

Australian Government
Australian Sports Commission

Australian Institute of Sport

Developing Skills Outside the Team Environment

Adam Gorman
Skill Acquisition
Australian Institute of Sport

© Australian Sports Commission www.ausport.gov.au

Australian Government
Australian Sports Commission

Australian Institute of Sport

Typical Weekly Training Schedule Men's Basketball

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Individual	60		60		60		
Shooting	45	45	45	30	45		
Team	120	120		60	90	90	
Weights		60		60		60	
Game			60				90
Totals (hours)	3.75	3.75	2.75	2.5	3.25	2.5	1.5

Weekly Total = 20 Hours

© Australian Sports Commission www.ausport.gov.au

Australian Government
Australian Sports Commission

Australian Institute of Sport

Rationale

(1) The amount of time and energy available for additional skill training, particularly as a team, is limited.

(2) Yet some players lack the core technical and cognitive skills (eg. decision-making) required for success in their sport.

How can players complete additional skill-based training, without contributing to physical fatigue, and without additional team-based practice?

© Australian Sports Commission www.ausport.gov.au

Australian Government
Australian Sports Commission

Australian Institute of Sport

Overview

Initiatives to Develop Skill Outside the Team Environment

1. Video-Based Training
2. Skill Cards
 - Core skill activities
 - Knowledge development

© Australian Sports Commission www.ausport.gov.au

Australian Government
Australian Sports Commission

Australian Institute of Sport

Video-Based Training

© Australian Sports Commission www.ausport.gov.au

Australian Government
Australian Sports Commission

Australian Institute of Sport

Video-Based Training

Similar cognitive processing to performance in the normal playing environment:

- Reading the play
- Recognising kinematics

Designed to train the perceptual-cognitive elements of performance

- Decision-making

© Australian Sports Commission www.ausport.gov.au

Video-Based Training

Advantages

- Low-impact (injured athletes)
- Enjoyable and appealing
- Record of results
- Can be tailored to the needs of the athlete
- Coach and other team-mates don't need to be present

© Australian Sports Commission www.ausport.gov.au

Video-Based Training

- Technological advances
- Group training using "pause" on standard VCR
- Use of 3D images
- Seated at a computer or throwing into a wall
- Using other skill acquisition principles to maximise the effects (implicit learning, contextual interference)

© Australian Sports Commission www.ausport.gov.au

Core Skill Activities

Advantages

- Help develop "touch" and hand-eye coordination
- Improve ball handling
- Non-dominant hand development
- Automation
- Individualised to needs of specific athletes
- Progression from simple to complex
- Coach doesn't need to be present
- Low-impact
- Injured athletes – structured maintenance plan

© Australian Sports Commission www.ausport.gov.au

Skill Cards

- Can be structured to suit individual needs
- Important scientific principles embedded into the training
- Can manipulate a number of key variables:
 - Complexity (Activities range from "Level 1" to "Level 5")
 - Duration
 - Frequency
 - Intensity
 - Volume
 - Variability (= number of skills included in a single session)

© Australian Sports Commission www.ausport.gov.au

Skill Cards

		Intensity		
		Low	Med	High
Variability (no. of skills)	Low	Green 1	Green 3	Yellow 3
	Med	Green 2	Yellow 2	Red 2
	High	Yellow 1	Red 1	Red 3

© Australian Sports Commission www.ausport.gov.au

Skill Cards

Can include other components of performance:

- Mental Skills
- Physical Activity
- Cognitive Tasks (eg. drawing offensive plays on a whiteboard between tasks)

© Australian Sports Commission www.ausport.gov.au



Australian Government
Australian Sports Commission

Summary



Australian Institute of Sport

- Skill cards used with netball, basketball, rugby, Australian Rules football
- Perception of athletes and coaches
- The innovation is in the design and structure, not necessarily the activities themselves.