Talent identification and development in Germany – state of play and current tasks

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Strengths in German Talent Promotion System

- big talent pool (7.5 million members in sport clubs under 18)
- high amount of money inside the sport system
- strong club system
- promotion and support system for almost all sports (OTC, NTC, Elite sport schools, employment opportunities at army/police,...)
TID and TDE in Germany - challenges

- cutting point between federal and state responsibility
- high number of stakeholders/involved institutions
- need for management and coordination of the whole process
- underrepresentation of TID/TDE in existing concepts
- insufficient transfer of knowledge from theory to practice
- promotion of early success
- lack of open-mindedness, political will and courage to embrace change

- no generic system for talent search and identification => many fishermen competing
- basic skills and prerequisites for peak performance remain underdeveloped
- developmental athletes over-compete and under-train
- copying of adult training and competition programs
- focus often onto short-term outcome and not to the process
- high dropout-rates at junior age
- chronological age used in training and competition planning
- best coaches at elite level, in JES often on voluntary base
- competition system mostly interferes with LTAD
TID and TDE in Germany

Elite performance

Umfeld

GLT  ABT  AST  HLT

Begabungen

NEW WR
9.54
100m

Spitzenleistung
TID and TDE in Germany - Requirements

Natural abilities
TID and TDE in Germany - Requirements

Natural abilities

3

TID and selection need to reflect performance disposition and capacity to develop.
What kind of gifts does a talent need in your kind of sports?

What makes up an Olympic champion?

Which environmental factors are needed for developing a talent to peak performance?
Jigsaw puzzle of talent

Wulff et al., 2017
Estimation of potential - anthropometrics

Altmann, 2017; Wulff et al., 2017

<table>
<thead>
<tr>
<th>WEIBLICH</th>
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<tr>
<td>Beckenbreite vs. Körperhöhe</td>
<td>Affenindex</td>
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<td>Schulterbreite vs. Beckenbreite</td>
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<td>Finale Körperhöhe</td>
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Entwicklungsstabilität anthropometrischer LV von der AK13 zur AK18

http://nwls.sport-iat.de/
Estimation of potential in boxing

Walter, 2017; Wulff et al., 2017

<table>
<thead>
<tr>
<th>athletes’ profile</th>
<th>technique</th>
<th>speed</th>
<th>environment</th>
<th>psyche</th>
<th>etc..</th>
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<td>Joe Jab</td>
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</table>

- **coordination**: alternating Hand Wall Toss Test
- **person**: maturation, mass, height, training age, arm span
- **physical capacities**: power (medicine ball throw sitting), - Jump and Reach
- **agility**: T-8 Hexagon Test
- **endurance**: 20m Multistage Fitness Test
- **competition**: structured observation, national, international win-loss-record
- **environment**: social environment, questionnaire
- **technique**: structured observation
- **psychology**: motivation, volition, self-efficacy, goal setting, information processing, self-regulation, hard work ethic, observation in combat games

Walter, 2017; Wulff et al., 2017
Why do we need an performance profile?
Estimation of potential in boxing

Walter, 2017; Wulff et al., 2017

Hoffmann • TID and TDE in Germany • ASPC Magglingen • January 15th 2018
Estimation of potential in boxing

Walter, 2017; Wulff et al., 2017

Potential of your athlete (aggregate)

> 2 Boxing Talent
> 1 Stay tuned!
≤ 1 Have fun!

Walter, 2017; Wulff et al., 2017
TID and TDE in Germany - Requirements

Talent development

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Spitzenleistung
TID and TDE in Germany - Requirements

4. Numerous ways can lead to the top of elite sports – and have to be taken into account for successful talent development.

5. Talent development needs a closer alignment with biological age instead of chronological age, solely.
Junior success as prerequisite for elite success?

Percentage of JWCH-Participants in Elite Sports

© Wulff, 2017
Junior success as prerequisite for elite success?

Analysis of TOP 20 WCh/OG Triathlon

- ca. 50% of TOP 20 without participation in JWCh
- no correlation of international junior and senior success
- different selection and promotion strategies of successful nations
- broad distribution of age at 1st success at elite level

Age at 1st elite success

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<tr>
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<th>JWM</th>
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<tr>
<td>JWM Teilnehmer (44)</td>
<td>24,3</td>
<td></td>
</tr>
<tr>
<td>Nicht-Teilnehmer (34)</td>
<td>25,9</td>
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<tr>
<td>JWM Teilnehmerinnen (31)</td>
<td></td>
<td>27,5</td>
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<tr>
<td>Nicht-Teilnehmerinnen (32)</td>
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Matt Collins/Triathlete.com, 2013

(Wulff et al., 2013)
Documentation of individual development
Systematic training is the most important factor for success in elite sports.

Main objective of training in LTAD is to develop performance prerequisites and load bearing capacity for elite sports.

Until maturity, training has to focus onto processes of perception and information processing.
Requirements for concepts of LTAD

• situation analysis (actual status, developmental trends, performance profile)

• principles and guidelines

• LTAD (stages, developmental characteristics and objectives; promotion system)

• talent search, talent identification and selection (who, when, how, complexity and dynamics)

• training and LTAD (objectives and program, periodization, load bearing capacity)

• performance tests and competitions (performance diagnostics, competition system)
Topicality of concepts of LTAD

- 36% not existent
- 26% concept < 4 years
- 17% 4 < concept < 8 years
- 21% concept > 8 years
TID and TDE in Germany - Requirements

Environmental factors

Umfeld

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Spitzenleistung
Successful talent promotion is systematic and flexible to allow individual pathways.
Best-practice: German Football Association

- 366 training centres
- 54 performance centres
- 35 elite schools of football
- 29 regional coordinators
- > 1300 professional youth coaches
Successful LTAD requires flexible educational opportunities for promising athletes.
Elite sport schools

- 43 locations, about 11,500 students
- including boarding schools
- connected to Olympic Training Centres
- optimal promotion of athletic performance development while enabling high quality academic education
Training volume of a prospect athlete in gymnastics (14 years)

2011 - hours/week
Overall 1079h

(© Naundorf, Scheder & Frehse)
TID and TDE in Germany - Requirements

Farbelegende
- nicht vorhanden
- flächendeckend außerschulisch
- flächendeckend außerunterrichtlich
- flächendeckend außerschulisch und unterrichtlich
- standortspezifisch außerschulisch
- standortspezifisch unterrichtlich
- standortspezifisch außerschulisch und unterrichtlich
- standortspezifisch unterrichtlich und außerunterrichtlich

Testvariante
- dmt (Deutscher Motorik-Test)
- Variationen des dmt
- EMOTIKON

Altersklasse
- Kindergarten
- Grundschule (1.-4. Klasse)
- Sekundarstufe I

(Herrmann et al., 2015)
Conclusions

TID and TDE have to be orientated towards elite peak performance.

Successful talent development is targeted, systematic and flexible for individual ways of development.

Talent is more than junior success – a complex documentation of individual development is necessary.

NSF have guideline competence – and have to exercise it. But hey need support and assistance.

A specific consideration of different sports is necessary.
Interim conclusions

• understanding of need for complex and dynamic TID instead of complex performance testing raises => federations express need for support
• data bases have to be built up or to be improved (quantity and quality)
• standardized testing protocols needed => testing manuals!
• transparency in setting scores and norms (weights of each prerequisite, criterions of assessment…)
• development of routines in analysis
• regular evaluation
Conclusions

- children and adolescents are trainable pre-, circa- and post-puberty – all energy systems are trainable everytime
- possible benefits of enhanced trainability of sole aspects of performance < potential risks of overtraining and burnout
- aerobic fitness equally trainable throughout maturity
- greater gains in strength with advancing age
- attenuated trainability of speed during puberty

=> overall limited evidence base!

=> enable variety of age-appropriate trainings stimuli and methods!

=> assess and monitor individual development!

(Armstrong et al., 2015; Mc Narry, Barker, Lloyd, Buchheit, Williams & Oliver, 2014)
Content-related and methodological differenciation in youth training

until ABT: developing prerequisites task-oriented (for future success)

Special programs for resistance and strength

Years of training

Training stage

Squad level

Development of load bearing capacity by versatile athletic programs

Adjustment of competition formats

Promoting personal development

Straining systems of perception and processing information in time

Developing speed and quickness regarding the performance profile
Content-related and methodological differentiation in youth training

Beginning with AST:
Complex development of performance

Significant increase in load requirements

Enhancing number and quality of competitions

Transition to elite training

Years of training

Training stage

Squad level

Catch-up to international elite performance level

Greater demands on energetic processes
Windows of opportunity?

Figure 1. Schematic of the accelerated rate of change in performance parameters often suggested with puberty (onset shown by vertical dashed line) and referred to as ‘windows of trainability.’

(Mc Narry, Barker, Lloyd, Buchheit, Williams & Oliver, 2014)
Systematic but flexible talent promotion

Useful addition to deliberate practice/LTAD?

Christopher Grotheer (GER)
- entered elite sports school as ski jumper
- switched to skeleton at age of 15
- Junior World Champion 2013 and 2015; 5th in WCh 2015

Helen Glover (GBR)
- hockey, swimming, and x-country runner at international level
- 2008 first contact with rowing at age of 22
- Olympic Champion 2012, Vice World Champion 2010 and 2011

Yes!
German model of long-term athlete development

(DHB, 2015)
Overall assessment as base for squad selection 2016/17

Technique
Rating by national coaches in competition

Athletic performance
Central assessment

Competition
Normative time

Estimation of potential in speed-skating

Fudel, 2017; Wulff et al., 2017
Modification of central athletic assessment
Talent need systematic promotion as well as challenges for successful development of performance and personality.
Promote and challenge talents

- promotion of personality development
- development of psychological characteristics (self-efficacy, self-management, coping with pressure, …)
- systematic organisation of challenges
- fostering quality of training and experience in competitions (centralisation, training camps, international exchanges)
Organisation of Sports in Germany

Public administration

- Federal government
- State government
- District/community

Administration of Sports

- DOSB (Deutscher Olympia-Sportbund)
- LSB (Landes Sportbund)
- KSB/BSB/SSB (Kreis/Straßburger/Bürgersportverband)

Specialisation:
- Generic
- Specific

- National Sport Federations
- State Sport Federations
- Regional/local Sport Federations

Sports clubs