

# Non-Cognitive Factors and Player Development

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# Research Focus

- Systems and structures of athlete development and sport performance.
  - Macro
    - Economic, cultural, political
  - Meso
    - Infrastructure, personnel, services
  - Micro
    - Processes and methodologies for development of athletes.
    - Non-Cognitive factors of athlete development.

# Agenda

- WHY non-cognitive factors?
- WHAT are non-cognitive factors?
- Grit Study
- Non-Cognitive Profile Study
- What we learned
- How to enhance non-cognitive factors
- You make the call...

# Why...

- What separates the top performers as well as how we evaluate them?
  - “Harder to hide talent, than it is to find it.”



What drives exceptional  
human performance?



# What If....


- we moved away from arm-chair psychoanalysis, by codifying and operationally defining anecdotal causes of performance and development?
- non-cognitive variables were a functionally purposeful and influential tool of athlete development and evaluation?

# What are Non-Cognitive Factors

- This is a horrible name for an important factor of performance.
- Initially meant to separate logical reasoning processes from emotions (Feigl, 1938).

# What are Non-Cognitive Factors

- Operational Definition: the “patterns of thought, feelings and behavior” (Borghans et al, 2008) of individuals that may continue to **develop** throughout their lives (Bloom, 1964).
- Skills that are not directly represented by cognitive skills or by formal conceptual learning. Instead, by psychosocial or behavioral characteristics that are **not fixed in personality**.

Four 3D gold question marks are positioned at the corners of the slide: top-left, top-right, bottom-left, and bottom-right. Each question mark is rendered with a metallic gold finish and a soft shadow beneath it.

*What non-cognitive skills  
predict performance?*

# What are your **Cognitive** AND **Non-Cognitive** abilities?

Cognitive abilities or hard-skills are associated with an individual's knowledge, intelligence and motor-functions. For all jobs, an employee requires to have some cognitive skills associated with obtaining information and completing tasks.

Non-cognitive abilities or soft-skills are associated with an individual's personality, temperament, and attitudes. For virtually all jobs, an employee needs the soft skills associated with working well with other people and functioning effectively in a work environment.

SparcIt

## Memory



Ability to recall facts from short-term/ working memory (limited storage), and Long-term memory (unlimited storage)

## Motor skills



Ability to mobilize our muscles and bodies, and ability to manipulate objects

## Visual and Spatial Processing



Ability to process incoming visual stimuli, to understand spatial relationship between objects, and to visualize images and scenarios

## Executive Functions



Abilities that enable goal-oriented behaviors, such

## Motivation



Desire to accomplish activities successfully

## Effort



Degree in which one takes an active role in achieving goals

## Communication & Interpersonal Interaction



Ability to cooperate, share and encourage others to accomplish a goal

## Self-Efficacy



The believe that one can complete and achieve a goal

# How to Enhance Non-Cognitive Skills



## What Kind of Mindset Do You Have?

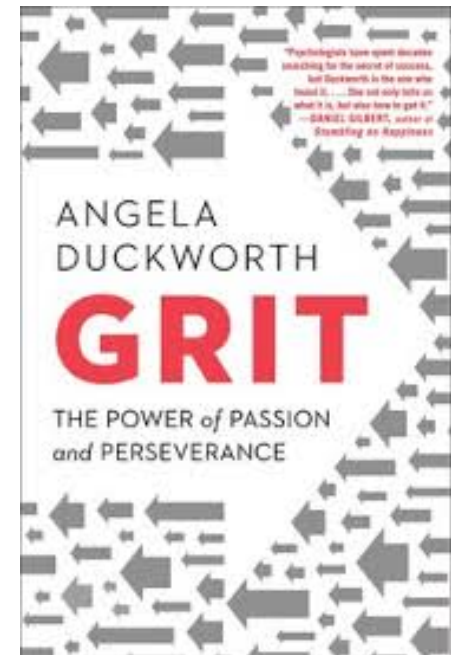


I can learn anything I want to.  
When I'm frustrated, I persevere.  
I want to challenge myself.  
When I fail, I learn.  
Tell me I try hard.  
If you succeed, I'm inspired.  
My effort and attitude determine everything.



I'm either good at it, or I'm not.  
When I'm frustrated, I give up.  
I don't like to be challenged.  
When I fail, I'm no good.  
Tell me I'm smart.  
If you succeed, I feel threatened.  
My abilities determine everything.

Created by Kristi Wilson. [growthmindset.org](http://growthmindset.org) ©2014. See how [growthmindset.org](http://growthmindset.org)



# Identifying the Intangibles

**Highly motivated**

**Self-efficacy/Self-determination**

**Very coachable**

**Growth Mindset**

**Willing to put in the work**

**Self-discipline**

**Not going to give up**

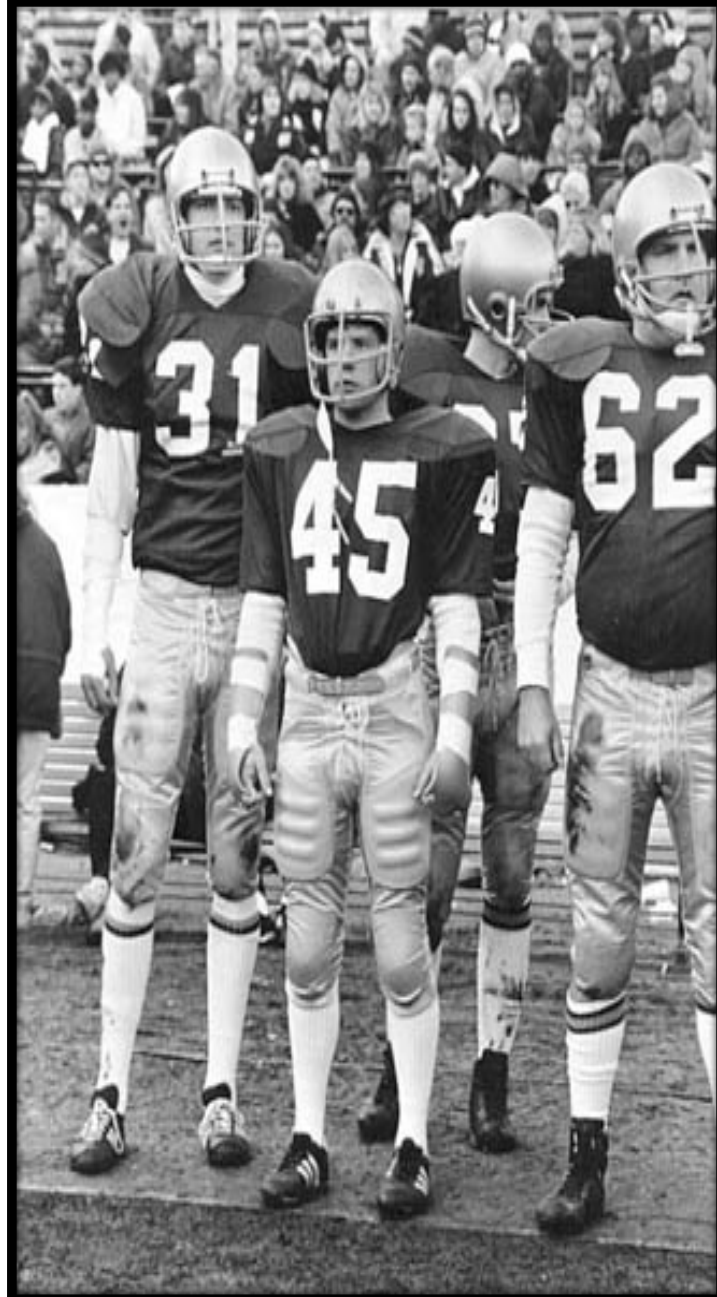
**Grit**

**Bounces back from adversity**

**Resilience**

**Makes good choices**

**Integrity**



# Why Grit?


- We know the tangible abilities necessary for athletic performance.
- However...
- We are constantly trying the mechanism that allows athletes to unleash these abilities?
- We are looking for the “IT” factor.

# Why Grit?


Anecdotal, grit is championed in sports.



“Perseverance and passion towards long term goals.” (Duckworth, 2007)



Dedicated long term practice is critical to high performance.



Is there a relationship between grit and athlete development?

# Literature Review

- Recent focus has shifted to psycho-social traits that individuals have the ability to control (Bengoechea & Streat, 2007; Keegan, Harwood, Spray, & Lavalley, 2009).

# Literature Review

- Overwhelming attrition of youth in sports by ages 12-13 (Vissek, Achrati, Mannix, McDonnell, Harris, & DiPietro, 2015).
- Grit is predictive of college academic performance (Duckworth, 2007).
- Grit has never been applied to athlete development (Morgan, 2016).

# What We Learned...

- Grit is **NOT** a magical formula to success.
- Grit is **NOT** elusive, it **IS** tangible.
- The ability to be gritty is within each and everyone of us.
- Being gritty is a choice of intentionality.

# Techniques for Reframing

FIRST YOU MUST KNOW YOUR ATHLETE!

- Staying hooked up (present)
- Paying attention to the small things (details).
- Concentrating/Focus.
- Slow the game down (Reconceptualizing failures).
- Flushing failures (humor).
- Get better everyday (Incremental progress...subjective v. objective)