Chapter 13: Imagery

Imagery
What Is Imagery?

- Equivalent terms are visualization, mental rehearsal, symbolic rehearsal, covert practice, and mental practice.

- Imagery involves creating or re-creating an experience in your mind.

- Imagery involves all the senses: Visual, kinesthetic, auditory, tactile, olfactory.
What Is Imagery? (continued)

- Imagery is a form of simulation that involves recalling from memory pieces of information stored from experience and shaping those pieces into meaningful images.

- The kinesthetic sense is particularly important for athletes.

- Imagery involves moods and emotions.
Does Imagery Work?

• Anecdotal reports: Jack Nicklaus, Tiger Woods, Chris Evert, Olympic athletes, and coaches

• Multiple-baseline case studies: VMBR investigations with skiers and karate performers

(continued)
Does Imagery Work? (continued)

• Psychological intervention studies show that imagery combined with other psychological strategies enhances performance and other psychological variables such as confidence and coping.

• Scientific experiments: Studies clearly demonstrate the value of imagery in learning and performing motor skills.
Does Imagery Work? (continued)

• Qualitative studies provide support for a positive relationship between imagery and performance and skill learning.

• Experimental evidence: There are many supportive experiments.

• However, imagery effectiveness depends on several factors.
Imagery in Sport: Where, When, Why, and What

• Where do athletes use imagery? Athletes employ imagery more in competition than in training.

• When do athletes use imagery? Athletes use imagery before, during, and after practice; outside of practice; before, during, or after competition; and for injury rehabilitation.

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• Why do athletes use imagery?
  – For motivational and cognitive functions

• Functions of imagery: Motivational
  – Motivational general mastery
  – Motivational general arousal
Functions of imagery: Cognitive

- Cognitive specific
- Cognitive general

What do athletes image?

- Aspects: Surroundings, the positive or negative character of images, the senses involved, the perspective (internal vs. external)
Figure 13.1

- **Motivational**
  - **Specific**
    - Goal-oriented responses
      - (e.g., imaging oneself winning an event and receiving a medal)
  - **General**
    - Arousal
      - (e.g., including relaxation by imaging a quiet place)

- **Cognitive**
  - **Skills**
    - (e.g., imaging performing on the balance beam successfully)
  - **Strategy**
    - (e.g., imaging carrying out a strategy to win a competition)

Adapted by permission from Pavio 1985.
Imagery in Sport: Where, When, Why, and What (continued)

- Imagery perspective
  - Internal perspective is visualizing the execution of a skill from your own vantage point (as if you had a camera on your head).
  - External perspective is visualizing yourself from the perspective of an outside observer (as if you were watching yourself in a movie).
  - No one imagery perspective is best to use at all times.
Uses of Imagery

Whether a person uses an internal or external image appears to be less important than choosing a comfortable style that produces clear, controllable images.
Factors in the Effectiveness of Imagery

• Nature of the task: Imagery affects performance the most on cognitive tasks.

• Skill level of the performer: Imagery helps performance for both novice and experienced performers; effects are somewhat stronger for experienced performers.
Factors in the Effectiveness of Imagery (continued)

• Imaging ability: Imagery is more effective when individuals are higher in their ability to imagine (have better vividness and control).

• Combination with practice: Imagery should be used in addition to (not instead of) physical practice.
How Imagery Works: Five Theories

- Psychoneuromuscular theory
- Symbolic learning theory
- Triple code model
- Bioinformational theory
- Psychological skills explanations
How Imagery Works

• Theory 1: Psychoneuromuscular theory
  – Imagery programs muscles for action.
  – Imagery facilitates the learning of motor skills because imagined events innervate the muscles as physical practice of the movement does; they strengthen neural pathways.

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How Imagery Works (continued)

• **Theory 2: Symbolic learning theory**
  – Imagery helps us understand movement patterns.
  – Imagery functions as a coding system (as mental blueprints) to help people understand and acquire movement patterns.
How Imagery Works (continued)

• Theory 3: Bioinformational theory
  – Images are made of stimulus and response propositions.
  – It is critical to imagine not only stimulus propositions (statements that describe the scenario to be imagined) but also response propositions (imaginer’s response to the scenario).

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How Imagery Works (continued)

• **Theory 4: Triple code model**
  – Imagery comprises the image, somatic response, and image meaning.
  – Primary importance is placed on the psychophysiology of imagery and understanding the imagery parts: The image, the somatic response, and the meaning of the image.
How Imagery Works (continued)

• Theory 5: Psychological skills hypothesis
  – Imagery develops mental skills.
  – Imagery develops and refines mental skills (e.g., concentration and confidence) and reduces anxiety.
Psychological Explanations for Imagery Effects

- Attention–arousal set theory: Imagery functions as a predatory set that assists in reaching optimal arousal.

- Psychological skills hypothesis: Imagery enhances feelings of confidence, reduces anxiety levels, and increases concentration.

- Motivational function: Imagery serves a motivational function.
Uses of Imagery

• Improve concentration.
• Enhance motivation.
• Build confidence.
• Control emotional responses.
• Acquire, practice, and correct sport skills.
Uses of Imagery (continued)

- Acquire and practice strategy.
- Prepare for competition.
- Cope with pain and adversity.
- Solve problems.
Keys to Effective Imagery

• **Vividness:** Use all the senses to make images as vivid and detailed as possible.

• **Exercise**
  – Imagine being at home.
  – Imagine a positive performance of skills.
  – Imagine a best performance.

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Keys to Effective Imagery (continued)

• **Controllability**: Learn to manipulate your images so they do what you want them to do.

• **Exercise**
  – Imagine controlling a performance.
  – Imagine controlling your emotions.
  – Imagine controlling a performance against a tough opponent.
Uses of Imagery in Exercise Settings

• Exercise technique: Imagery to help develop perfect exercise technique
• Aerobics routines: Imagery to help develop routines
• Exercise context: Imagery to create a particular scene or environment
• Appearance images: Imagine your body as you would like it to be
Uses of Imagery in Exercise Settings (continued)

• Competitive outcomes: Images doing well

• Fitness and health outcomes: Images related to improvements in fitness and health

• Emotions and feelings associated with imagery: Images that increase arousal and excitement or reductions in stress

• Exercise self-efficacy: Images that provide confidence to sustain workouts
Developing an Imagery Training Program

• Tailor imagery programs to an athlete’s individual needs, abilities, and interests.

• The first step in developing an imagery program is evaluating the athlete’s imagery skills.

• Imagery must be individualized and practiced. Hence, it should be built into an athlete’s daily routine.

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Developing an Imagery Training Program (continued)

• Imagery guidelines
  – Practice in many settings.
  – Aim for relaxed concentration.
  – Set realistic expectations, sufficient motivation.
  – Use vivid and controllable images.
  – Apply imagery to specific situations.
  – Maintain positive focus.
  – Consider use of videotapes, DVDs, and audiotapes.
  – Include execution and outcomes.
  – Image timing.

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When to Use Imagery

• Before and after practice
• Before and after competition
• During the off-season
• During breaks in action (in practice and competition)
• During personal time
• When recovering from injury
Imagery Use in Youth Sport

• Athletes as young as 11 were able to show imagery ability similar to that of adults.

• Older children (11-14) had structured imagery training, whereas younger athletes (7-10) mostly had spontaneous imagery.

• Only 11- to 14-year-old athletes used kinesthetic imagery, although athletes across the age ranges used visual and auditory imagery.