competing. This encourages Fin to “fill in the gaps” and become more involved in his imagery experience.

While leaving content open for interpretation can be useful, it may not always be appropriate as some responses may be inadvertently detrimental to performance. In such instances explicit details are required. In our example we are using imagery to help Fin cope with his pre-competition nerves and change his perceptions of anxiety symptoms experienced. Therefore, we included explicit script content when interpreting these feelings such as “You have experienced these feelings in the past and have performed well . . . therefore you know that you are ready to perform well again today.” Consequently, the unspecified feelings experienced prior to performance are explicitly associated with a good performance. Throughout the script the athlete can insert his own thoughts and feelings but because the script explicitly states that these are associated with a good performance it ensures the imagery is interpreted in a positive way.

From our experience, if the content and how it is written is carefully planned with the athlete, the script usually does not need much revision. However, it is important to remember that a script can sound very different when it is being written compared with when imaging it. Therefore it is essential that once a draft is written, it is pilot tested by your athlete before it is regularly used. This also ensures that the athlete gets used to imaging the script.

Prior to using the script before competing, Fin practiced using the script during training when he could image the scenario in similar conditions (e.g.,

in his canoe, holding his paddle). Once he became comfortable imaging the script he incorporated it into his pre-competition preparations.

EVALUATING THE SCRIPT

Once the athlete begins to use the script, it is important to obtain regular feedback to ensure it is well received and determine when and how it should evolve over time. Similar to physical practice, imagery can improve with invested time and effort. Therefore, as the athlete becomes more proficient they may be able to incorporate more senses or image for a longer duration. Additionally, as the athlete's skill level improves, the imagery should be modified to reflect this improvement. These script modifications will also ensure that the imagery remains fresh and will prevent the athlete from becoming bored with it.

Occasionally, a review of the five Ws with the athlete is necessary to establish whether these have changed since initially identified. This will make sure that the script remains tailored to the athlete's personal characteristics and continues to serve its intended function. Therefore it will ensure it is still generating content most effective for the athlete.

When evaluating the imagery, you must decide how formal this should be and how it will be done. This could range from speaking to the athlete or using evaluation forms to record this feedback more systematically (e.g., self-report rating scales filled in by the athlete). Rating scales can be easier to compare with previously evaluated versions of the script. However, open ended feedback can sometimes provide information that would otherwise be overlooked. Therefore, we advocate a mixture of both methods to gain a more comprehensive record of the script and how it should be developed. The important thing is that changes to the script should be made with the athlete's involvement so they are aware of these and can veto information they are not comfortable with or do not feel will facilitate performance.

CONCLUSION

Although imagery scripts are considered to be an effective way of guiding an individual's imagery within sport psychology, a number of considerations must be taken into account to ensure the script is effective in practice. There is no definite right or wrong way to plan and implement an imagery script. However, we suggest using the checklist (Appendix B) to help collate information about who the individual is, why the imagery is being used, where and when the imagery will be performed, and what content will help the athlete achieve this function. Importantly the athlete must have an input into the imagery script to ensure it is something that they can relate to.

Moreover, be mindful that what works for one person may not be effective for another individual. Finally, once the script is used by the athlete it should be regularly evaluated and revised to ensure that it remains a productive and effective strategy.

REFERENCES

- Cumming, J., & Williams, S. E. (2012). The role of imagery in performance. In S. Murphy (Ed.), *Handbook of sport and performance psychology* (pp. 213–232). New York, NY: Oxford University Press.
- Hall, C., Mack, D., Paivio, A., & Hausenblas, H. (1998). Imagery use by athletes: Development of the sport imagery questionnaire. *International Journal of Sport Psychology, 29*, 73–89.
- Holmes, P. S., & Collins, D. J. (2001). The PETTLEP approach to motor imagery: A functional equivalence model for sport psychologists. *Journal of Applied Sport Psychology, 13*, 60–83.
- Lang, P. J. (1979). A bio-informational theory of emotional imagery. *Psychophysiology, 16*, 495–512.
- Moritz, S. E., Hall, C. R., Martin, K. A., & Vadocz, E. (1996). What are confident athletes imaging?: An examination of imagery content. *The Sport Psychologist, 10*, 171–179.
- Nordin, S. M., & Cumming, J. (2005). More than meets the eye: Investigating imagery type, direction, and outcome. *The Sport Psychologist, 19*, 1–17.
- Nordin, S. M., & Cumming, J. (2008). Types and functions of athletes' imagery: Testing prediction from the applied model of imagery use by examining effectiveness. *International Journal of Sport and Exercise Psychology, 6*, 189–206.
- Orlick, T. (2007). *In pursuit of excellence* (4th ed.). Champaign, IL: Human Kinetics.
- Pain, M. A., Harwood, C., & Anderson, R. (2011). Pre-competition imagery and music: The impact on flow and performance in competitive soccer. *The Sport Psychologist, 25*, 212–232.
- Paivio, A. (1985). Cognitive and motivational functions of imagery in human performance. *Canadian Journal of Applied Sport Science, 10*, 22S–28S.
- Robin, N., Dominique, L., Toussaint, L., Blandin, Y., Guillot, A., & Le Her, M. (2007). Effects of motor imagery training on service return accuracy in tennis: The role of imagery ability. *International Journal of Sport and Exercise Psychology, 2*, 175–186.
- Smith, D., Holmes, P., Whitmore, L., Collins, D., & Davenport, T. (2001). The effect of theoretically-based imagery scripts on field hockey performance. *Journal of Sport Behavior, 24*, 408–419.
- Williams, S. E., & Cumming, J. (2012). Athletes' ease of imaging predicts their imagery and observational learning use. *Psychology of Sport and Exercise, 13*, 363–370.

APPENDIX A

Sample Imagery Script for a Slalom Canoeist

You have just finished your warm up and are ready to begin your race ... you see the course in front of you as you wait in the starting pool ... you see the other competitors and the spectators preparing for the competition ... you hear the busy noises around the performance area ... you notice the sound of the water as you paddle gently ... feel the paddle in your hand and notice how you feel in your canoe ... you begin your final race preparations. You know you have around 60 seconds before you start your race.

You notice how you think and feel in this moment. You feel nervous in your ability to execute the perfect race today ... you experience the familiar tension in your muscles and butterflies in your stomach as the start of your race draws closer. These feelings tell you that you are ready to perform. You have experienced these feelings in the past and have performed well ... therefore you know that you are ready to perform well again today.

You are aware of your goals for today's performance and are filled with confidence as you realize your ability to achieve them ... you are in control ... of yourself and of your race ... nothing can affect you today ... and you are determined to demonstrate to yourself that you can be successful ... you approach the start of your race ... the buzzer goes ... GO!

You execute the first gate excellently ... this fills you with confidence and with the determination you need to attack the rest of the race ... you are still in control ... of yourself, your boat and your paddle ... all three aspects working together to give a fluid motion as you go through another gate, then another ... you execute the first five gates of your race to the best of your ability ... you continue to see yourself execute your race strategy effectively.

You maintain your momentum as you approach gate 10 ... you are demonstrating excellent paddling skills, your stroke is long and strong, your ups are effective, and you keep your turns tight.

You approach the final 5 gates ... taking each one at a time as you execute your techniques effectively.

You finish your race and acknowledge your good performance. You reflect on the nerves you felt at the start of the race ... the butterflies and tension you felt in the start pool have helped you to perform your best today ... you feel confident and recognize that these nerves are important in helping you perform successfully ... you understand that these nerves are going to lead to good performances in the future.

