Teaching Athletes Visualization and Mental Imagery Skills David Yukelson, Ph.D. Penn State University

I. Introduction

The world's best athletes have highly developed imagery skills and use these skills on a daily basis. Visualization (often termed imagery) is a mental training technique that involves using all your senses including thoughts, feelings, emotions, and other sensations such as sight, sound, feel, adrenaline to create or recreate an experience in your own mind. An important part of visualization is "feeling" yourself performing the way you want (confident, focused, good rhythm and tempo, etc.). As such, sport psychologist Terry Orlick refers to this as "feelization" as opposed to visualization. Many athletes use imagery as a mental training skill to build confidence and a feeling of readiness prior to competition (e.g. motivational aspects of imagery). It can also be used as a cognitive technique to plan competition strategies, rehearse game plans, affirm what you want to occur, or as a coping skill strategy to stay calm and composed under pressure. Everyone possesses the ability to use imagery, like anything else, it is a skill that must be developed and practiced.

II. How does imagery work?

First, research has demonstrated that imagery strengthens the neural pathways for certain movements (i.e., psychoneuromuscular explanation). When you imagine performing a particular sport skill, your muscles fire in the same sequence as if you were actually performing the skill. Second, imagery may function as a coding system in the brain to help athletes form a plan or "mental blueprint"; imagery strengthens the mental blueprint, enabling the actions/movements to become more familiar or possibly automatic (symbolic learning theory). The third explanation comes from Bio-Informational Theory (Lang, 1979) whereupon imagery involves the activation of a network of coded stimulus and response propositions stored in long term memory (for instance, the texture and feel of a basketball in one's hand coupled with the fluid motion associated with stroking the free throw). Recent research (Taylor, 1995) has focused on the effectiveness of imagery as an important self-regulation skill (e.g., the ability to set goals, plan and solve problems, regulate arousal and competitive anxiety, manage emotions effectively). The key is to program your mind, muscles, and emotions for success, and to make your imagery as vivid, realistic, and detailed as possible. When you vividly imagine yourself getting ready for competition, your central nervous system becomes programmed for success. It's as if the activity you visualized has already happened!

III. Uses of Imagery

Visualization and mental rehearsal can be carried out virtually any time, anywhere, and yes IT Does WORK! Through imagery, you can program your mind and muscles for success prior to competition; learn how to regulate feelings of pre-competition arousal/adrenaline/emotions successfully; see yourself coping with adverse situations ahead of time with confidence and full focus; or picture yourself achieving competition goals. For instance, while preparing for competition, see and feel yourself performing the way you want - confident, focused, in command, and in control. Many times, athletes lose their poise in competition when "unexpected surprises" occur. Anticipating adversity and incorporating coping skill strategies ahead of time can reduce these surprises.

Imagery can also be used as a relaxation technique (e.g., visualize yourself in a relaxing setting like the beach or a mountain creek), to improve interpersonal communication skills (e.g., visualize yourself asking someone out for a date, asserting your needs to a coach, teammate, friend, etc.), or when recovering from injury (e.g., direct healing thoughts to an injured body part, stay mentally fresh by seeing yourself execute certain plays while recovering from injury). It can be especially helpful when learning new skills, or used in conjunction with videotape. Similarly, it has great practical use as a study skill aide (e.g., going over your notes and preparing for an upcoming test).

IV. Key Components

Vividness - a vivid image is one in which the imagined events are realistic, and multi-sensory, and as detailed as possible. The closer the image is to the real thing in terms of thoughts, emotions, senses, and actions, the better the transfer should be to actual performance. The key is to use as many senses as possible (e.g., see the action, feel yourself moving, hear the sounds, smell the smells), and to try and recreate the <u>feel</u> of the movement as if you are actually doing it ("feelization"). For instance, Sport Psychologist Dick Coop suggests golfers incorporate two levels of visualization on every shot; first create a mental movie of the way you want the ball to fly (ball flight to the target) and second, translation of that picture into an image of how the body should move in order to hit the shot (rhythm and feel of hitting a solid shot or putt). Key is to create a vivid, detailed, and confident image.

Controllability - Make the image do what you want it to do. Many athletes have difficulty controlling their images, often repeating the same mistake over and over, or failing to conjure up the appropriate image. Learn how to program your own "internal computer" so you are confident and focused on those things you want to occur.

Internal/External Perspective - Internal perspective refers to visualizing the sport or event through the performer's eye. External perspective refers to watching your performance on a video screen or from a spectator's position in the stands. Although influenced by individual preferences, some experts say internal imagery is preferred for competition focusing while external imagery is better for correcting errors. Key is to see and feel yourself performing the way you want.

Use Energizing Concentration Cues and Triggers to Enhance Recall – emotionally laden cues and positive affirmations can increase the quality, feel, and effectiveness of your imagery. Kinesthetic cues such as (i.e., Be Smooth and Powerful, "Confident and Explosive", "Confident and In Control") are extremely helpful.

Mastery Rehearsal (see yourself performing perfectly, in command, in control with confidence and full focus) and coping rehearsal techniques (see yourself successfully overcoming mistakes, coping with potential setbacks and adversity in a poised and confident manner).

Real Time Imagery (ex. Pitch-hit sequence, speed and spin of baseball, gymnastics routine, track/golf routine)

V. General Considerations

- Imagery programs should be individualized based on athlete's needs, abilities, and interests.
- Athletes should have realistic expectations and motivation. Imagery has the potential to improve skills only if the athlete believes it will work and regularly devote time on developing it.
- Devote 10-15 minutes a day to imagery training. Start with skills you already do well, then increase vividness and complexity of your imaging (game situations and strategy). Strive to imagine positive outcomes.
- General relaxation and slow, deep, diaphragmatic breathing should precede imagery practice
- Mastery Rehearsal Focus on a time when you were playing/performing great (recreate that feeling as vividly as possible: the setting, the atmosphere, the sights, the sounds. Feel the energy, adrenaline, intensity, and positive emotions running through your mind and body).
- Visualization before game competitions reflect on the mindset you want to carry with you into competition (confident, focused, poised, aggressive), have a goal for each competition – imagine yourself being on a mission, use energizing cues to get the adrenaline and emotions flowing, think like a champion - nothing is going to stop you today. See/feel yourself performing great, with confidence, in sync, everything flowing automatically
- Coping Rehearsal Identify situations that cause you problems, visualize appropriate coping responses ahead of time where you take control of the situation (e.g., controlling emotions, overcoming mistakes, etc.).
- Integrate visualization into practice (e.g. learning new skills, refining old skills, correcting errors, etc.)

VI. Application of Visualization Script for Volleyball: Getting Ready for Competition

- Mental Training Room (comfortable environment from which to draw on inner strength)
- Begin with breathing and general muscle relaxation
- Think about the mindset you want to carry with you into competition, what you need from yourself in order to play great (confident, focused, energized, positive emotional intensity, one play at a time mentality, etc.)
- Connect with your competition goals (game plan, sense of being on a mission) focus on what you want to occur, imagine how you will achieve your competition goals (expect to do well, have purposeful intentions)
- Positive goal oriented affirmations ("I am a highly skilled and talented volleyball player, nothing or nobody is going to stop me today", "play hard, play well", "trust my skills/preparation, play hard, be confident, have fun")
- Project self onto large video screen, see self in locker room getting dressed in uniform and ready for tonight's game, draw on energy/support of teammates
- As you move out onto the floor, feel that burst of energy run through your body (adrenaline pumping)
- See self going through stretching/ warm-up (you feel loose, confident, poised, ready to go)
- Now see and feel self playing great, executing your skills confidently and effectively (visualize various scenarios such as passing, serving, blocking, digging, spiking taking big swings at the ball)
- See/feel yourself reacting to various keys: blocking ("ball setter, ball hitter"), defense ("attitude and footwork"), passing ("anticipate, good platform, make good contact"), hitting ("fly to the ball, hit high, hit hard, hit smart", serving ("relax, see and feel self making good contact")
- See and feel self in different situations (ahead in the match, behind in match, playing with great rhythm, timing, aggressiveness, confidence).
- See and feel self in command, in control, playing with great enthusiasm, intensity, passion, and focus
- Also, see self-reacting to mistakes in an emotionally constructive manner (being mentally tough in key situations, withstanding shifts in momentum, dealing with mistakes, etc.).
- Reward self for a job well done!