

Its all the GAME: Setting the Agenda



Niall Moyna





2006



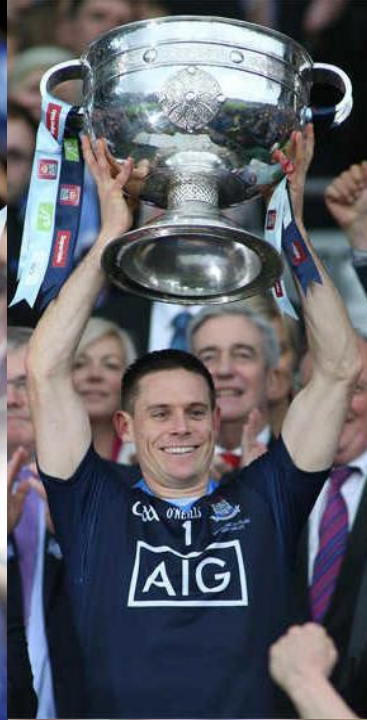
2010



2012



2015





ANCORA
IMPARO

ALWAYS
LEARNING



Age 85, 1562

ANCORA

IMPARO

—Michelangelo

ALWAYS
LEARNING





Adaptable

“I found out that if you
are going to win
games, you better be
ready to adapt”



Scotty Bowman

Embrace Change



“The willingness to experiment with change may be the most essential ingredient to success at anything”

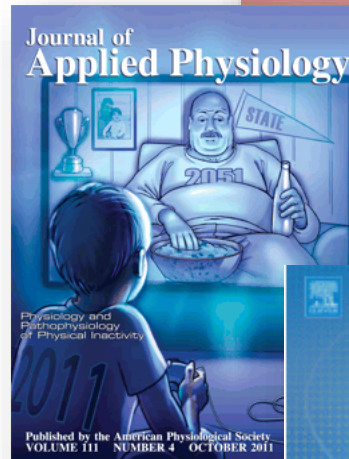
Pat Summitt

8 NCAA Women's Basketball Titles

Monaghan

Ulster Champions 1988





PHILOSOPHY



Games Based Approach

Technically proficient

Tactically adaptable

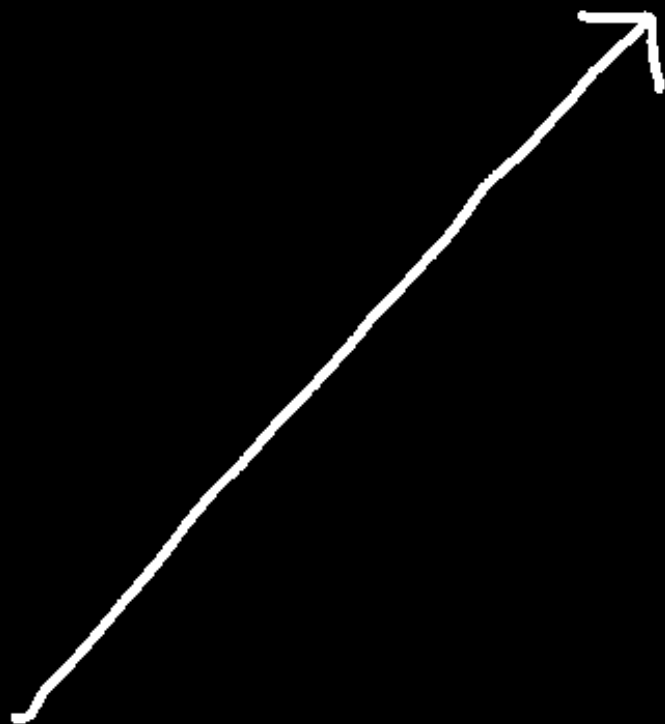
Excellent problem solvers

Excellent decision makers



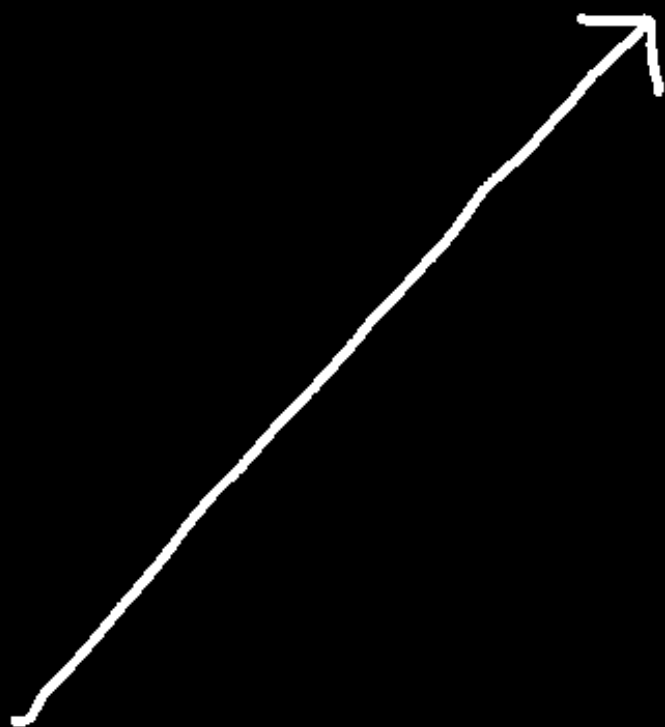


SUCCESS



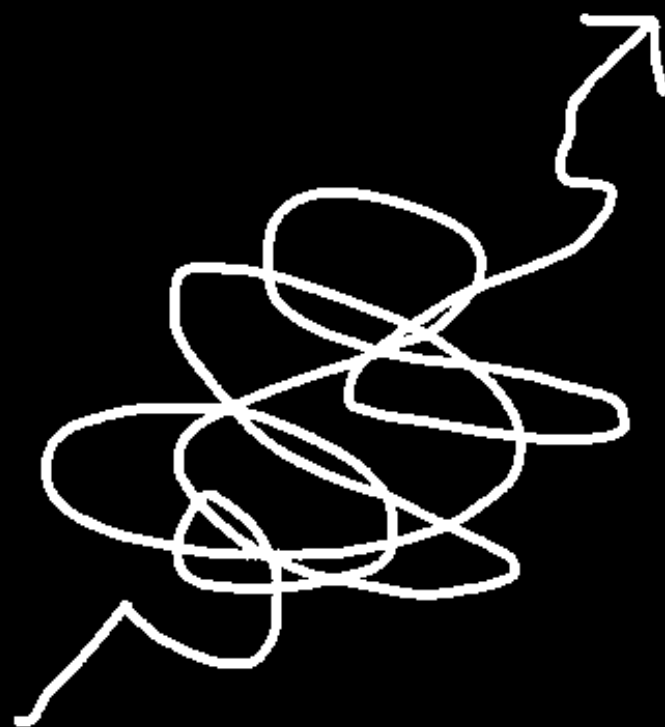
WHAT PEOPLE THINK
IT LOOKS LIKE

SUCCESS



WHAT PEOPLE THINK
IT LOOKS LIKE

SUCCESS

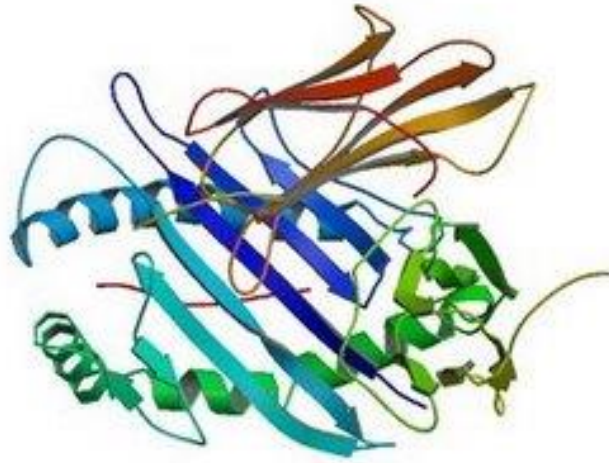


WHAT IT REALLY
LOOKS LIKE

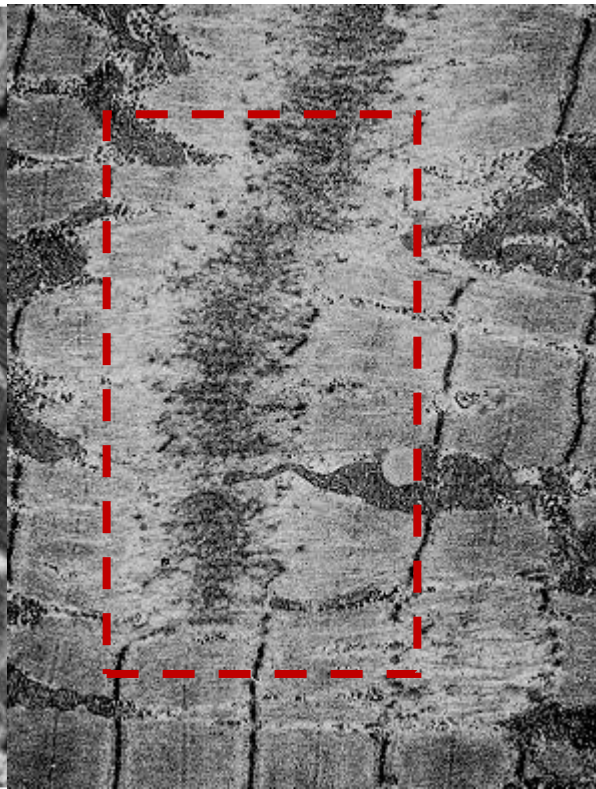
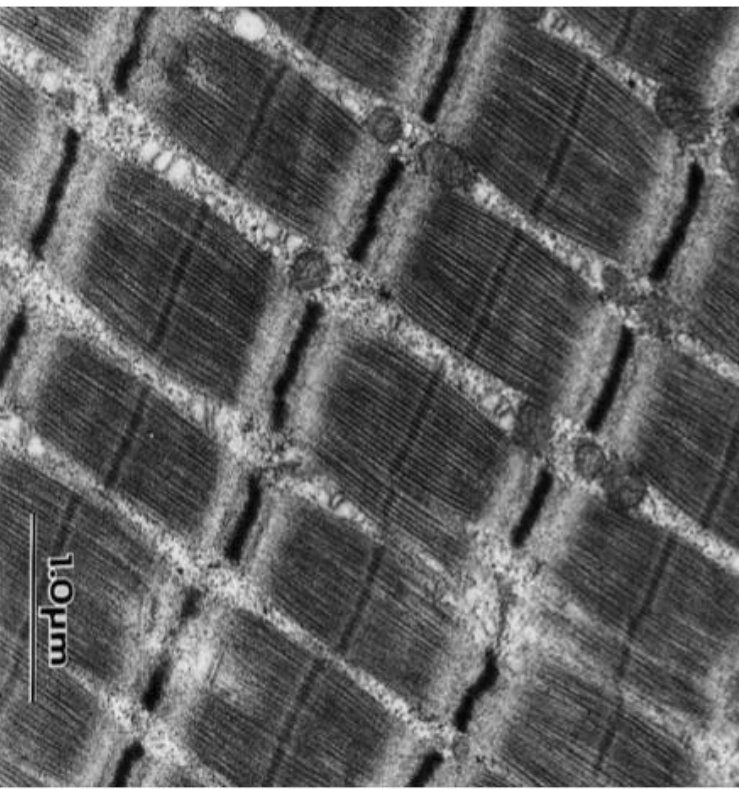
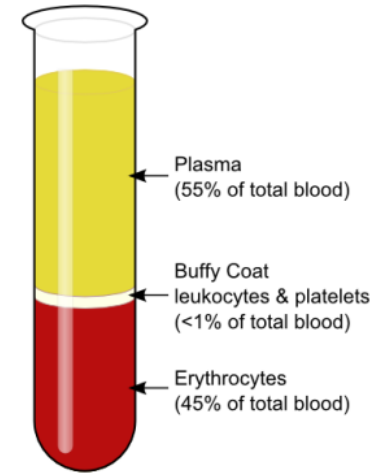
~~ONE
SIZE
FIT
ALL?~~

**One Size
DOES NOT
Fit All!!**



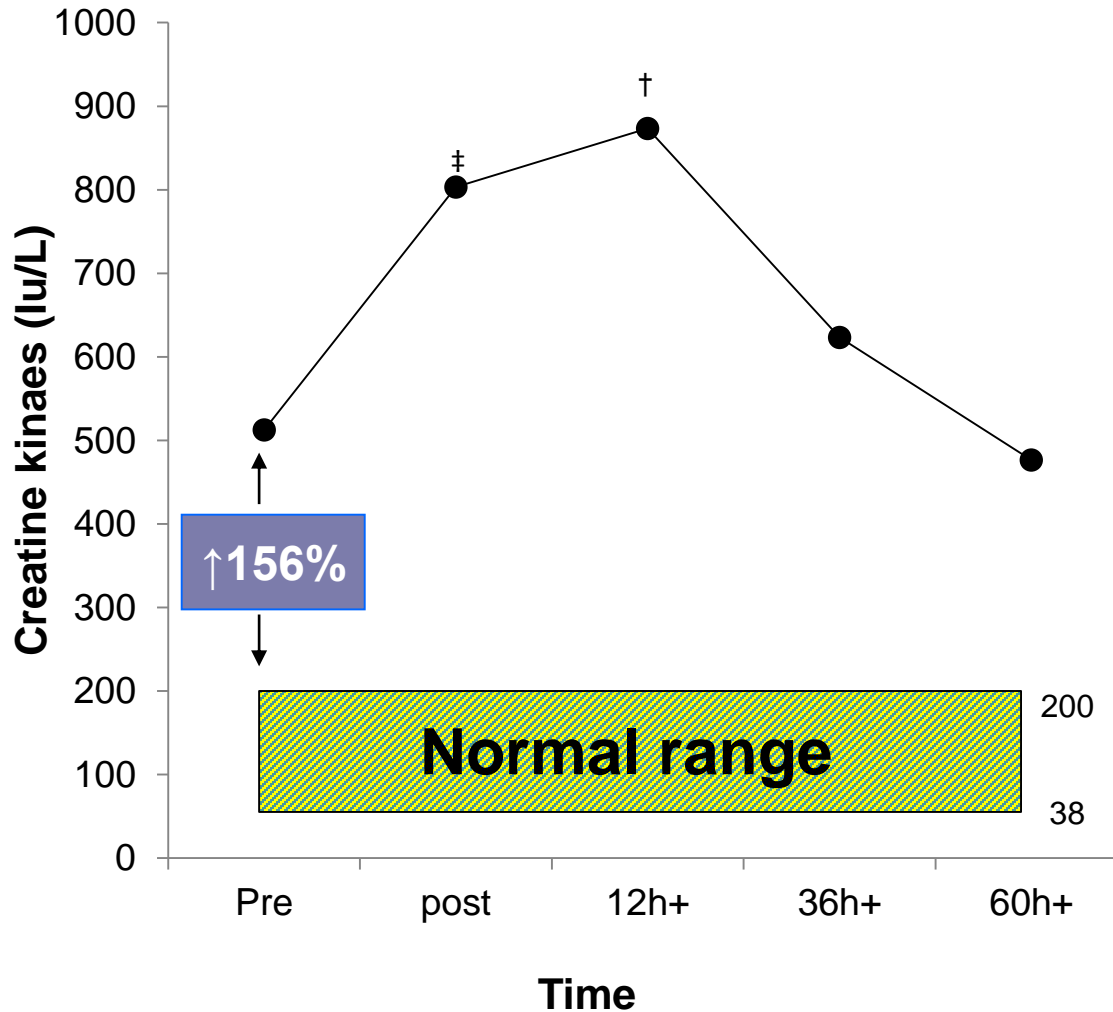


Creatine Kinase

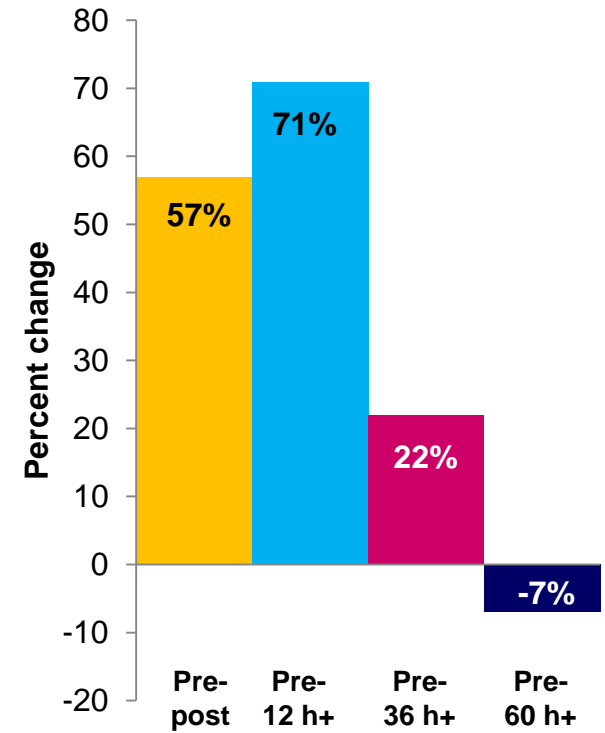


CK

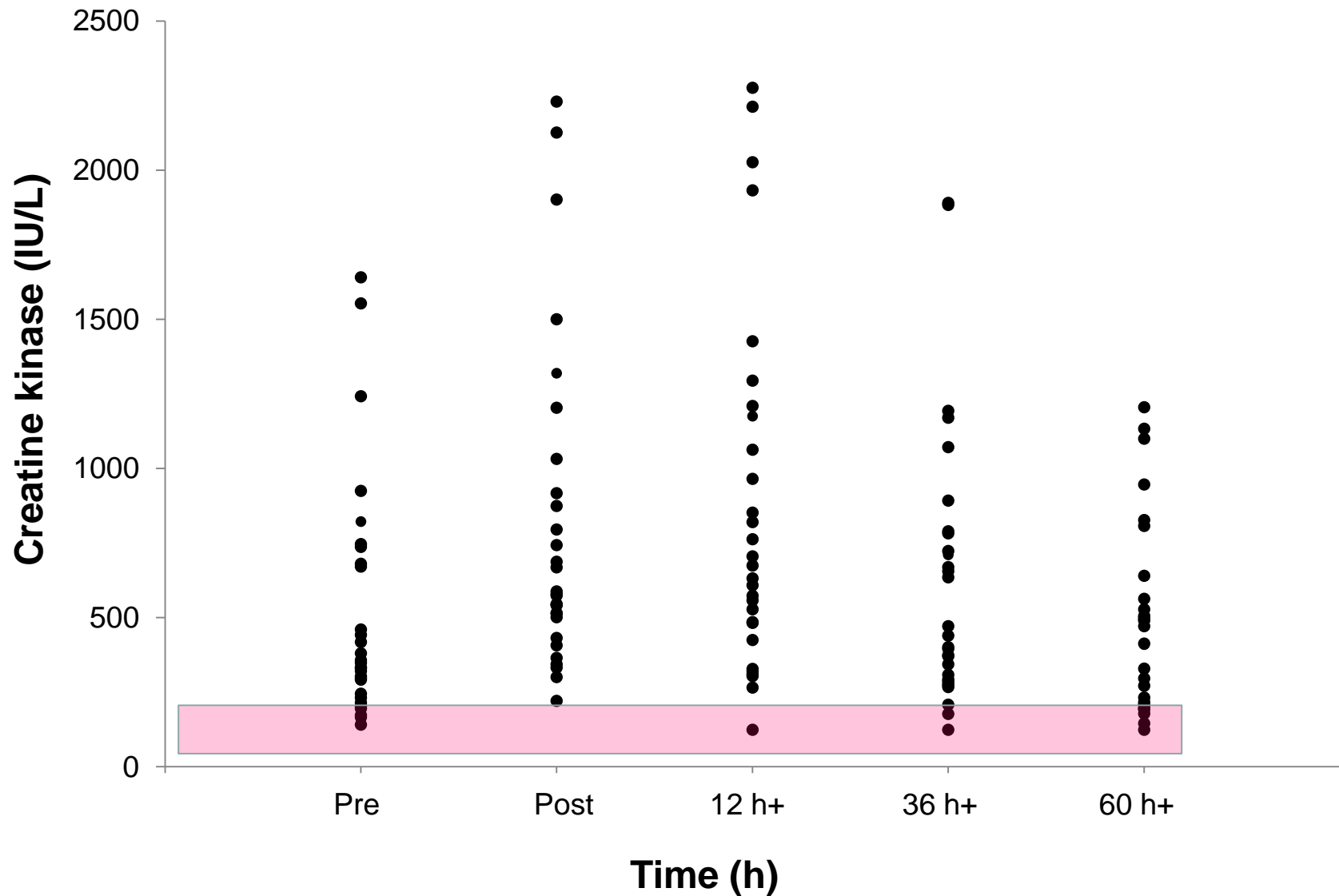
Pre and Post Game Response



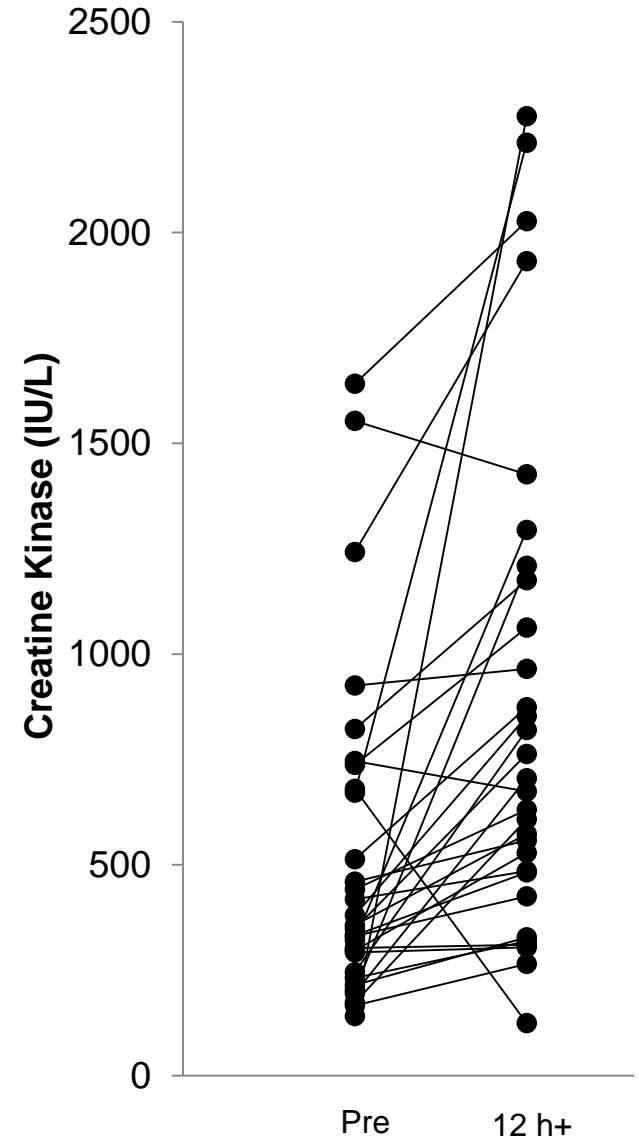
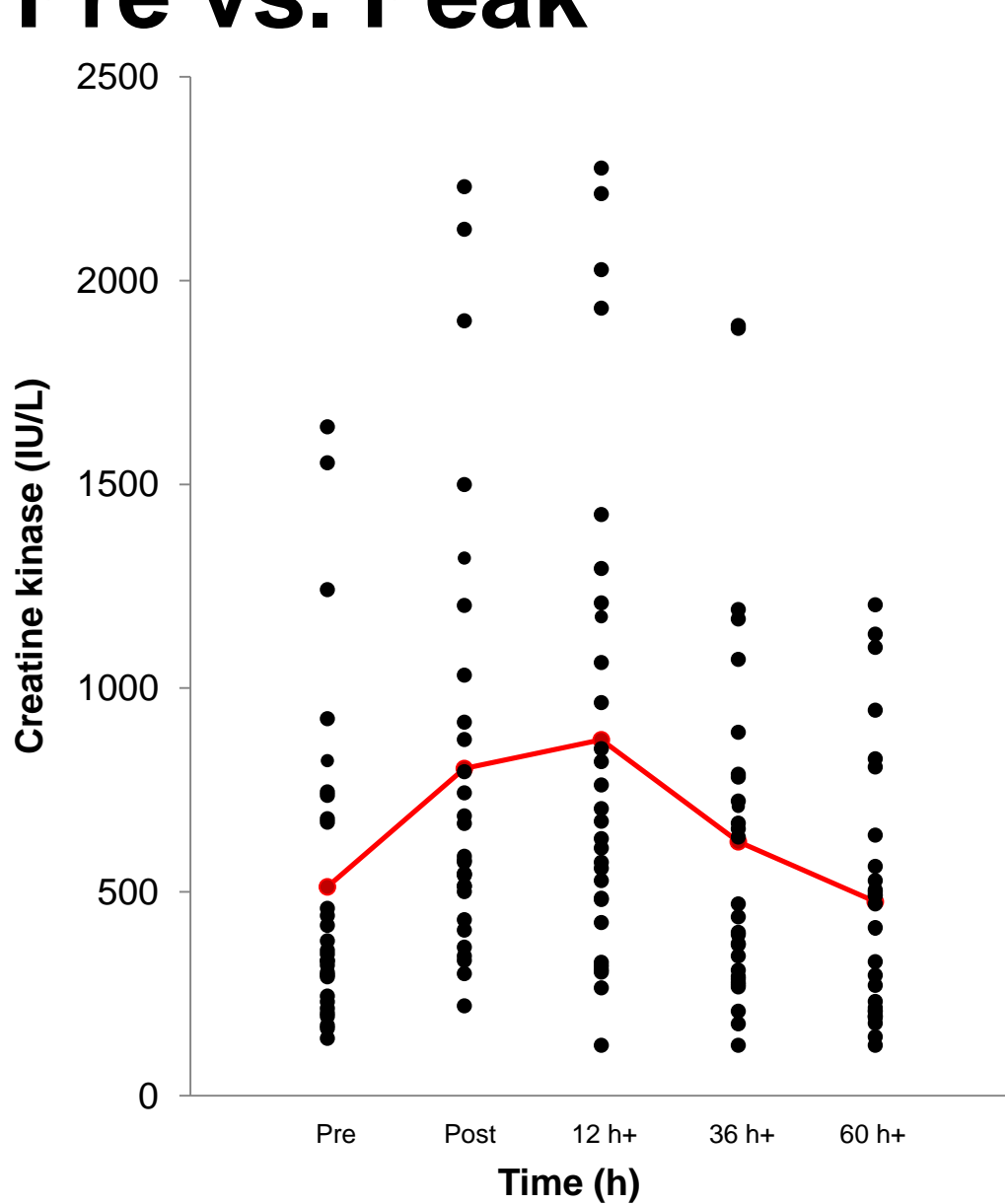
†p<0.01 vs. pre; ‡p<0.001 vs. pre



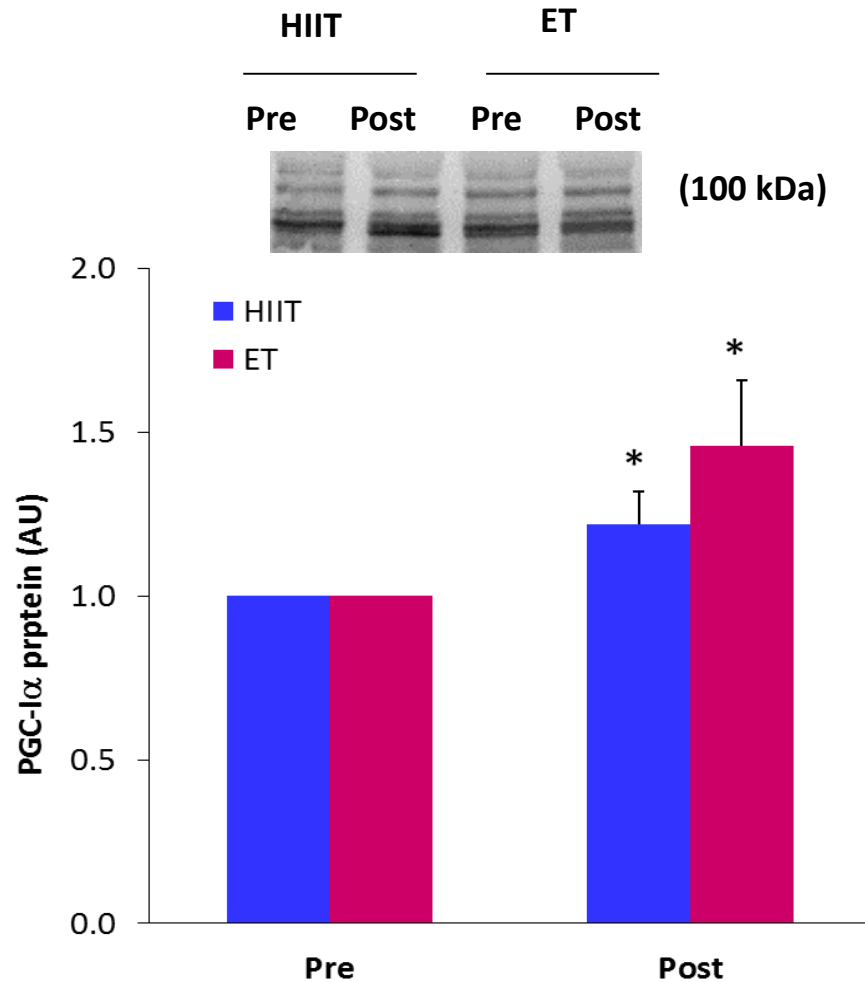
Creatine Kinase Individual Responses



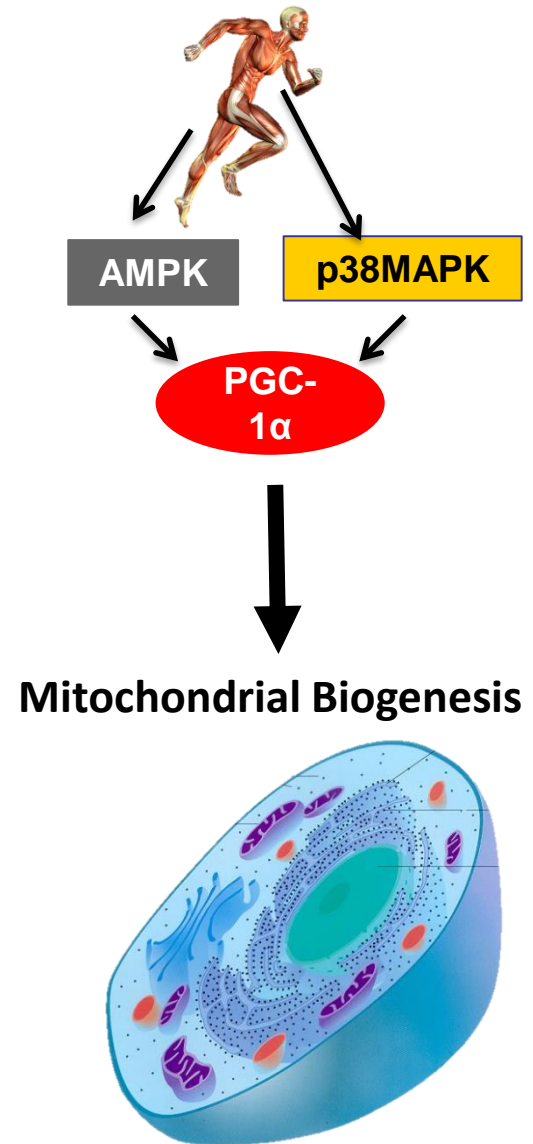
Creatine Kinase Response Pre vs. Peak



Endurance and High Intensity Interval Training PGC-1 α Protein Content

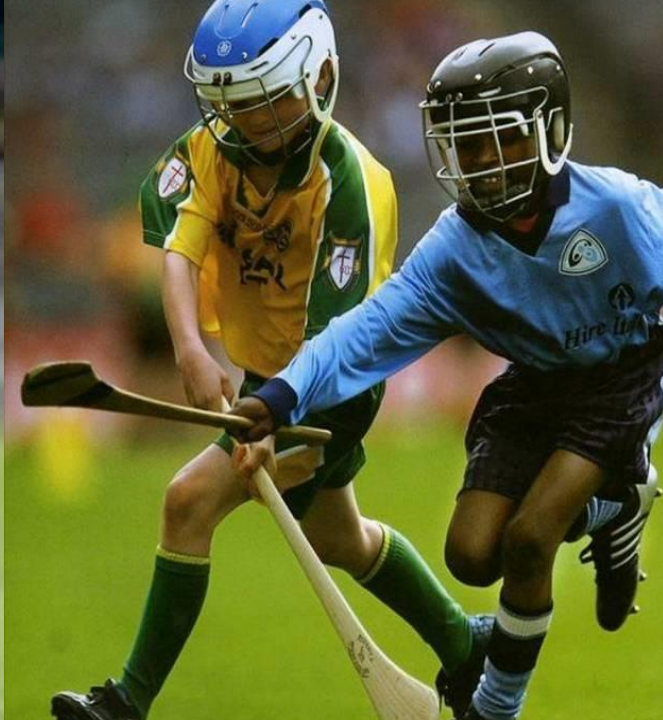


* $p < 0.05$ vs. pre-training





**Many coaches erroneously believe that
attaining sporting excellence hinges on talent**

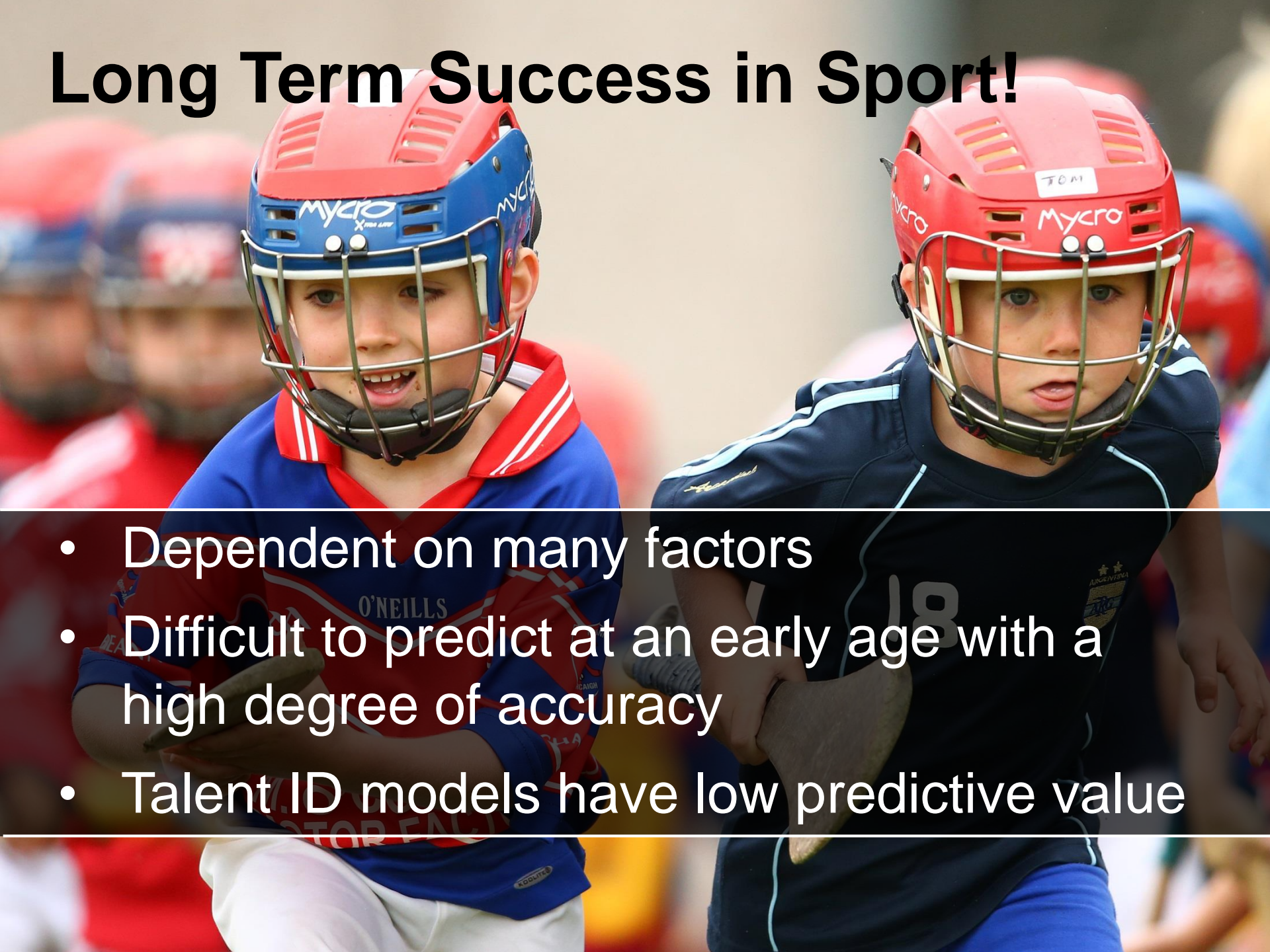




We Don't Know



Long Term Success in Sport!

- 
- A photograph of two young boys in Gaelic football gear. The boy on the left is wearing a blue jersey with red trim and a blue and red helmet. The boy on the right is wearing a dark blue jersey with light blue trim and a red helmet. Both are holding hurleys. The background is blurred, showing other players and spectators.
- Dependent on many factors
 - Difficult to predict at an early age with a high degree of accuracy
 - Talent ID models have low predictive value



Wolfgang Amadeus Mozart



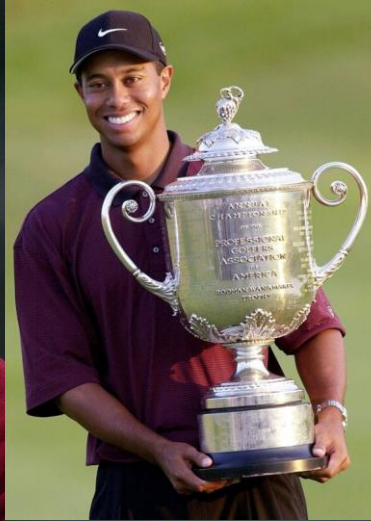
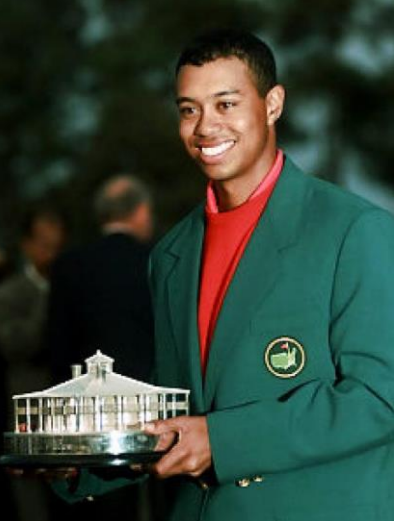




Del Signore Giovane Wolfgang Mozart



Mozart





Practice Theory of Expertise

“Children have extraordinary potential, and it is up to society to unlock it”

Laszlo Polgar
(Educationalist Psychoologist)



Karla and Laszlo Polgar



Sofia

Susan

Judith



- 1988 - World U-12 champion
- 1991 – Youngest (male or female) grandmaster in history (15 y and 4 months)
- World number 1 for 20 years
- Defeated Garry Kasparov, Anatoly Karpov and Viswanathan Anand
- **Considered the greatest female chess player of all time**



Judith Polgar

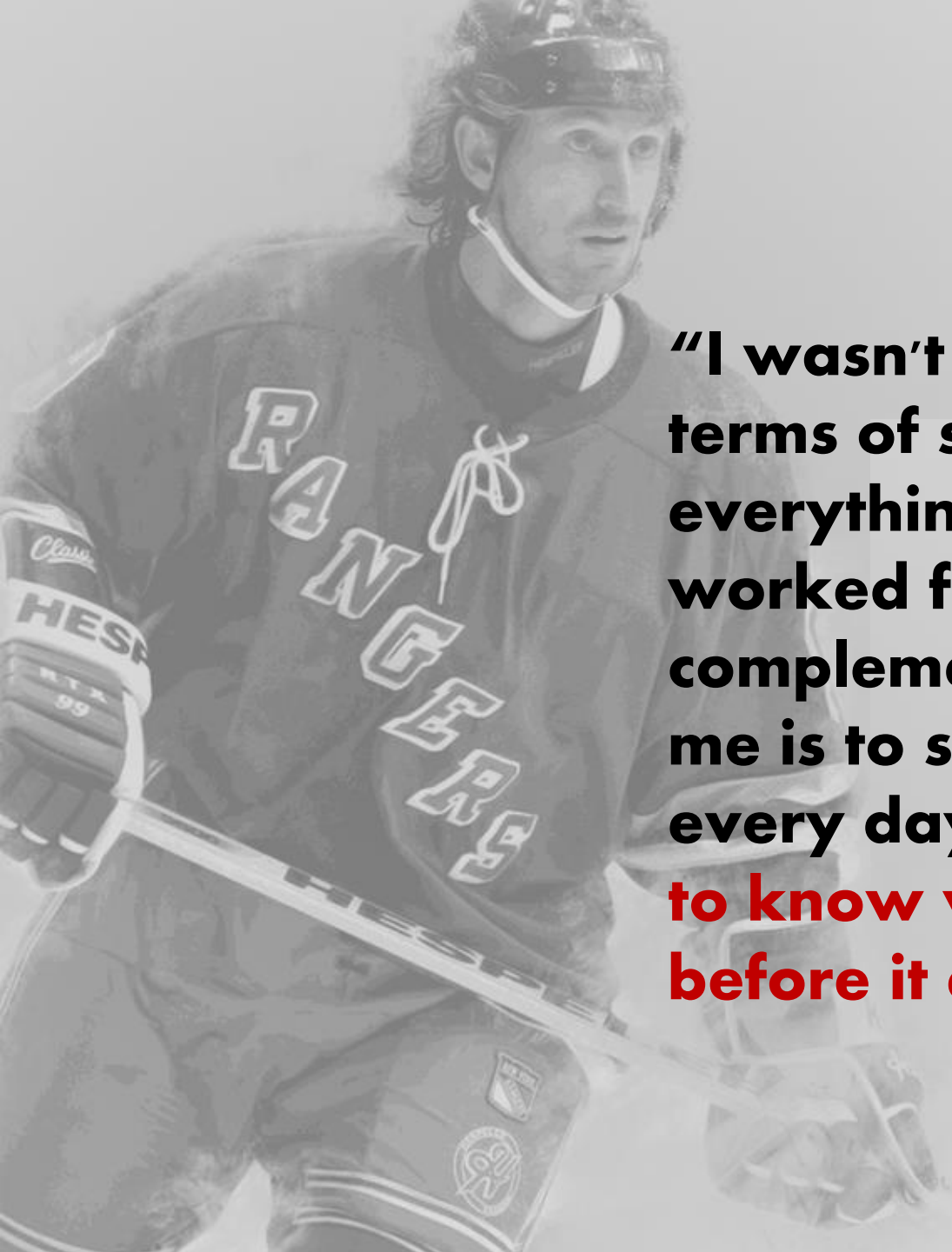


Laszlo Polgar

“Children have extraordinary potential, and it is up to society to unlock it”

- Superior ability is often taken as evidence of talent rather than lots of hidden practice





"I wasn't naturally gifted in terms of size and speed; everything I did in hockey I worked for. The highest complement that you could pay me is to say that I worked hard every day.....That' how I came to know where the puck was before it even got there"****

Wayne Gretzky



“Children have extraordinary potential, and it is up to society to unlock it”

Laszlo Polgar

- Superior ability is often taken as evidence of talent rather than lots of hidden practice
- There is no evidence of a fast track for high achievers
- **Opportunity** is necessary for success
- If, as a coach you believe that attaining excellence hinges on talent you are likely to give up on children if they show insignificant early promise

A group of young boys, likely a soccer team, are huddled together on a grass field. They are wearing various colored jerseys (blue, yellow, grey) and shorts (white, blue, red). Some jerseys have "Coaching" written on them. The background is a blurred green field.

Mol and óige agus tiocfaidh sí

Praise the young and they will flourish

**Practice and not talent is
what really matters!!**

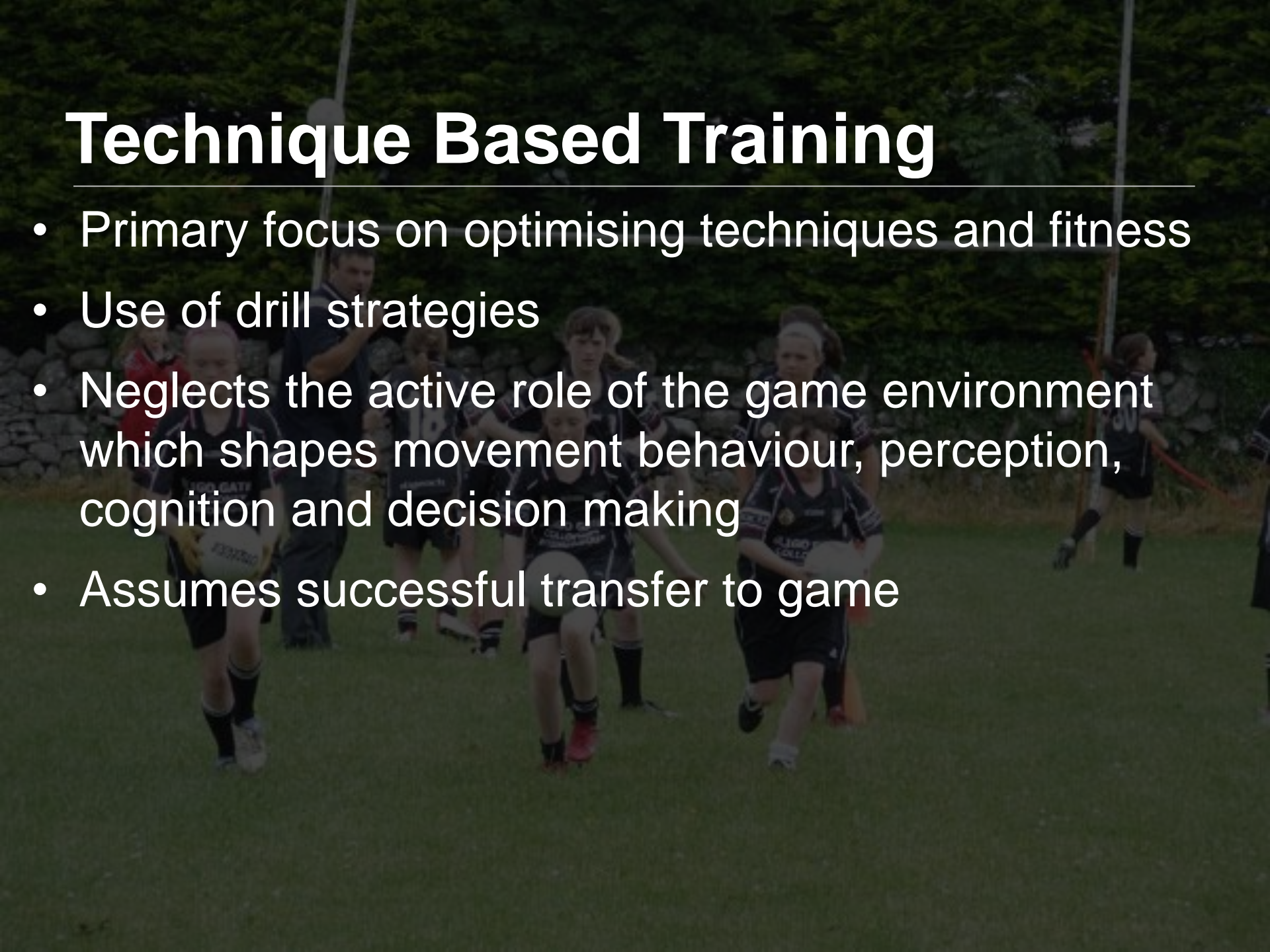




Practice ?

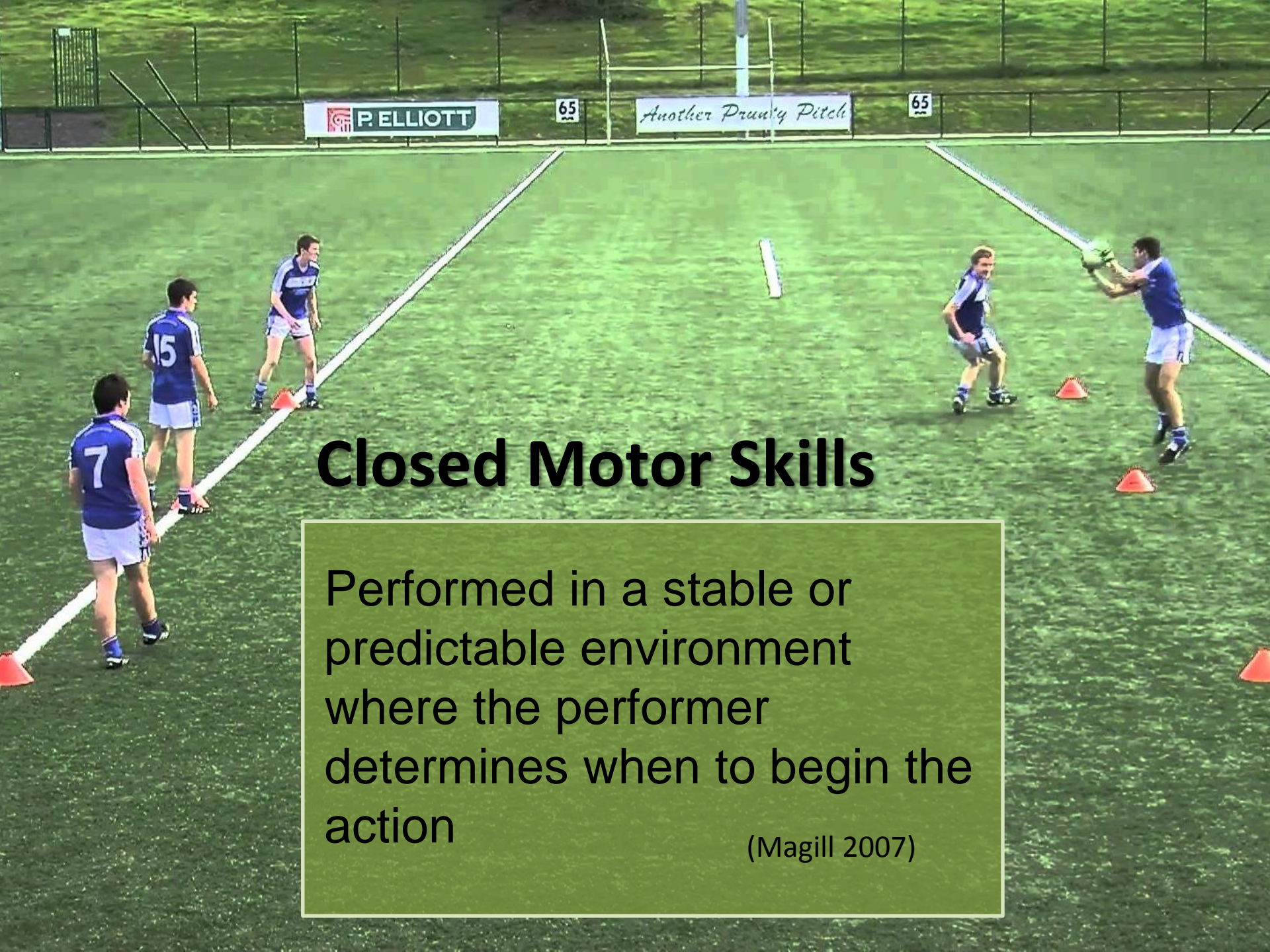
Technique Based Training

- Primary focus on optimising techniques and fitness
- Use of drill strategies
- Neglects the active role of the game environment which shapes movement behaviour, perception, cognition and decision making
- Assumes successful transfer to game









Closed Motor Skills

Performed in a stable or predictable environment where the performer determines when to begin the action

(Magill 2007)













Gaelic Games

Characteristics

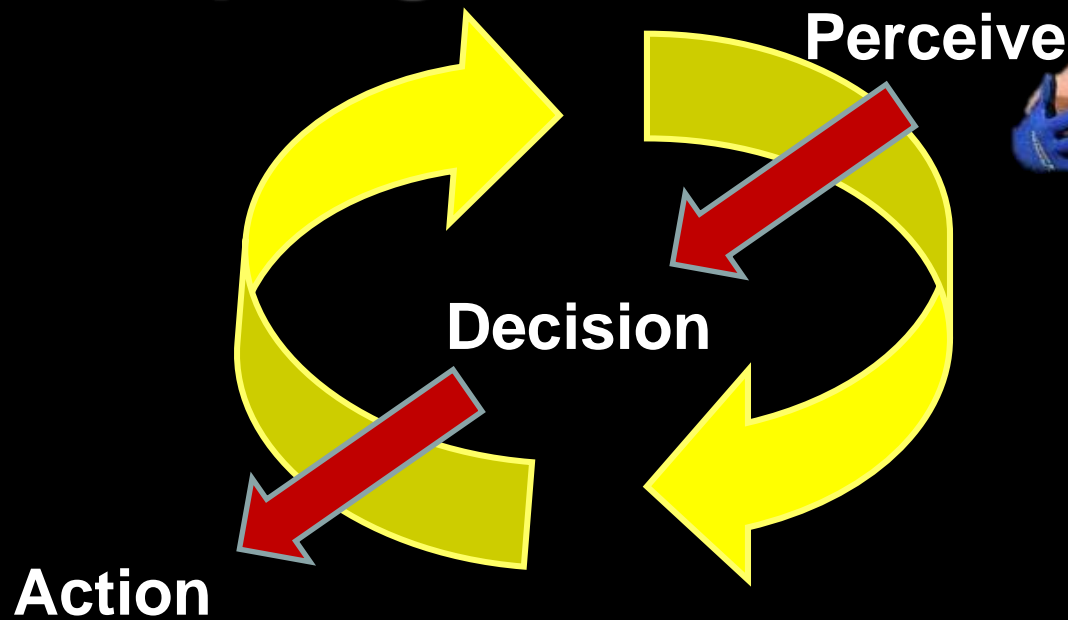
The relation between a player and the situation around him/her is dynamic

Skills are performed under the conditions of an unpredictable constantly changing environment

Require a considerable amount of contextual processing – game sense or “reading the game”

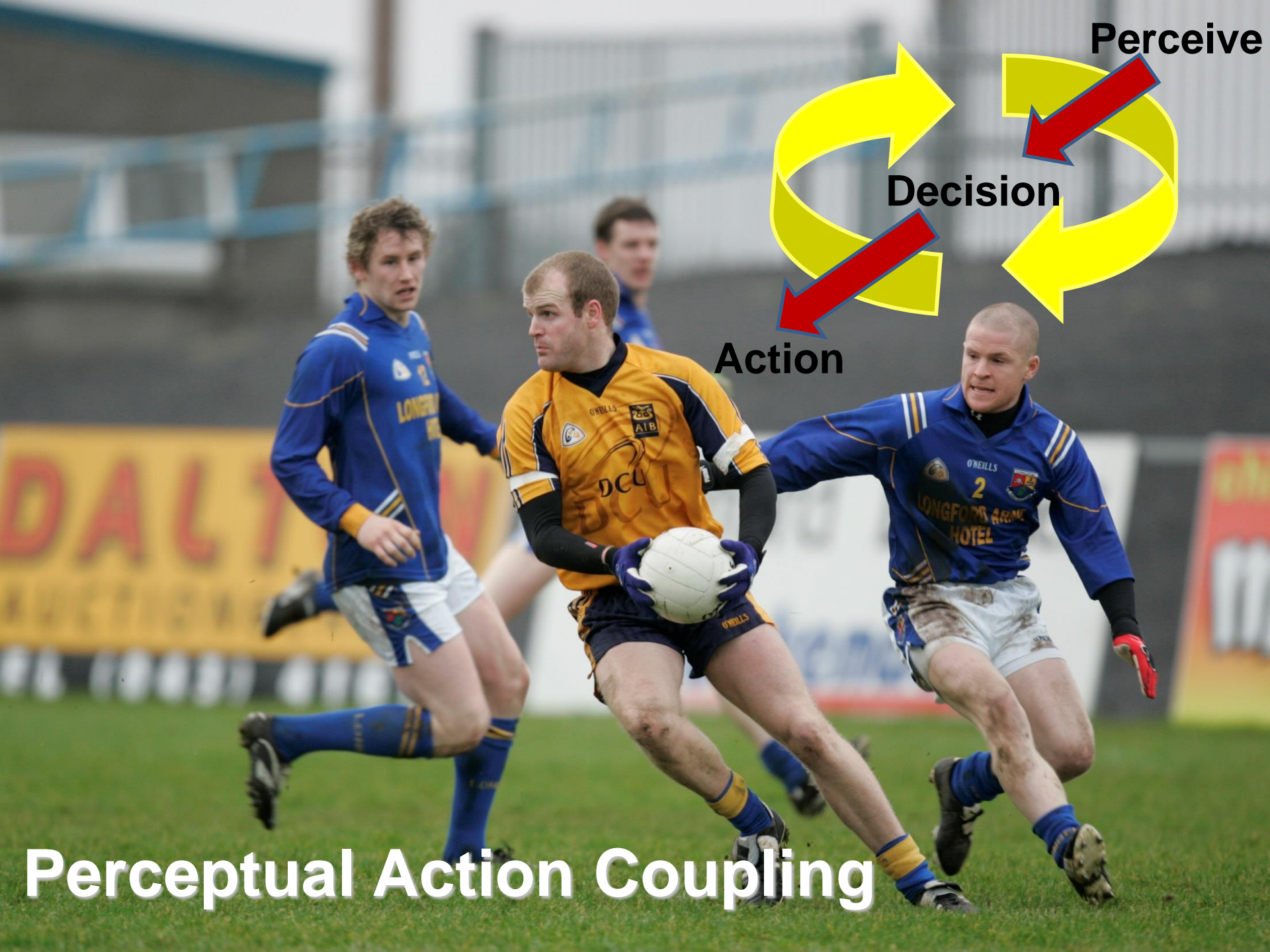
Players are constrained by their capacity to process information

Perceptual Action Coupling



Contextual processing

Empower players to make decisions based on spatial awareness and pattern recognition under pressure



Perceive

Decision

Action

Perceptual Action Coupling

Action





Decision Making

- Technical execution is critical to game performance
- Deciding “**what to do**”, “**how to do**” and “**when to do**” is just as important
- Poor decision making rather than poor technical execution is more likely to be the cause of errors in games



A background image of a hurling match. A player in a light blue jersey with 'O'NEILL'S' and 'GAA' logos is on the left, holding a hurley with a white ball. A player in a black and yellow striped jersey with 'GAA' and 'Avonmore' logos is on the right, reaching out. A third player in a similar striped jersey is in the background. All players are wearing helmets and are in motion on a grass field.

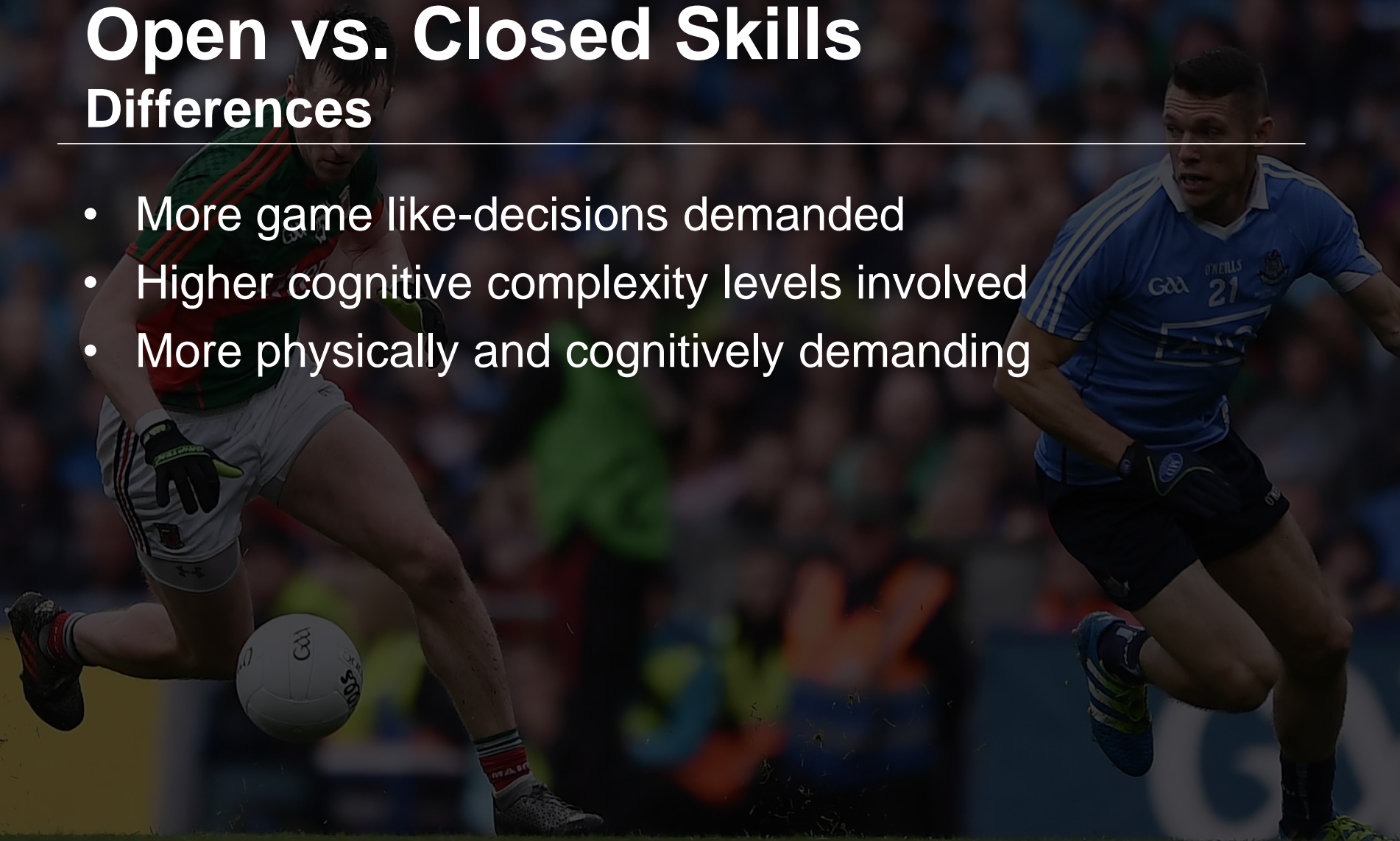
Open Motor Skills

Motor skills performed in
an unstable unpredictable
environment (Magill 2007)

Open vs. Closed Skills

Differences

- More game like-decisions demanded
- Higher cognitive complexity levels involved
- More physically and cognitively demanding



Expert Performer Characteristics

Perform intuitively under pressure in competition

Recognize and recall specific patterns of play

Accurately select the correct option from a variety of alternatives

Make decisions rapidly and efficiently

How?

By extracting information from related experiences stored in long term memory (Schmidt's schema theory, 1975, 1988)

“Time Paradox”

Ice hockey frequently looks like a game of chaos. But amid the mayhem, Gretzky can discern the games underlying pattern and flow and anticipate what’s going to happen faster and in more detail than anyone else in the building.

New York Times



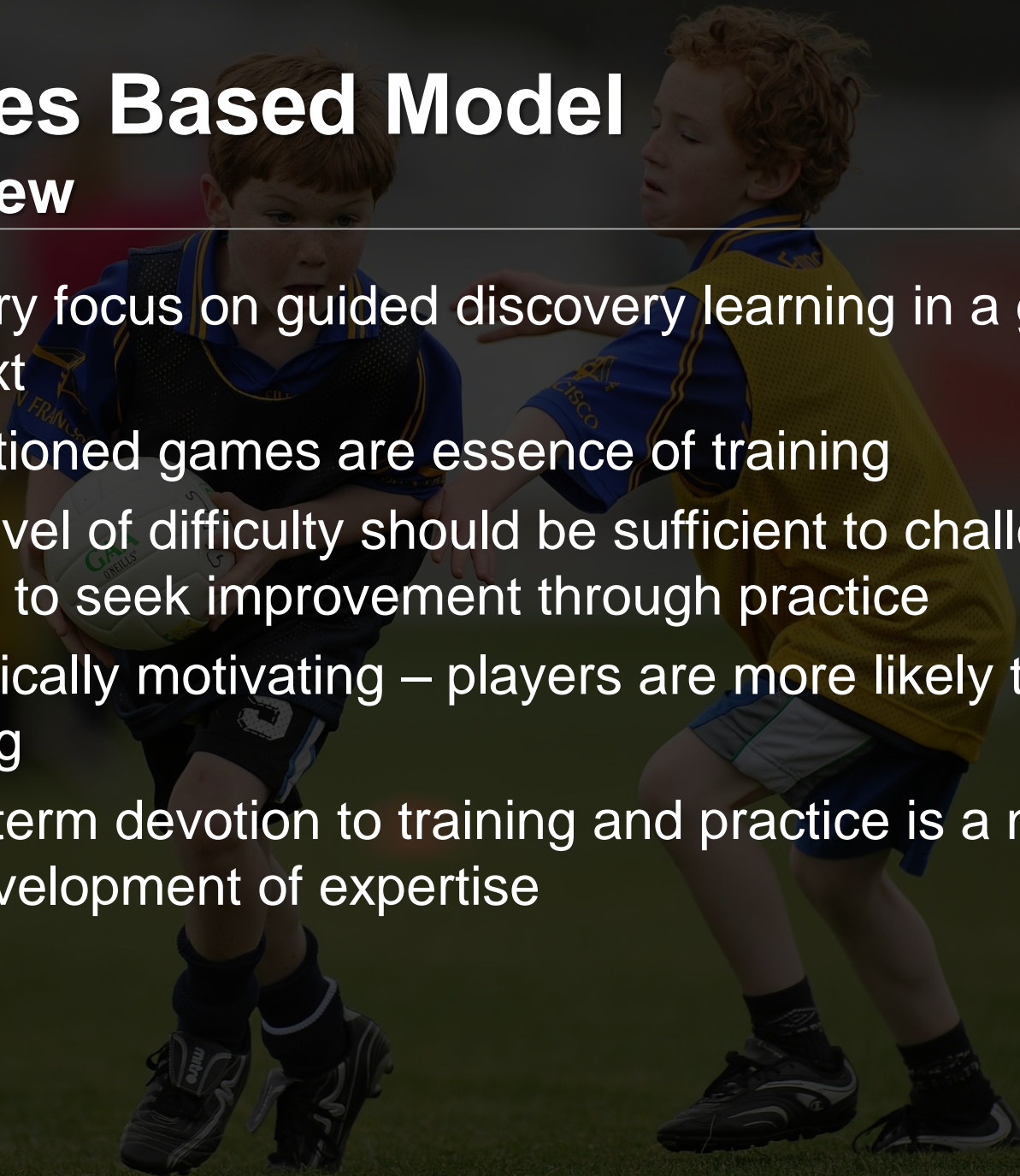




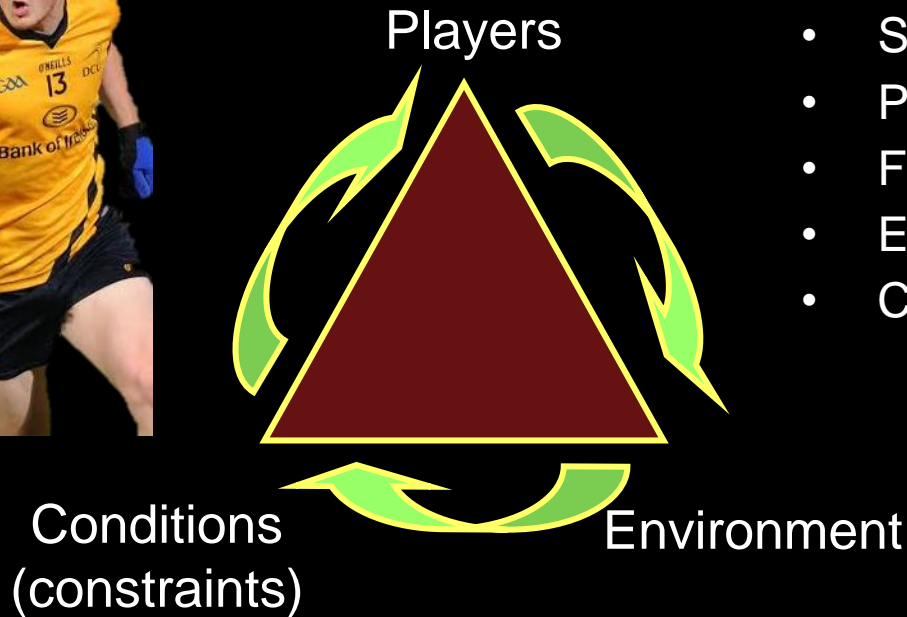
Games Based Model

Overview

- Primary focus on guided discovery learning in a game context
- Conditioned games are essence of training
- The level of difficulty should be sufficient to challenge each player to seek improvement through practice
- Intrinsically motivating – players are more likely to continue playing
- Long-term devotion to training and practice is a necessity for development of expertise

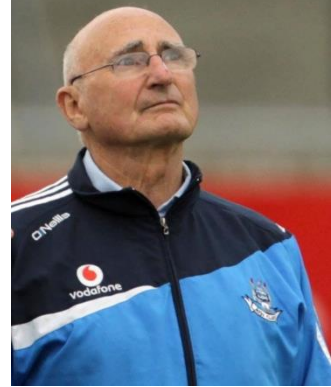


Games Based Method



- Duration
- Number of players on each team
- Dimensions of the playing area
- Scoring zones
- Playing rules
- Feedback
- Equipment
- Coach encouragement

Dr. Michael Whelan



Skills

- Total catches
- Chest catches
- Total passes
- Foot passes
- Pick ups
- Interceptions
- Solo hops
- Scoring attempts
- High catches
- Low catches
- Hand passes
- Punt kicks
- Blocks
- Solo taps
- Total touches

Possession Characteristics

- No of team possessions
- No of skills per possession
- No of players involved/possession
- Time per possession

U-14

15 v 15

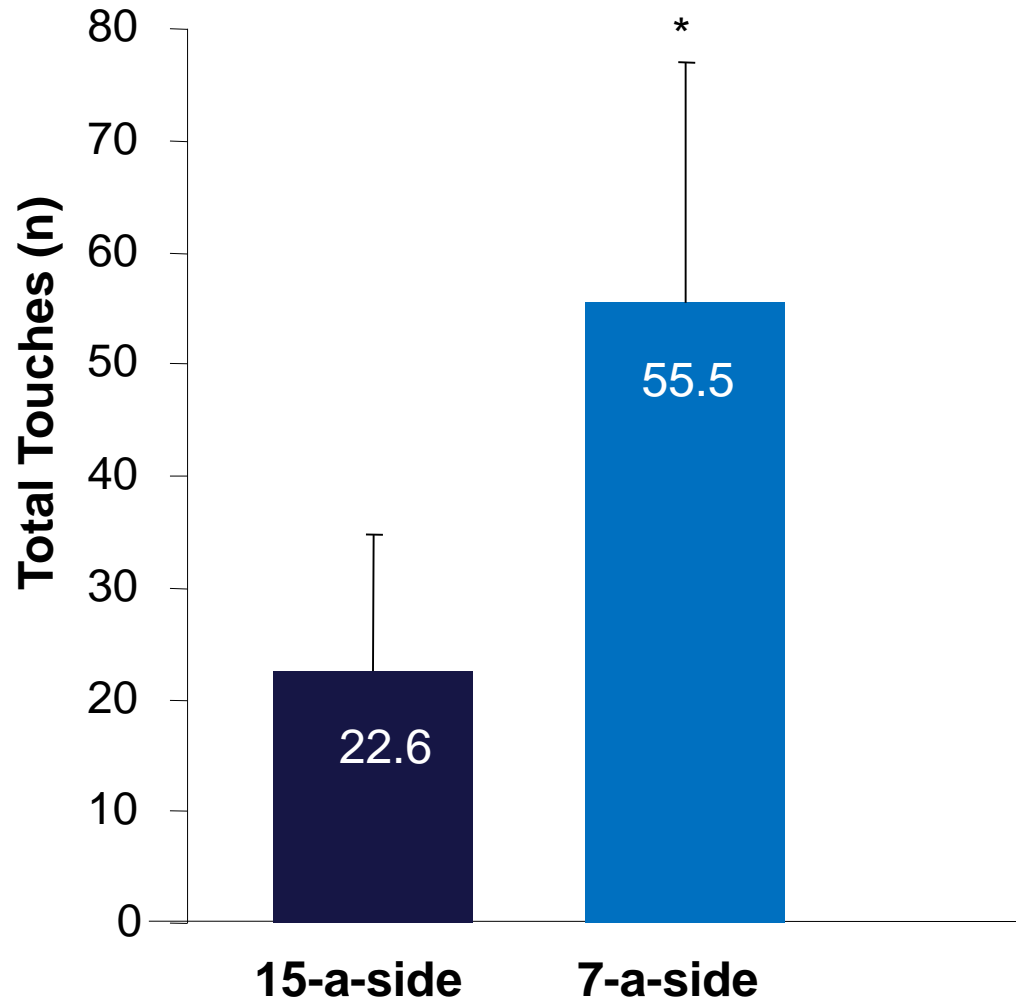
320²m/player

7 v 7

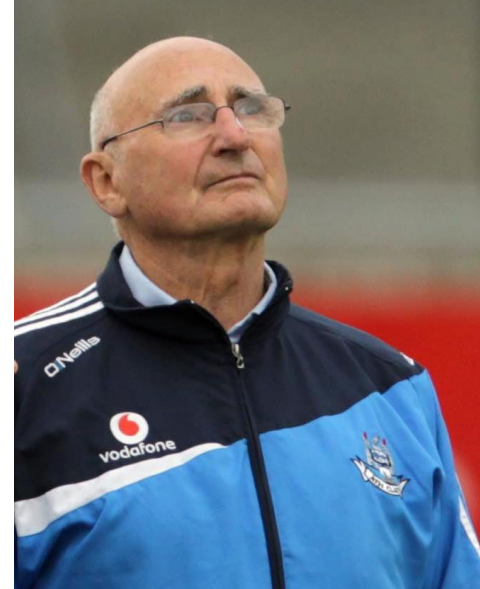
320²m/player

Selected skills
Possession characteristics
Enjoyment
Perceived competence

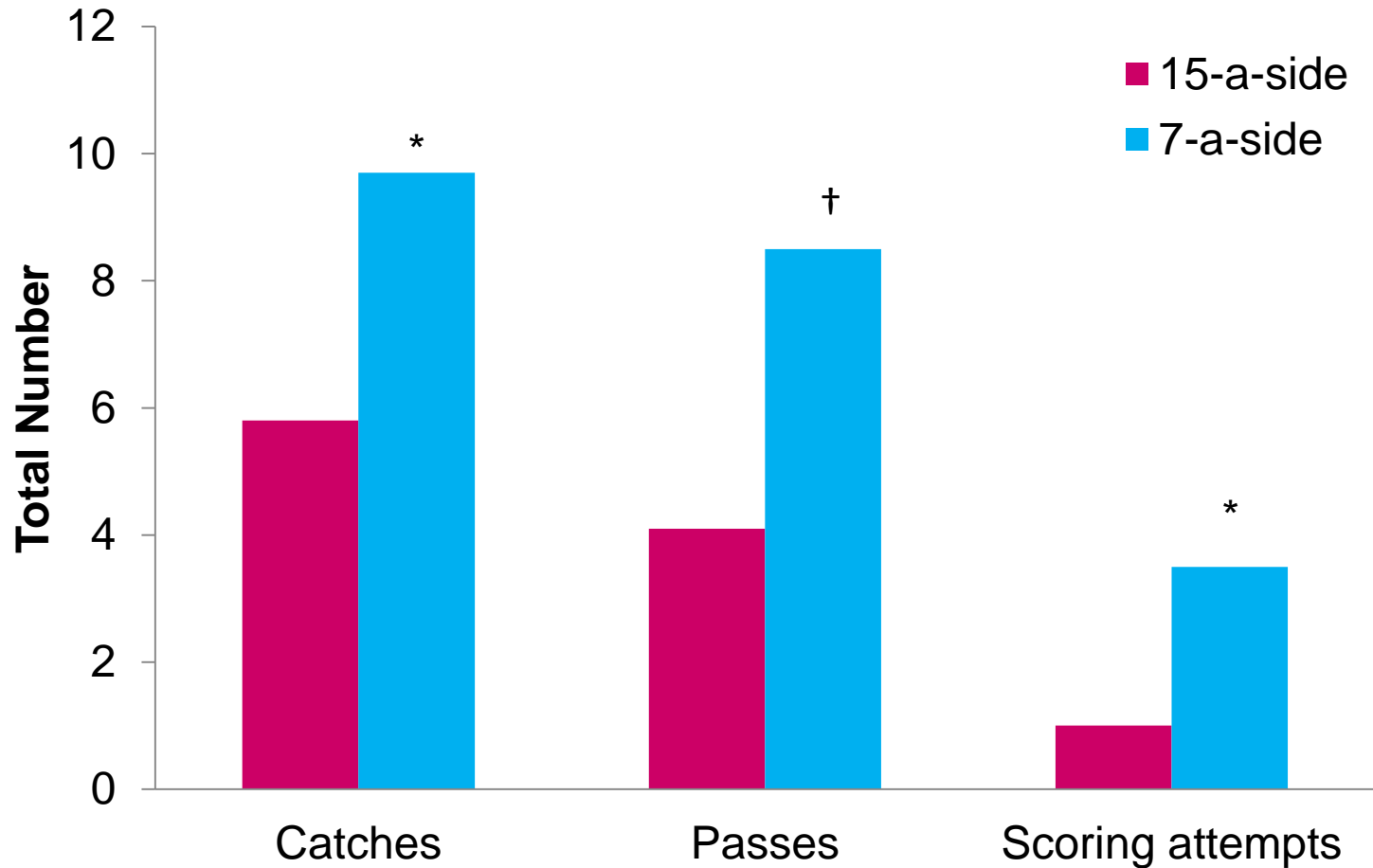
Touches Per Player



*P<0.001 vs. 15-a-side



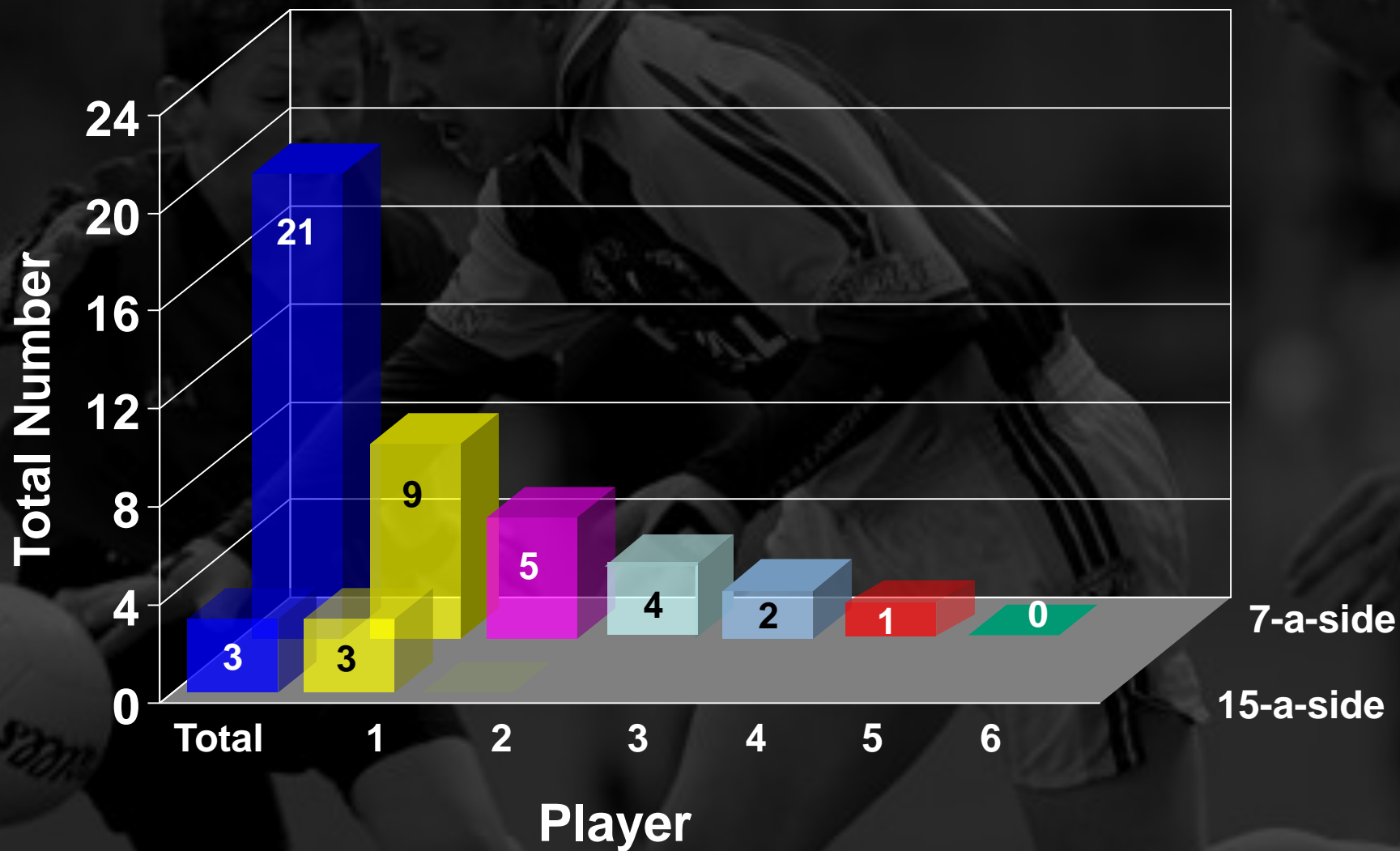
Selected Skills Performed



* $p < 0.05$ vs. 15-a-side

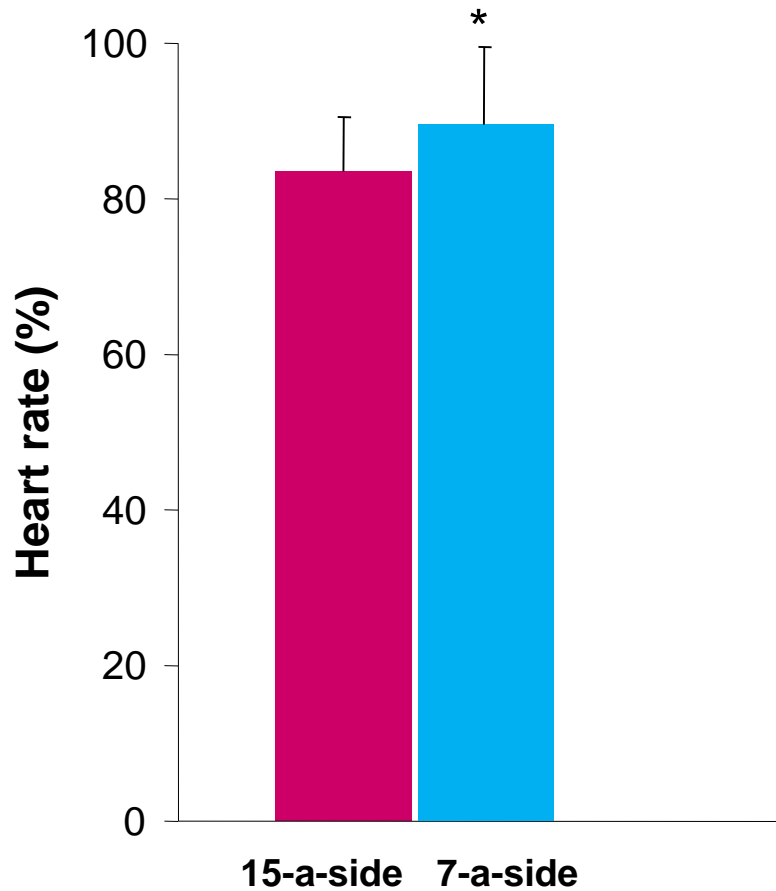
† $p < 0.01$ vs. 15-a-side

Scoring Attempts

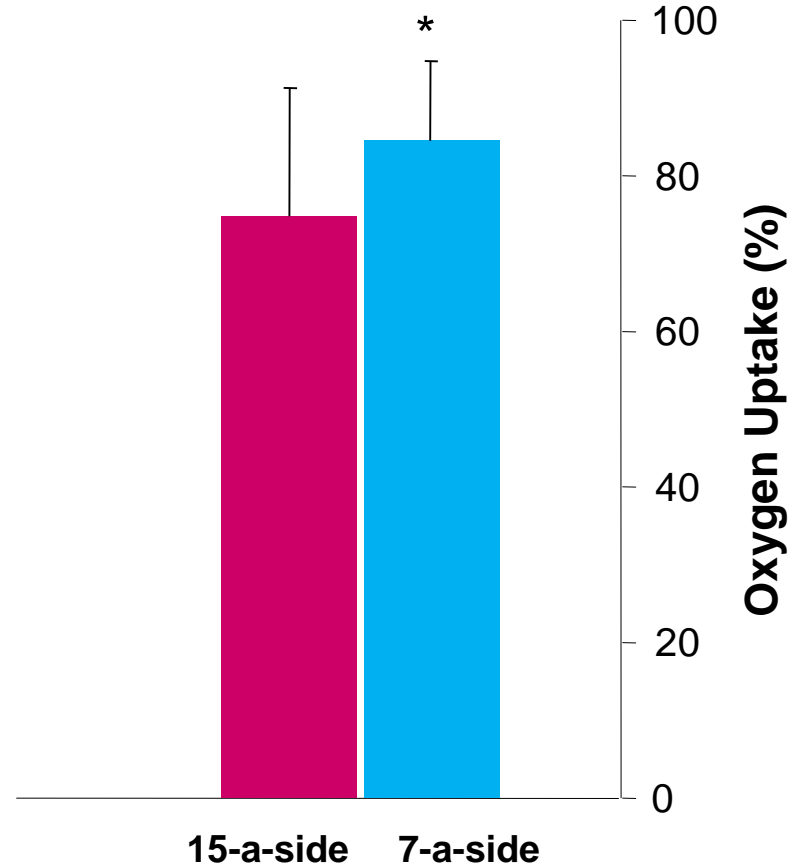


Physiological Responses

Heart Rate



Estimated %VO₂



*P<0.01

Gaelic Games



Ice Hockey



Field Hockey



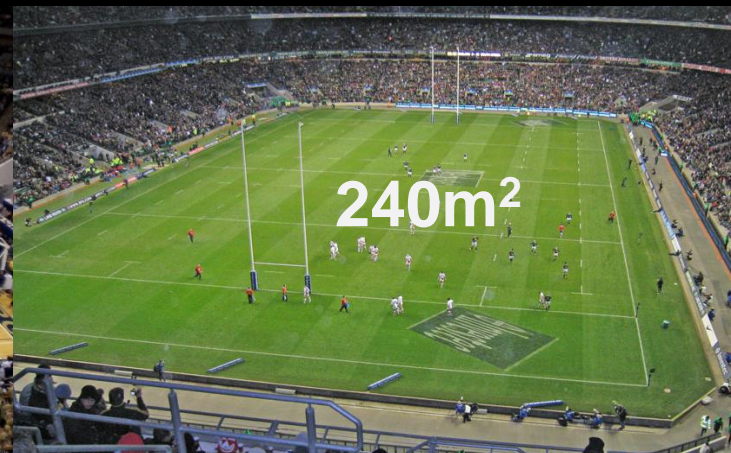
Soccer



Basketball



Rugby

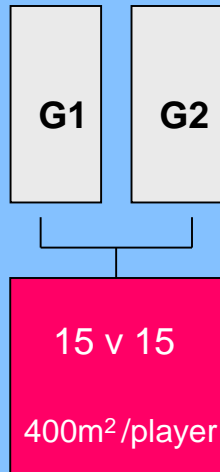


Dr. Michael Whelan

U-16

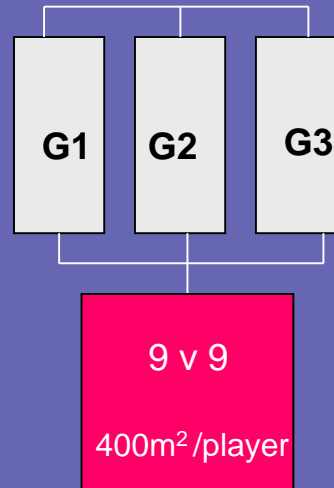
15 v 15

140 m x 86 m



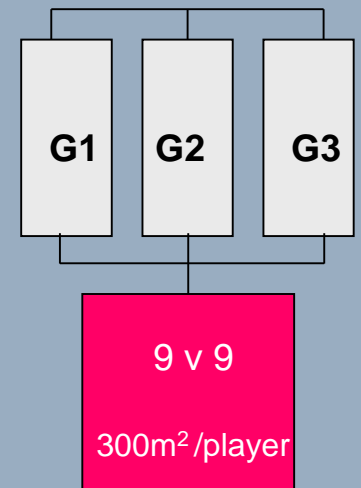
9 v 9

100 m x 72 m



9 v 9

90 m x 60 m



Comparisons

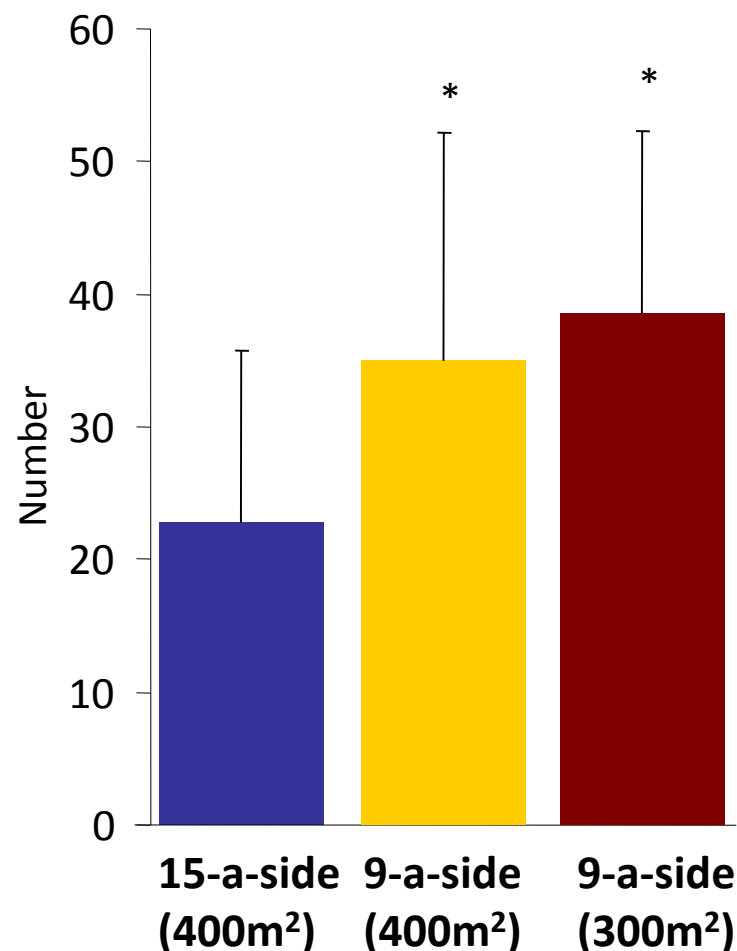
Skills Performed

	15 v 15 (400m ²)	9 v 9 (400 m ²)	9 v 9 (300m ²)
Total catches	6.8 ± 4.5	9.4 ± 5.3†	10.6 ± 5.0‡
High catches	0.8 ± 1.0	1.1 ± 1.2	1.0 ± 1.1
Chest catches	4.1 ± 3.1	5.2 ± 3.4	6.1 ± 3.1†
Low catches	1.8 ± 1.6	3.1 ± 2.2†	3.6 ± 2.4‡
Total passes	6.7 ± 4.2	9.3 ± 4.7†	10.0 ± 4.3‡
Hand passes	3.6 ± 2.8	4.2 ± 3.0	5.4 ± 3.6†
Foot passes	3.1 ± 2.7	5.0 ± 3.4†	4.6 ± 2.4*
Punt kicks	0.1 ± 0.3	0.1 ± 0.2	0.0 ± 0.2
Scoring attempts	0.8 ± 1.1	2.0 ± 2.4†	2.2 ± 2.3‡
Pick-ups	1.9 ± 1.7	3.0 ± 2.1†	2.9 ± 2.1*
Blocks	0.2 ± 0.5	0.1 ± 0.4	0.2 ± 0.5
Intercepts	0.8 ± 1.2	1.4 ± 1.4*	1.4 ± 1.1*
Solo taps	1.5 ± 2.4	2.6 ± 3.9	2.9 ± 2.7*
Solo hops	2.2 ± 2.8	3.3 ± 3.3	3.1 ± 2.7

Values are mean ± SD

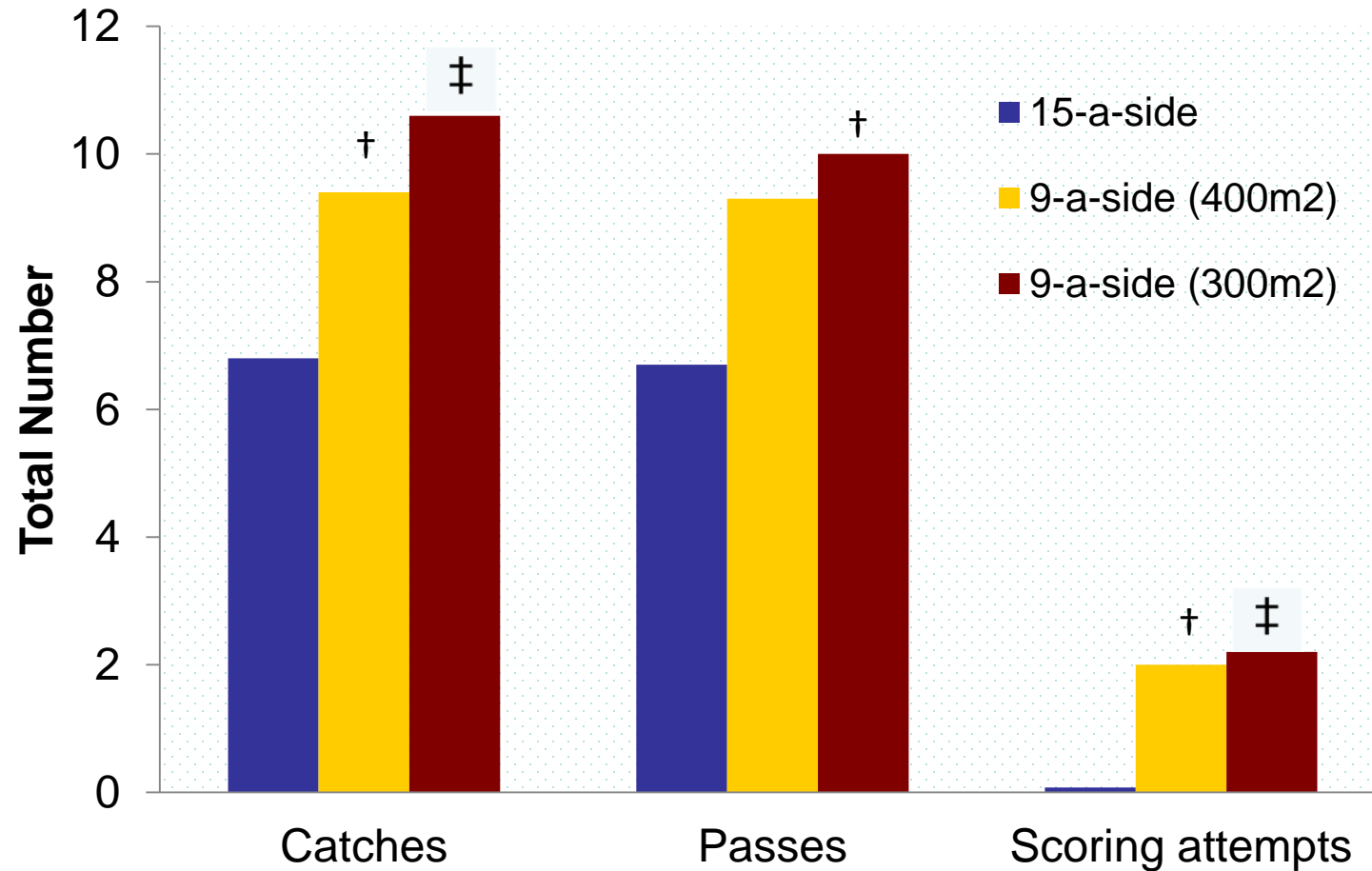
*p<0.05 vs.15-a-side , †p<0.01 vs.15-a-side ‡ p<0.01 vs.15-a-side

Total Touches



*p<0.001 v 15-a-side

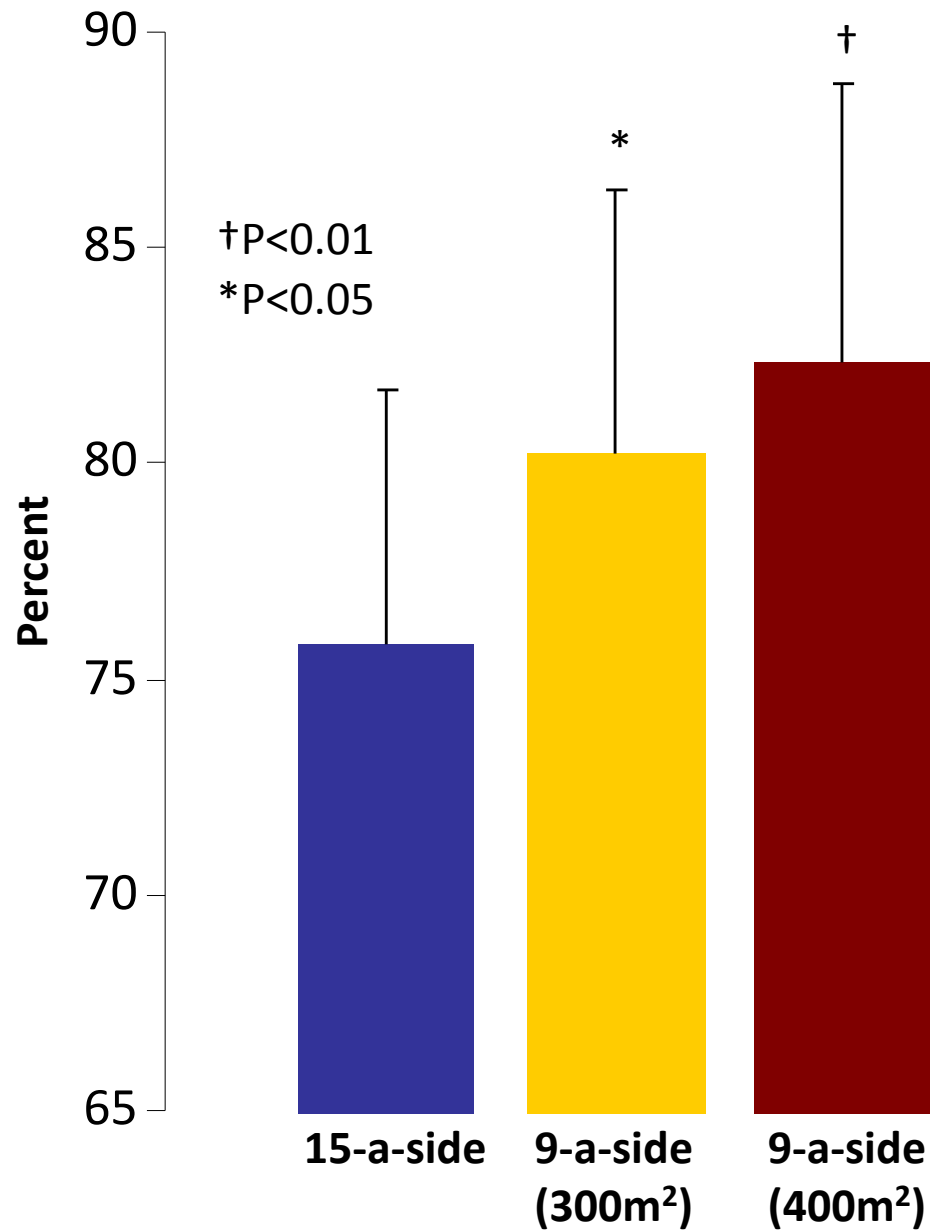
Selected Skills



*p<0.05 vs.15-a-side

†p<0.01 vs.15-a-side

Relative VO₂



Players



Conditions

- Game conditions (rules adopted)
- Match duration
- Number of players
- Dimensions of the playing area
- Scoring zones
- Presence of a goalkeeper
- Feedback
- Equipment
- Coach encouragement

Environment

Club philosophy/culture







Performance



Ice-Berg Effect



Performance



- Communication
- Leadership
- Teamwork
- Goal setting
- Humility
- Time management
- Competitive nature
- Handle pressure
- Embrace changes
- Honesty
- Deal with adversity
- Competitive
- Open minded
- Willing to learn
- Self-motivated
- Loyal
- Accept criticism
- Discipline
- Adaptable

Players



Conditions

- Game conditions (rules adopted)
- Match duration
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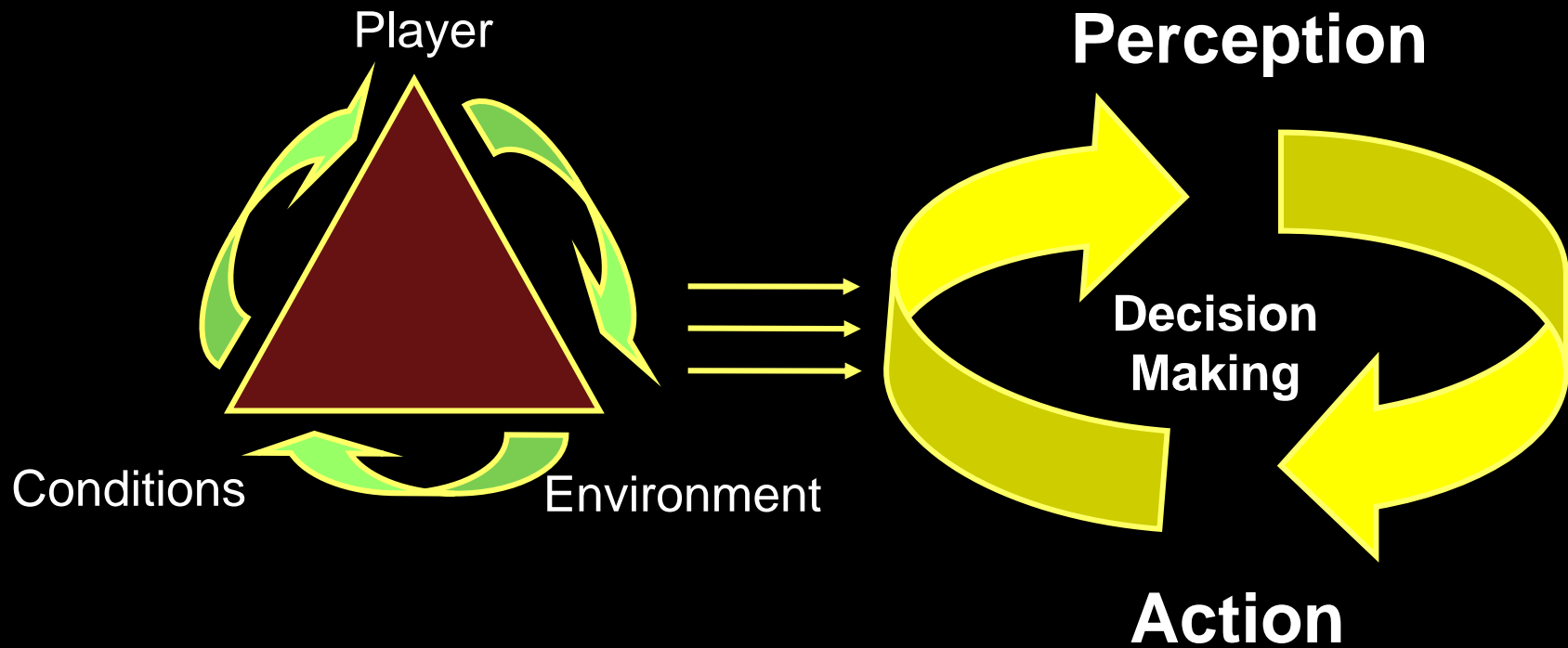
Environment

Club philosophy/culture
Coaching staff





Games Based Method



Problem Solvers/Decision Makers

“I like to see players making decisions individually and collectively because it shows they’re thinking like leaders”

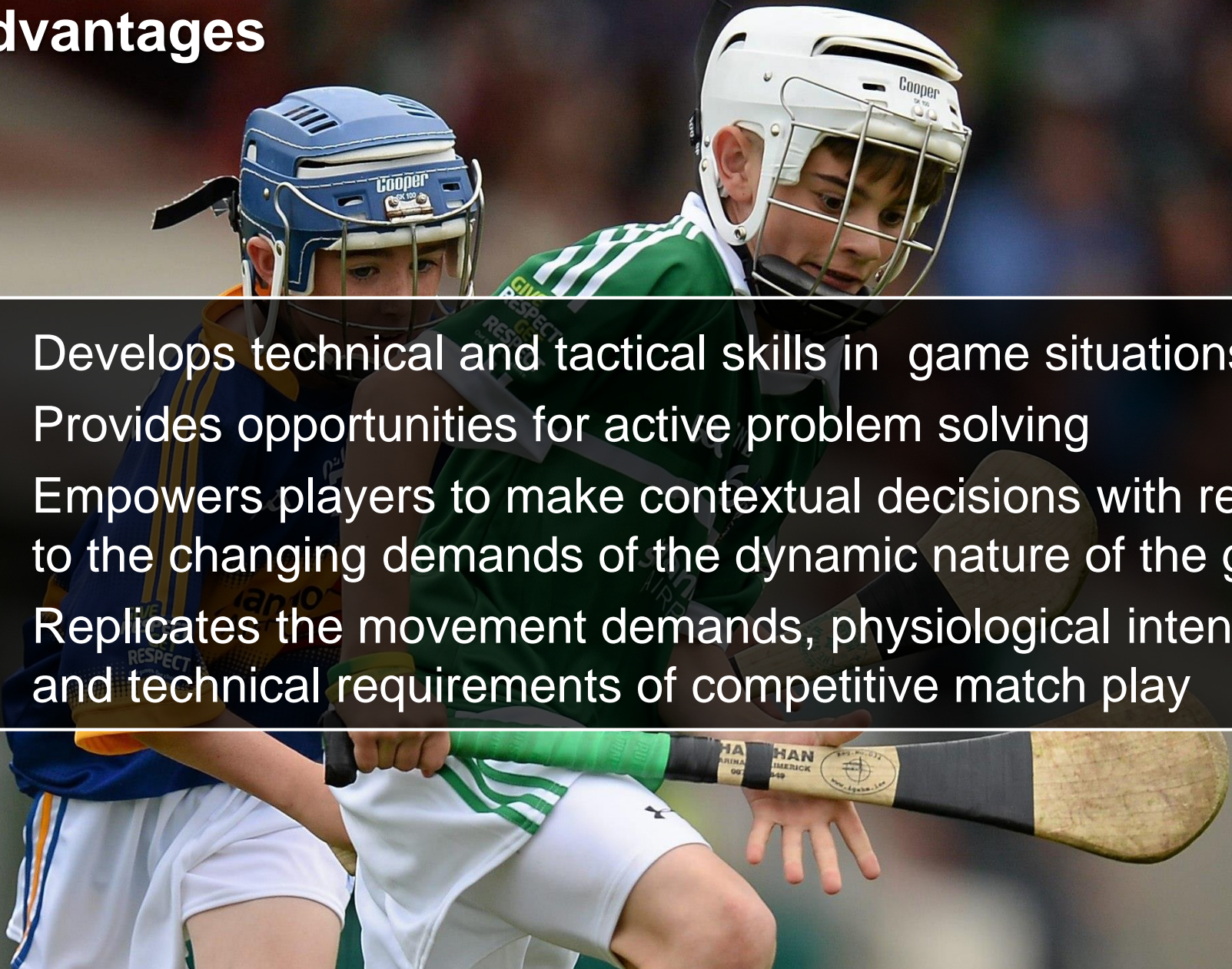
Brian Cody



Games Based Model

Advantages

- Develops technical and tactical skills in game situations
- Provides opportunities for active problem solving
- Empowers players to make contextual decisions with respect to the changing demands of the dynamic nature of the game
- Replicates the movement demands, physiological intensity, and technical requirements of competitive match play



Gaelic Games Fitness Components

Speed

Speed
Endurance

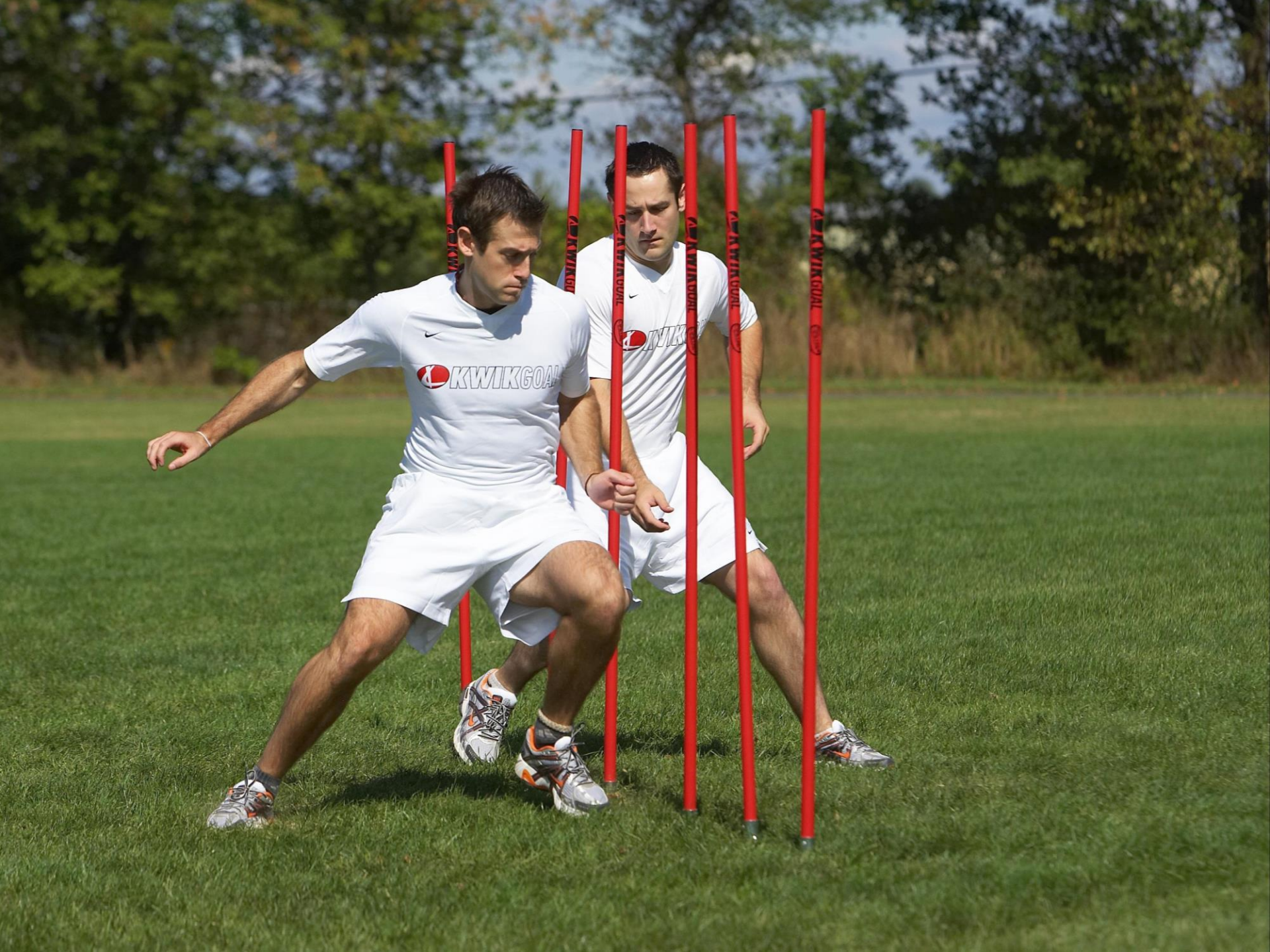
Power

Agility

Endurance

Strength
Endurance

Strength





Agility

Preplanned



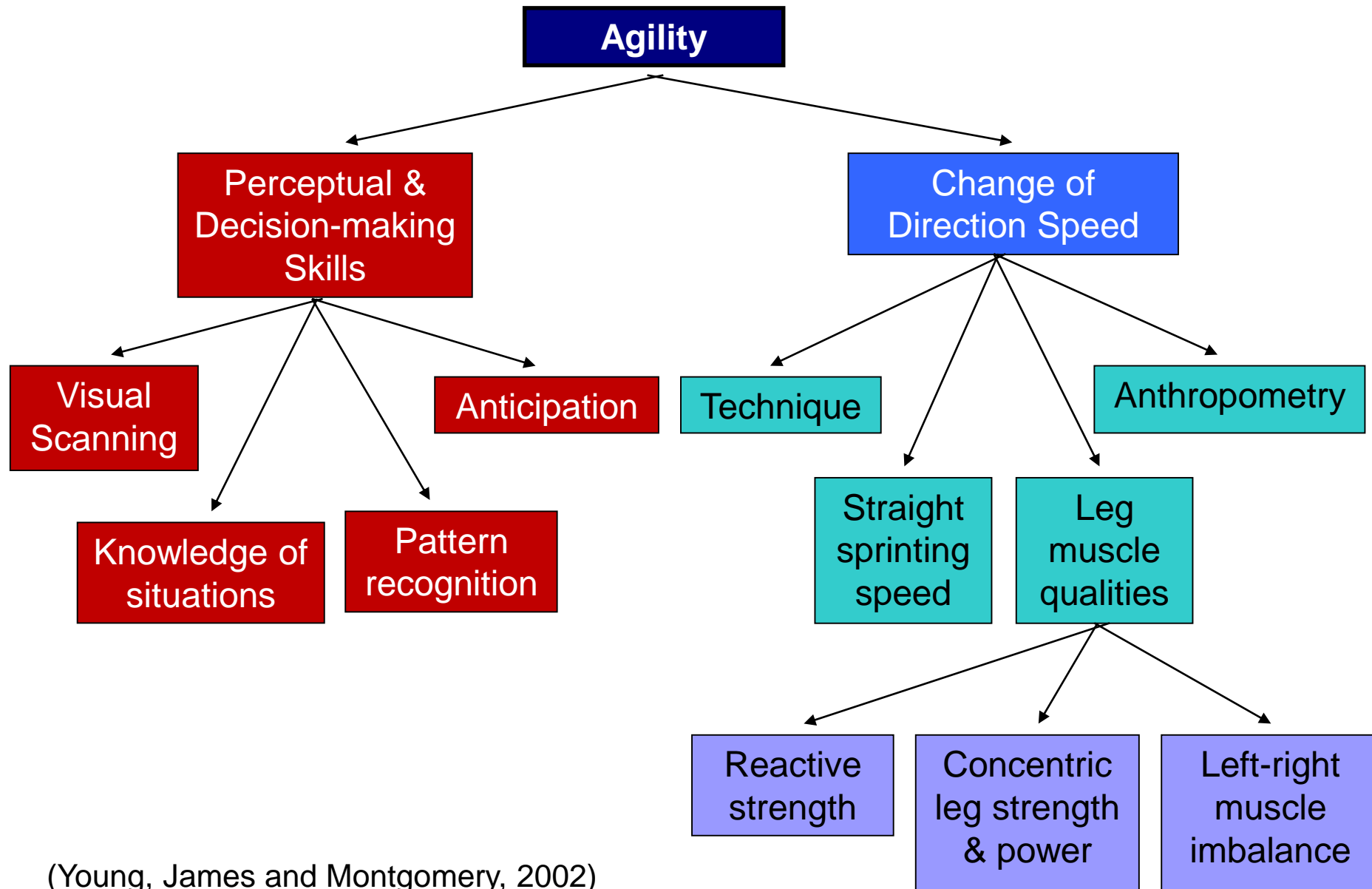
The ability to change direction and start and stop quickly
(Verstegen & Marcello, 2001)

Reactive



A rapid whole-body movement with changes of velocity or direction **in response to a stimulus**
(Sheppard & Young, 2006)

Determinants of Agility



(Young, James and Montgomery, 2002)

Game Based Model

Role of the Coach

- Determine how to create practice that allows players to learn implicitly
- Manipulate the constraints/conditions of practice activity to an appropriate level to cause an improvement in skill performance
- Goal orientated - retain possession/offensive or defensive transition/
- Guide and shape rather than dictate practice/training
- Rely on skilful observation and player questioning “discovery learning”

Games Based Methods (Playing form)

- Warm up (dynamic & specific)
- Game
- Questions and challenges
- Back to Game
- Further Questions and challenges
- Progression of game
- Repeat above cycle
- Warm down

Progression

PS ... focus on technique-skill only when it improves the game or the ability of an individual to play the game (retention & transfer benefits)

What we say

OK, so get with a partner and practice the chest pass. Remember to keep your elbows out, and step forward as you extend your arms towards your partner. And once you can pass accurately, we will try to put it into a game



What they hear

*blah blah blah blah blah blah
blah blah blah blah blah blah
blah blah blah blah blah blah
blah blah blah blah blah blah
blah blah blah blah blah blah
blah blah blah **game***









Irish Children Previous Generations

Spent considerable time in unstructured activities such as “street games” or “playing on the green”

Fun, encouraged improvisation, and nurtured the development of sporting expertise

Majority organized without any adult involvement

Full participation was guaranteed

Number and skill level of the players on each team were altered to insure games were fair and competitive

Playing area and playing rules were modified in order to create an enjoyable non-threatening environment

Game Based Coaching

“Provides for the development of game appreciation, perceptual and tactical awareness, and strategic knowledge, which contribute to the decision-making process”

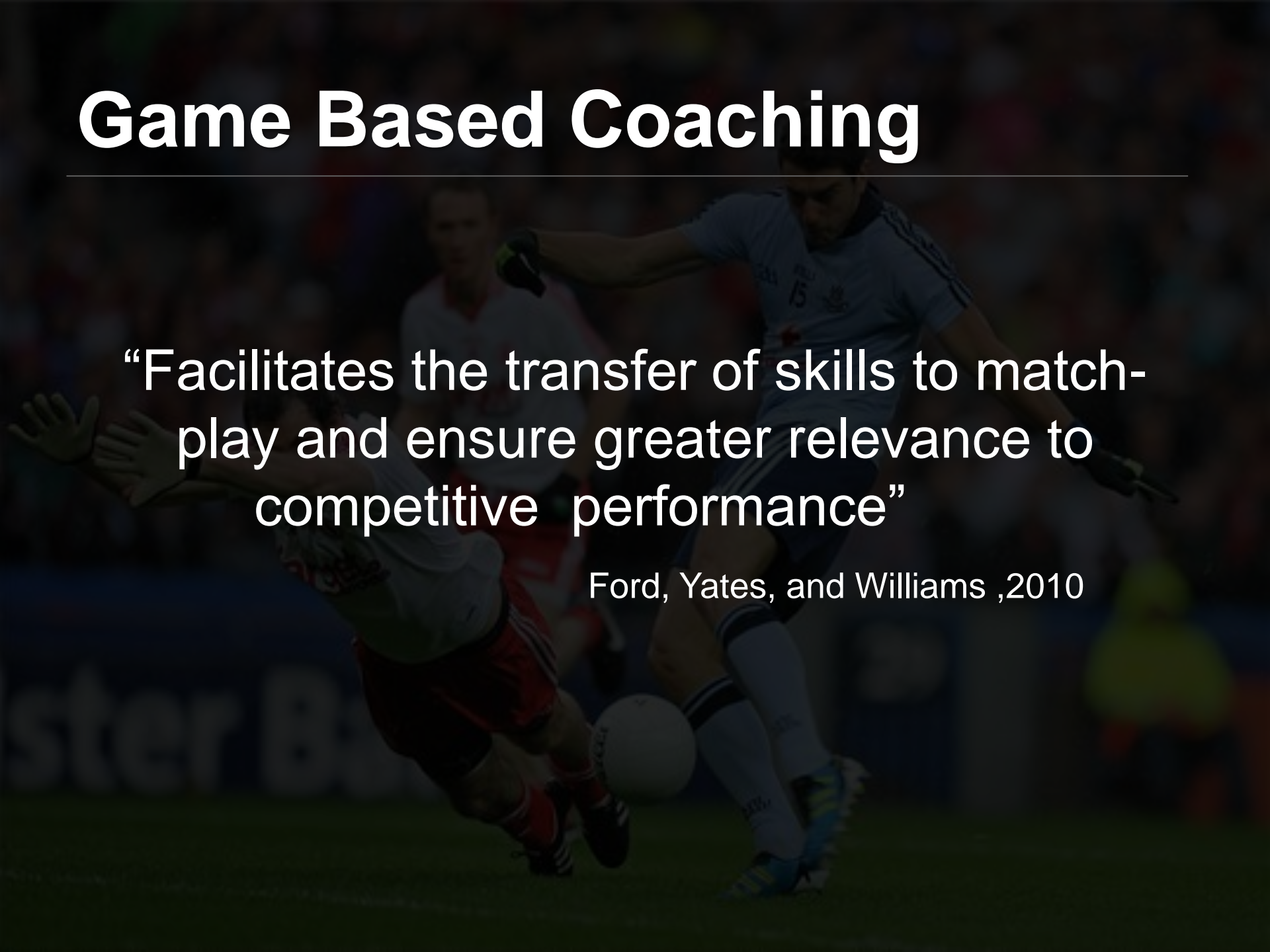
Renshaw, Davids & Savelsberg, 2010



Game Based Coaching

“Facilitates the transfer of skills to match-play and ensure greater relevance to competitive performance”

Ford, Yates, and Williams ,2010







A Tale of Two classrooms

Classroom A

Teacher knows everything.

Mistakes = ☹

Teacher Questions.

Kids listen.

Goal is good grades.

Memorize Facts.

Finish Pages.

One Size Fits All.

Rules enforced.

A Tale of Two classrooms

Classroom A

Teacher knows everything.

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Rules enforced.

Classroom B

Teacher as learner.

Mistakes = Learning

Kids Question.

Kids think.

Goal is learning.

Solve Problems.

Create.

One Size Fits EACH.

Rules unnecessary.

A Tale of Two classrooms

Classroom A

Teacher knows everything.

Mistakes = ☹

Teacher Questions.

Kids listen.

Goal is good grades.

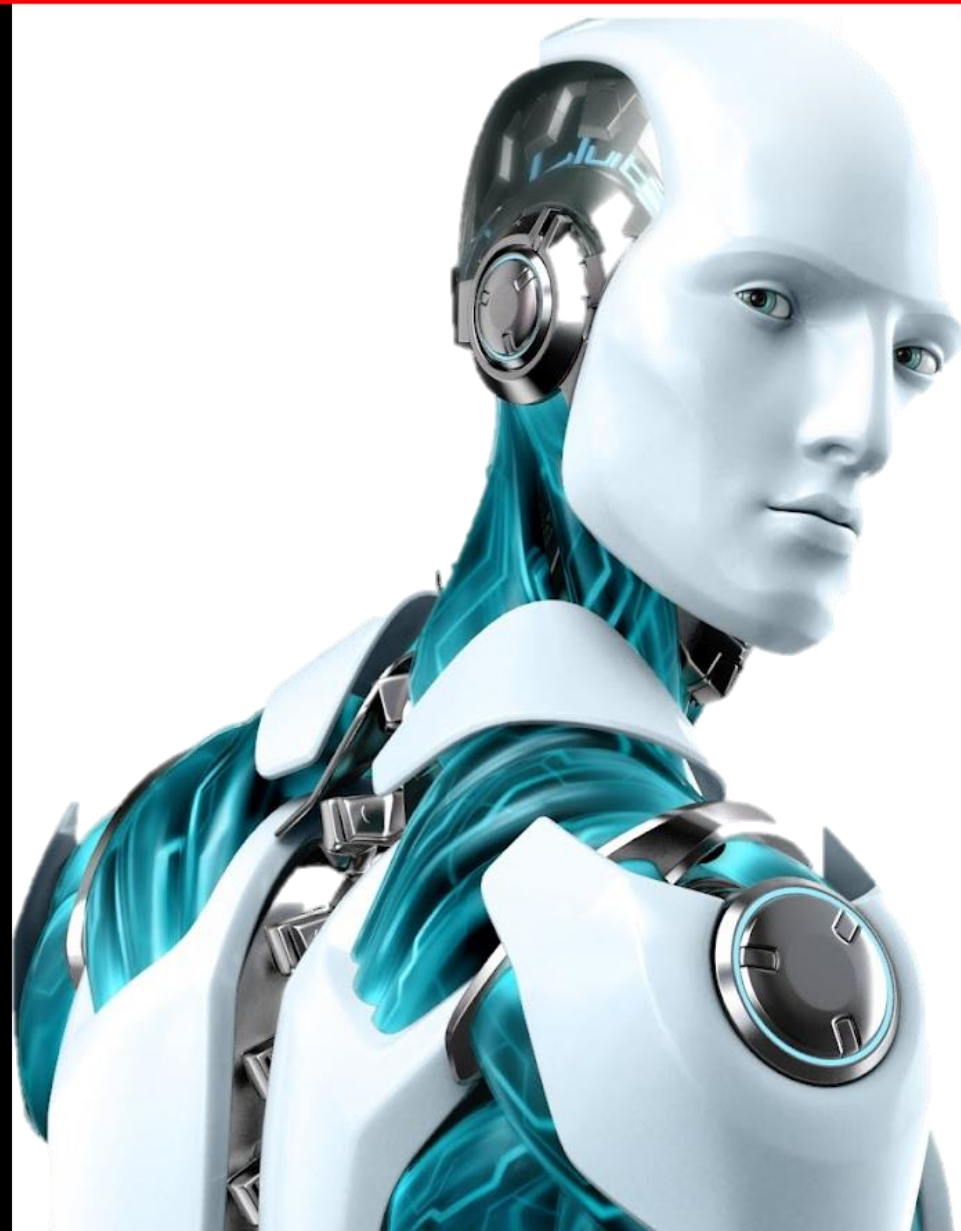
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↑
good
for robots



A Tale of Two classrooms



Classroom B

Teacher as learner.
Mistakes = Learning

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Solve Problems.

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One Size Fits EACH.

Rules unnecessary.

great for kids 









[illegible]

target attitude psychology mind thinking optimism positive life
being idea largely likely failure strategies defined define concept theory external useful accept
internal typical approaches time negative something psychological physical questionnaire action
skills intelligence step pessimism one shown people goal trace consume
better negative something psychological physical questionnaire action people goal trace consume
theoretical relationship explanatory style logic test much including
focused learn best success things knowledge experience terms disease through human
argue original perfectionists successful explain depression
steps purposes



Drug













1976



2016





5-18 year olds
Should get at least



**MINUTES OF
MODERATE-TO-
VIGOROUS**

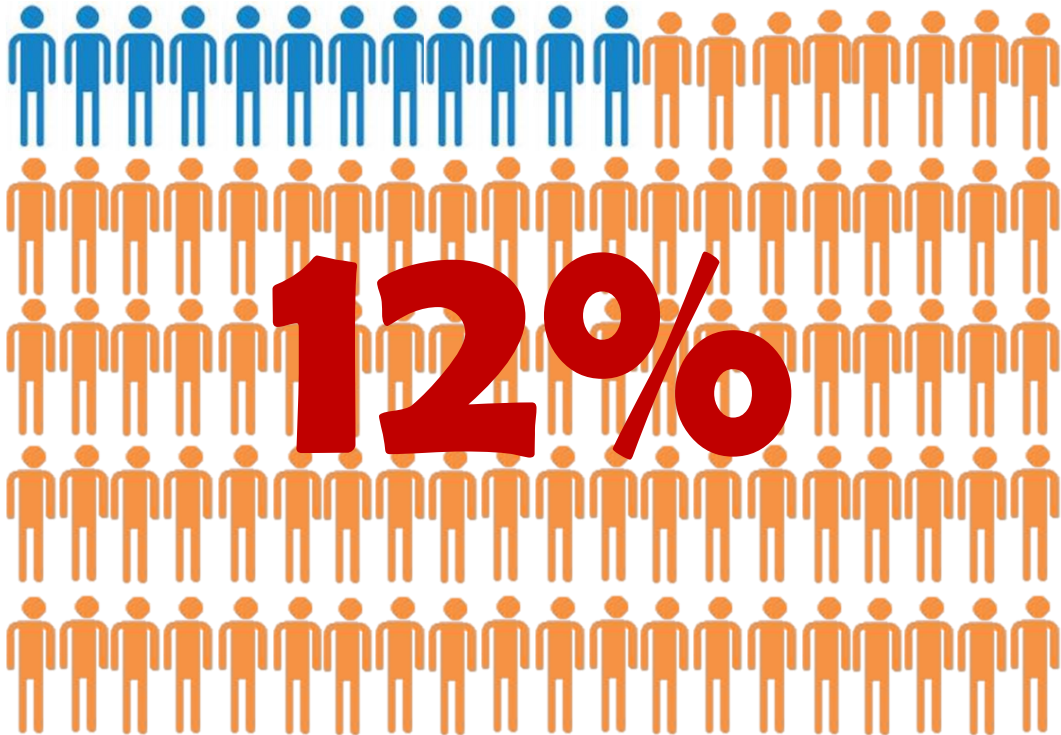


**PHYSICAL
ACTIVITY
EVERYDAY**

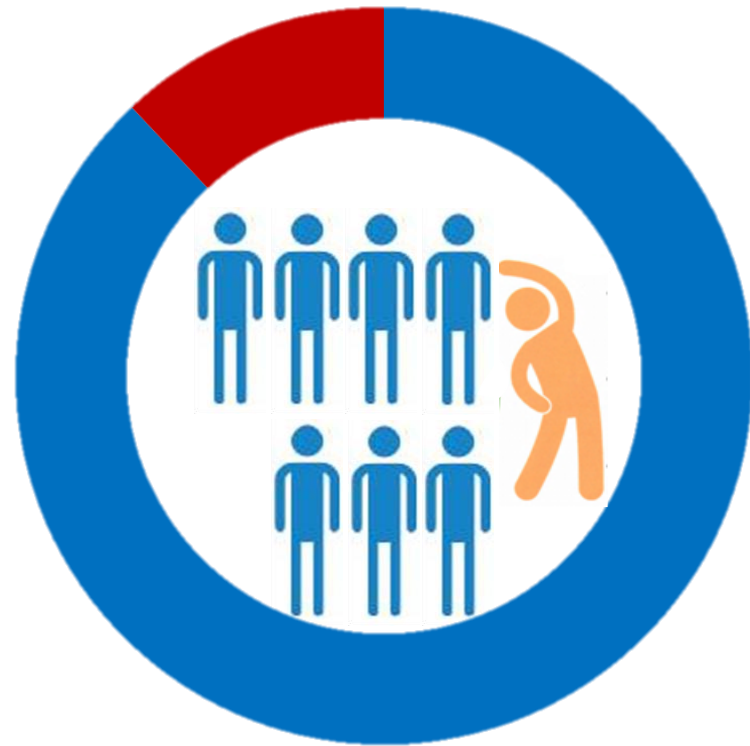


At least **60** minutes of moderate- to vigorous-intensity aerobic activity **Every** day

1 in 8
Teenagers



12%



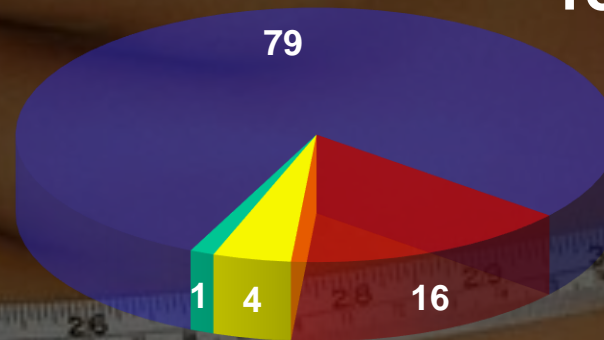
Woods et al. CSPPA, 2009

BMI

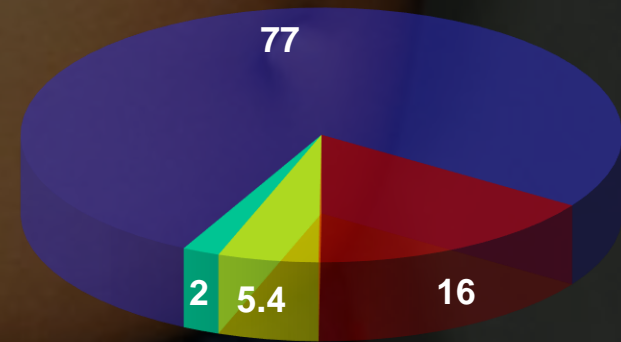
10-12



13-15



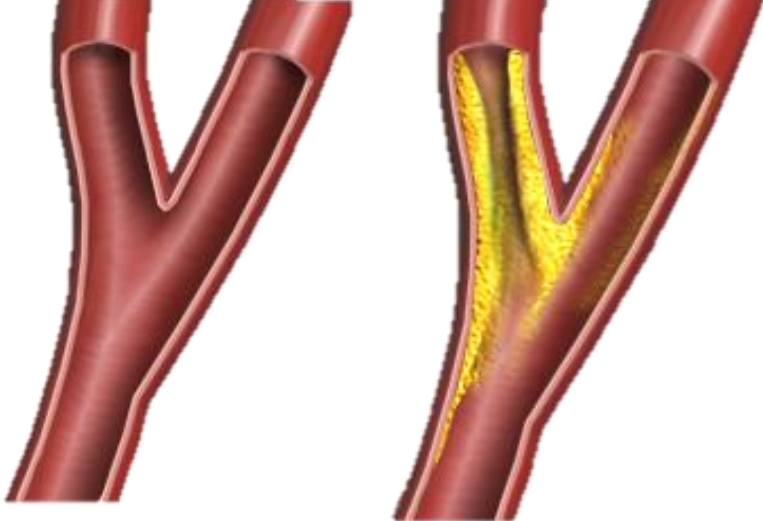
16-18

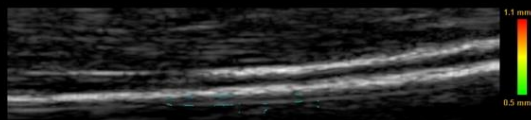


- Underweight
- Normal
- Overweight
- Obese





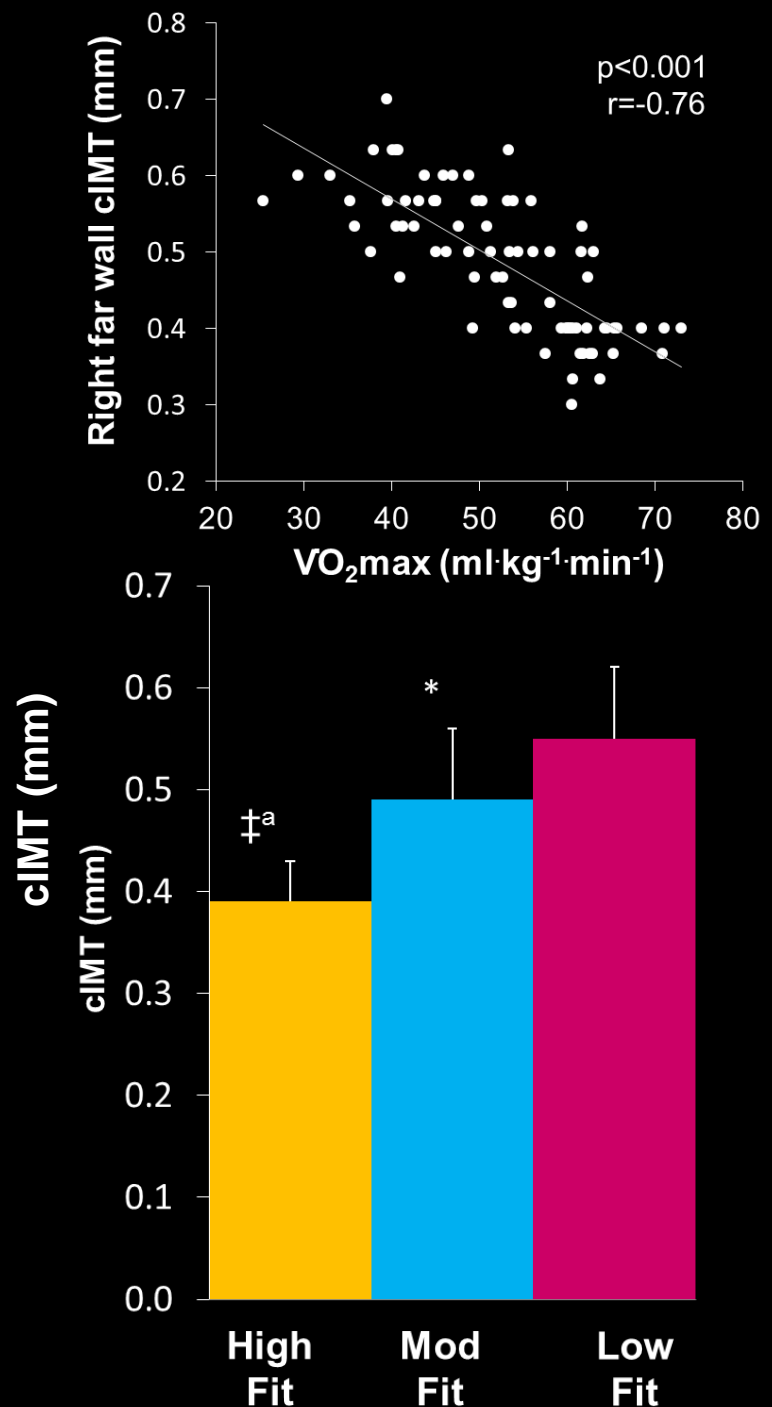


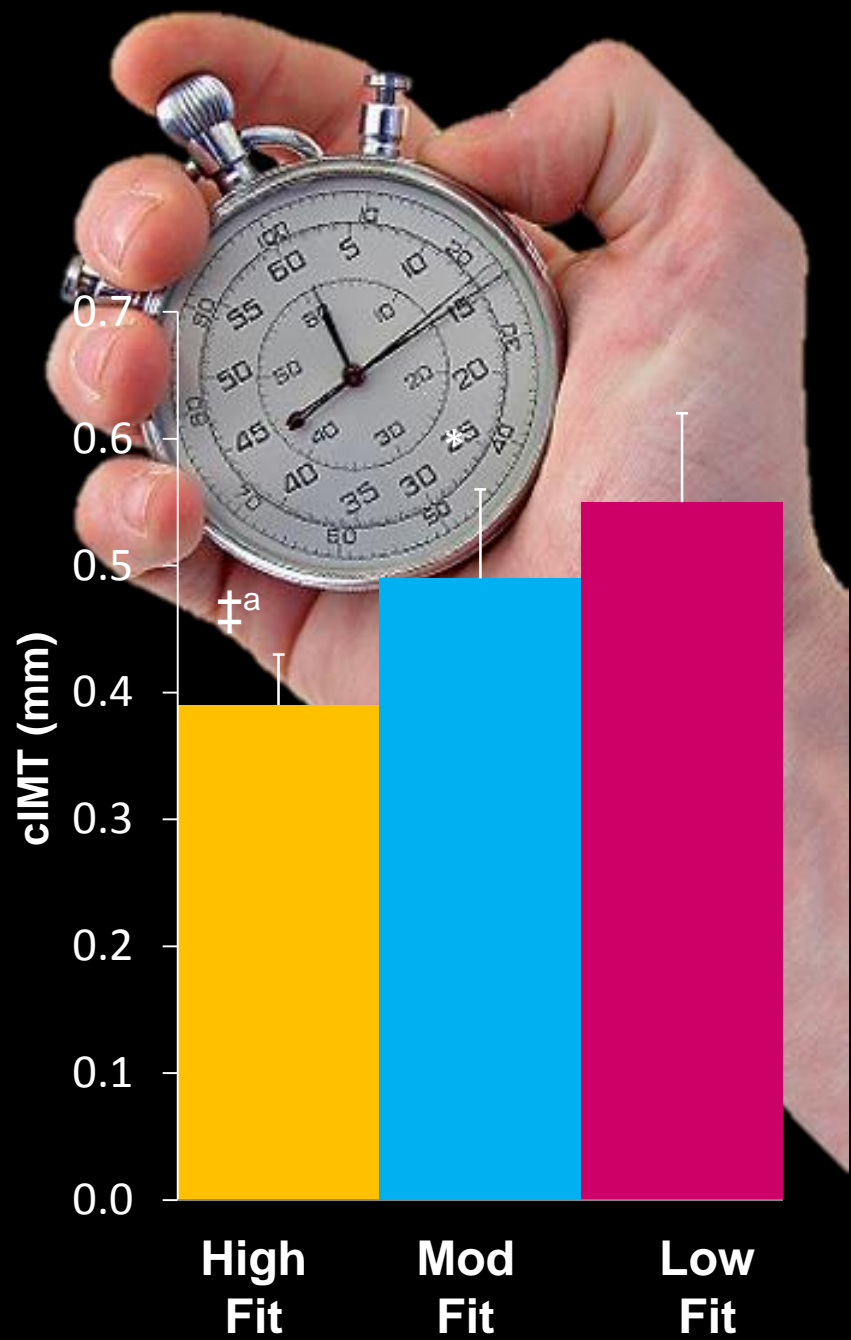


	Max	Mean	SD	Q1	Points
Near	0.53 mm	0.48 mm	0.08 mm	0.24	71
Far	0.62 mm	0.56 mm	0.03 mm	0.97	288



- **64%** were overweight or obese
- **75%** of LF had high blood pressure
- **62%** were insulin resistant
- **87%** had a vascular age between 55-60 years









**Gaelic games may not be for everyone,
but the opportunity to try should be**



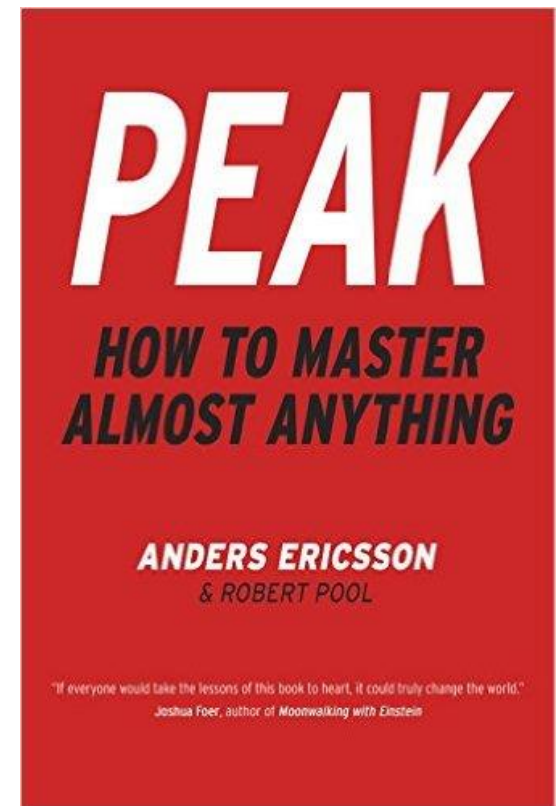
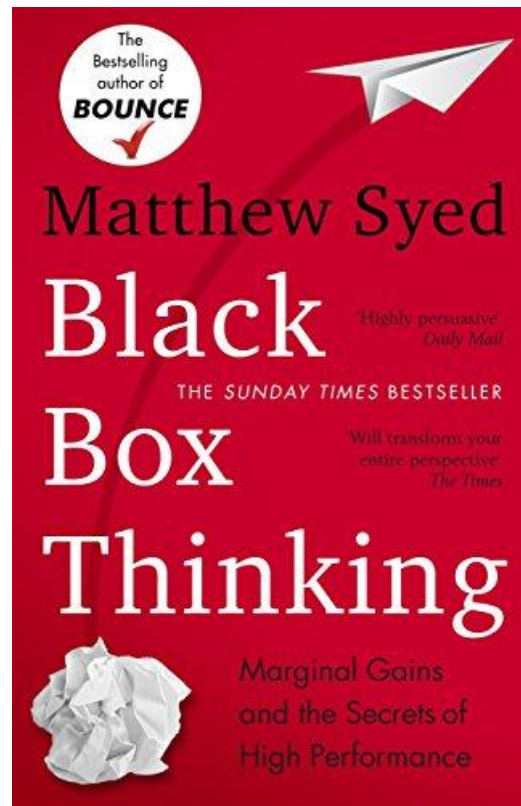
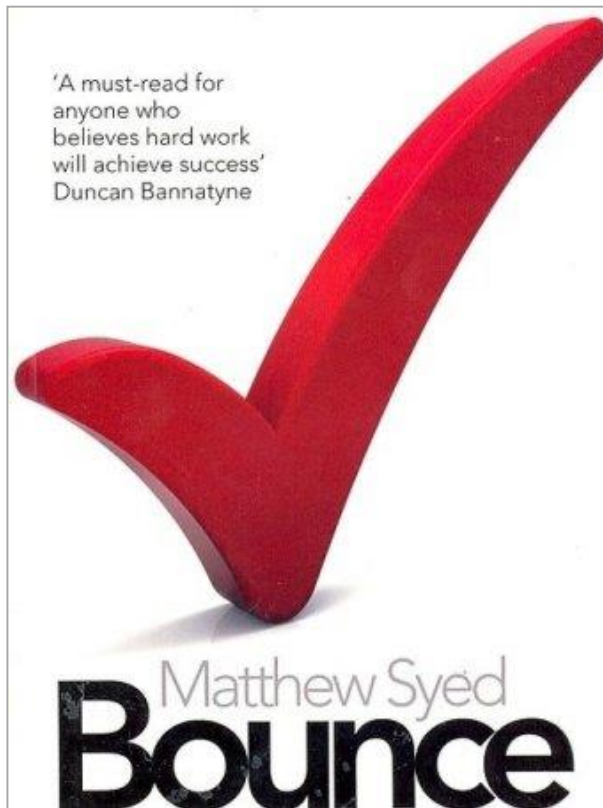


It is much better for children/adolescent to play our games poorly that to watch others playing it well





"This really is an innovative approach, but I'm afraid we can't consider it. It's never been done before."





Do not go where the path may lead, go instead
where there is no path and leave a trail.

(Ralph Waldo Emerson)

Thank you