Some Aspects of Coaching in the 21st Century

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Some Aspects of Coaching in the 21\textsuperscript{st} Century

- Introduction
- Some Myths of training
- Coaching and the coach
- Alternative Coaching Strategies
Some Myths of training
1 - The Overcompensation Myth

• This is what we believe
This is what we know

- The body is capable of adaptation to training loads
- Training loads of the correct intensity and timing cause overcompensation
- Training loads that increase progressively cause repeated overcompensation and higher levels of fitness
- There is no increase in fitness if loading is always the same or too far apart
- Overtraining or incomplete adaptation occurs when training loads are too great or too close
- Adaptation is specific to the specific nature of the training
This is what we don’t know

- What is the amount of fatigue necessary for adaptation?
- What is energetic fatigue - what is neuronal fatigue?
- What is the time span for regeneration?
- What is the duration of “overcompensation”?
- What about individual variation?
2 - The Periodisation Myth

• This is what we believe

  – We are able to ensure best performance at the major competitions

  – We can peak performance by correct choice of training means and methods
The Periodisation Myth

• This is how it is

Study conducted in 2000
Database

- 3360 Athletes
- Best 20 in 14 events (not: middle/long distance)
  USTAF and DLV
- Period of observation
  - 1996 (OG Atlanta)
  - 1997 (WC Athens)
  - 1999 (WC Seville)
Findings

Average and timeline

GER
USA

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Latest Findings

Number of SB/PB

WC 07 | OG 08
---|---
HJ | 1 | 0
LJ | 2 | 0
TJ | 3 | 0
PV | 0 | 2

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3 - The Volume Myth

• Volume is considered as one of the most important factors in training
• “I did 10 tons in weight training”
• “I did 200 hurdle jumps today”

What is the meaning of such statements?
Calculation of Load

• As volume and intensity are contradictory (the higher the volume the less the intensity and vice versa) you cannot calculate the load by just adding volume

• Example Weight lifting

  80%: 6 sets x 10 rep x 100kg = 6.000 kg
  95%: 6 sets x 2 rep x 130kg = 1.560 kg

• This is just the external load
Calculation of Load (2)

• More relevant is the internal load
• What does the external load mean for the various systems of the organism?
• In many situations it’s the nervous system that counts
• Then “intensity” is the most important factor followed by “density”

• Resume: Calculation of load is different from adding volumes and needs some experience. There is no equation that gives a reasonable result.
Intensity vs Quality

- Intensity is different from quality.

- Intensity is a percentage of 100%

- Quality means a percentage of “perfect”
4 - The warm up myth

• This is how it is
  – 2 laps jogging
  – 10 minutes stretching
  – 10 minutes running drills

• Intention
  – Warm up muscles, soft tissues, nervous system etc.
  – Reduce risk of injury
4 - The warm up myth

• At 2\textsuperscript{nd} glance
  – 2 laps jogging
    • Usually the speed is too slow and heart rate doesn’t raise sufficiently
  – 10 minutes stretching
    • Muscles are still “cold” and stretching cannot be really efficient
  – 10 minutes running drills
    • Quite often it’s just a routine without correction

Resume: A waste of 30 minutes every day
4 - The warm up myth

• Alternative

  – 10 minutes intensive work with a heart rate of about 150 bpm
  – Increasing intensity and range of motion
  – No breaks
  – Stretching is an own element of selected sessions
  – Running drills are supervised
5 - The “jumps off short approach” myth

Typical statement

• My athlete does 7.30 m from a short approach. It will be amazing what he will do from regular approach.

• But: quite often it’s 7.40 m instead of the expected 7.80 m
Situation

- Jumps off a short approach are very popular in all jumping events
- Depending on the period and the level of performance they cover 70% or even more of technical training
- The result is quite often not satisfactory
Pro Arguments

- More repetitions
- Movement is slower
- More time to concentrate on details
Contra Arguments

- Basic change of take-off
- Basic change of time programme
- Improper reactive strength (plyometrics) pattern
- Adaptation of CNS to non-competitive situation
Rationale

- Run-up speed is missing
  - Kinetic energy is missing
  - Longer path of acceleration
  - Lowering of CM
  - Longer take-off time
  - Different use of free elements

- Re-introducing speed causes a lot of problems
Consequences

- Reduce jumps off short approach
- Always remember the speed component
- Look for alternative drills apart from the pit/mat to work on technical details
- Permanently adapt to jumps off regular approach even in general preparation period
Coaching and the Coach
Coaching and the Coach - I

Coaches overestimate their influence

• “Over coaching” is one of the worst habits of coaches
  – The day before the major competition
  – During the competition

• It doesn’t prove your competence that our are capable to identity 5 faults at a time

• It’s a proof of competence that you give one relevant hint concerning the most important fault
Coaching and the Coach - II

• You always bring in your own personality
• You will always transport your mood, your hopes, your pressure, your anxieties, your …
• The worst scenario is when athletes start competing "for you"

• Who coaches you?
Following the well-known pathways is the most secure way.

To broaden the horizon sometimes needs new approaches.

To strike a new path always bears the risk of faults and failures.

Faults and failures must be accepted in order to achieve new goals.
Coaching and the Coach - IV

Coach-Athlete interaction

- Respect / Acceptance
- Communication
- Confidence / Honesty
- List of commitments
Alternative Coaching Strategies
Michelangelo was asked the question how it was possible to make such a beautiful sculpture from a block of marble.

His answer:

“David has always been there. I just had to remove the redundant marble.”
The classical approach

Potential + Training = Performance
The alternative approach

Potential - Interference = Performance

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Consequences

• Coaching is athlete centered
• Coaching is much more than teaching
• Coach-Athlete interaction is essential
• The "inner game"

• Coaching starts with the coach
Coaching is athlete centered

- Athletes are humans with all their hopes, anxieties, motivations, strengths and weaknesses
- You must start where you are not where you would like to be
- Always there is more than one way to success both technically and physically
Coaching and teaching

• Giving instructions, correcting performances, designing plans etc. are the classical duties
• Coaching is much more and the higher the level the more important are e.g.
  • Mentoring
  • Guidance
  • Interaction
  • Supporting life balance
  • I’ve got your back
The "Inner Game"

- SELF INSTRUCTIONS
  - "Keep concentrated"
  - "Try harder"
  - "Remember the quick foot plant"

- Who is talking to whom?
The Two Egos

• Ego 1: The conscious part
  – Looks for control
  – Doesn't trust Ego 2
  – Permanently interferes with judges, comments and instructions

• Ego 2: The unconscious part
  – Is permanently struggling with Ego 1
The Flow

- Golfers, when in the game, imagine the flight of the ball and where it lands
- They don’t instruct their muscles with details
- They trust their body to make it

- Athletes from all sports report that the really perfect jump, throw, shot etc. is “easy going”, “without effort”, “it just happened”.
Practical implications

• Example
  – To make a top performance in the sprint hurdles the hurdle unit time must be 1.02 sec
  – Your athlete is at 1.05 sec
  – What to do?
Practical implications

• Strategy 1
  – Work on technical details; give instructions; repeat and repeat the drills; believe that technical improvement will shorten the hurdle unit time

• Strategy 2
  – Reduce the height and/or distance of the hurdles till your athlete makes 1.02 sec
  – Slightly increase height and or distance always having the time in mind
  – Continue till you arrive at original heights/distances
Resume

- Trust your body
- Don't interfere too much

- Working with images and sensations quite often is more promising than working with verbal instructions on technical details
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