The Holistic Ecological Approach to Talent Development in Sport: From Theory and Research to Practice

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Overview

• Athlete career pathways and the role of environment
• The Holistic Ecological Approach (HEA) focusing on Athletic Talent Development Environments (ATDEs)
  – What is the HEA?
  – The HEA working models
  – The HEA research approach, case examples, and summary
• The HEA applied principles and guidelines for optimization of the ATDEs
• What is next?
It takes a whole environment to raise a child

“African proverb

“It takes a whole environment to raise an athlete”
Is it easy to organize a harmonious athletic environment?

Quotes from an interview with 17 years old Swedish volleyball player, a student of the national elite sport school:

• “I’m going to practice, I have to practice, whatever you say, I need to study, but ooh no I have practice, that’s how it is, practice takes your whole life…”

• “… In the beginning of the educational year I wanted sport and school to mean the same, but I moved here because of my sport, so my sport means more to me, but school is more important, so it comes first, I know I am contradicting myself …school is number one, so I have told myself and so have all coaches and my parents told me …but I moved here because of my sport …I did not move here because it is a good school …I chose to move here to get better at my sport. But school is not unimportant, because you cannot live off this sport, therefore you need education.”

Athletic pyramid metaphor
The National Standards for Youth Sports Philosophy

“Every youth should be given the opportunity to grow and develop in sports, have positive experiences and not be left out or behind.”

**Principle 1:**
Place the Youth’s Interest Before Yours

- **Standard 1:** Equal Opportunity
  Every youth has an equal right and opportunity to play, regardless of ability, age, gender, race, economic status or any other social discriminator.

- **Standard 2:** Safety
  Every youth has the right to play in a safe and non-threatening environment, free of injury or abuse.

- **Standard 3:** Proper Equipment
  Every youth has the right to equipment that is in serviceable condition, suited for the task and purpose, and his/her age and ability.

**Principle 2:**
Be a Role Model

- **Standard 4:** Values
  Every individual in youth sports must conduct him/herself in a manner that demonstrates the values of friendship, respect, excellence, sportsmanship and fair play.

- **Standard 5:** Parental Involvement
  Every parent or guardian must be pro-actively involved in their youth’s participation in sports.

- **Standard 6:** Adequate Qualifications
  Everyone who coaches or works in youth sports must be adequately trained and screened, with the relevant experiences and skills.

**Principle 3:**
Have Fun, Winning Isn’t Everything

- **Standard 7:** Positive Experiences
  Every sporting opportunity must engage the youth and heighten their overall experiences.

- **Standard 8:** Holistic Development
  Every has the right to, and will be provided with holistic development in their sports participation.

- **Standard 9:** No Harmful Substances
  Every youth sports environment shall be free of alcohol, drugs, tobacco and any illegal performance enhancers.

**Stakeholders**
- Coaches and Sports Instructors
- Parents, Guardians and Educators
- Youth
- Sports Officials and Event/Competition Organisers
- Sports Managers and Administrators
- Media and Photographers
- Spectators and General Public
- Corporates and Organisations

From Sport Singapore web-site
Holistic Athletic Career Model (Wylleman, Reints, & De Knop, 2013)

- **Athletic level**
  - Initiation
  - Development
  - Mastery
  - Discontinuation

- **Psychological level**
  - School-child
  - Puberty
  - Adolescence
  - Adult

- **Psychosocial level**
  - Parents
  - Siblings
  - Peers
  - Partner
  - Coach - Support staff
  - Teammates - Students
  - Family (Coach)
  - Peers

- **Academic/Vocational level**
  - Primary education
  - Secondary education
  - (Semi-) professional athlete
  - Higher education
  - (Semi-) professional athlete
  - Post-athletic career

- **Financial level**
  - Family
  - Sport federation
  - Sport federation
  - NOC • Sponsor
  - Family
  - Employer
Holistic Perspective on Junior-to-Senior Transition (JST)

- Decisive transition
- Athletic demands complemented by non-athletic demands in:
  - studies (transition to higher education)
  - psychological development (e.g., identity formation; role experimentation, striving for independence)
  - psychosocial development (e.g., high importance of socializing, having friends and love)
  - financial development (role of parents, sport organizations, and sponsors)
- About 20-30% cope successfully
- The JST duration is 1-4 years
- Athletes’ competencies and external support are key factors for successful coping

Bruner et al., 2008; Finn & McKenna, 2010; Morris, 2013; Morris et al., (2014), Pummell et al., 2008; Stambulova, 1994, 2009; Stambulova et al., 2012, 2017.
ROADS TO SPORTING EXCELLENCE

What are the pathways for young aspiring athletes in Singapore to develop into elite athletes?

ASPIRING ATHLETES

Schools
Co-curricular activities (CCAs) enable students to hone their skills in a particular sport and take part in interschool competitions.

Singapore Sports School
Provides students with a more conducive environment for rigorous sports training, balanced with a flexible academic programme.

National Youth Sports Institute (NYSI)
Supports high performing youth athletes through coaching, sports science and athlete life management.

National Sports Associations (NSAs)
Develop aspiring athletes into elite athletes through structured training programmes. Promising athletes will be recommended to NYSI for carding.

• ActiveSG / Private Academies and Clubs
• MOE Junior Sports Academies
Provide structured exposure and developmental programmes to equip participants with strong foundational skills.

ELITE ATHLETES

Singapore Sports Institute (SSI)
Grants carding status to athletes. Provides elite athletes with spexGrants, as well as Sports Science and Medicine support. This includes Sports Biomechanics, Nutrition, Physiology, Psychology, and Strength and Conditioning.

• SDSC Developmental Training Centre
• NDSAs
Equip persons with disabilities with the skills and opportunities to play sports recreationally and in a competitive setting.

ActiveSG Centres of Expertise for Disability Sports
Offer accessible sports programmes and facilities to encourage sports participation among persons with disabilities.

Singapore Disability Sports Council (SDSC)
National Disability Sports Associations (NDSAs)
Special Education (SPED) Schools
Special Olympics Singapore

spexGrants
Cover training and competition costs, equipment and apparel.

spexScholarship
Pinnacle level of support for elite Singaporean athletes with the potential to win medals at Asian, World and Olympic levels. Includes financial support, education, career and personal development.
**Pathways for Sailors**

**Aspiring Sailors**

- **Schools**
  - Provide sailing as a co-curricular activity (CCA) for students to develop their skills and take part in interschool competitions. Some schools partner SSI to offer more students access to sailing through the Sailing & Sustainability Programme.

- **Private Sailing Clubs**
  - Offer “Learn to Sail” and weekend sailing courses to hone basic sailing and racing skills.

**National Youth Sports Institute (NYSI)**

- Supports high performing youth athletes through sports science and athlete life management. NYSI works closely with SSI to deliver cohesive education programmes on mental preparation, recovery and nutrition to the national youth sailors.

**Elite Sailors**

- **Singapore Sports Institute (SSI)**
  - Grants carding status to sailors. Provides Sports Science and Medicine support, and works closely with SSI on monitoring sailors’ high performance development.

- **Singapore Sailing Federation (SSF)**
  - Provides training platform for the development of sailors across Junior, Youth, Senior and Olympic classes. Sailors meeting performance criteria are recommended to SSI for carding and for enrolment on the spexScholarship.

**Singapore Disability Sports Council (SDSC)**

- Reaches out to persons with disabilities through community outreach activities, provides programmes for them to learn the sport, and equips them with the skills to play in a competitive setting.

**SDSC Developmental Training Centre**

- Provides para sailors with more intensive training to prepare for higher level competitions.

**spexGrants**

- Cover equipment expenses, and training and competition costs for key international events, such as World Championships at the senior and junior levels.

**spexScholarship**

- Provides support for elite sailors who are competing in or transitioning to Olympic boat classes. A high degree of specialisation support is provided to individual spexScholars to address the specific requirements of each boat class.
What is the HEA?

- The HEA is a rapidly developing approach in talent development research and practice
- Main idea of the HEA is to shifts the attention from the individual athlete’s development to the environment in which he or she is developing
- Environment is important for athletes’ development at any stage of their careers but it is especially influential when athletes are still young and immature
- It is a common knowledge that some athletic environments are more successful than others in helping young talented athletes to grow into successful senior athletes and to create foundation for their long-lasting, healthy and successful athletic careers and life after sports
- Role of other people and organizations in athletes’ development was in focus before the HEA. The HEA added a holistic perspective to understanding the young athletes’ environment termed athletic talent development environment (ATDE).
Definition of ATDE (Henriksen, 2010)

ATDE as a dynamic system comprising:

- an athlete's immediate surroundings at the micro-level where athletic and personal development take place,
- the interrelations between these surroundings,
- at the macro-level, the larger context in which these surroundings are embedded, and
- the organizational culture of the sports club or team, which is an integrative factor of the ADTE's effectiveness in helping young talented athletes to develop into senior elite athletes.
The HEA structure

• Definitions
• Two working models: Athletic talent development environment (ATDE) and Environment success factors (ESF)
• Research guidelines and case study examples
• Features of successful ATDEs (a summary of existing research)
• Applied principles and guidelines for ATDE optimization
ATDE model

Henriksen et al., 2010

Reference groups

Present

Future

Specific sport culture

Youth culture

Past

Non-athletic domain

Athletic domain

Educational system

School

Prospect Athletes

Coaches

Managers

Senior athletes

Younger athletes

Club mates

Experts

Family

Media

Related teams/clubs

Sports federation

Macro environment

Micro environment

National culture

General sports culture

At the heart of the diagram, the concept of Prospect Athletes is central, surrounded by various stakeholders and environments. The diagram illustrates the interactions between different domains: Non-athletic and Athletic. The Non-athletic domain includes educational system, school, family, and media, while the Athletic domain includes related teams/clubs and sports federation. The macro and micro environments further delineate these interactions.
The Environment Success Factors (ESF) model (Henriksen et al., 2010)

Preconditions
- Financial
- Human
- Material

Process
Training
Competitions
Camp

Organizational development & culture (Schein 2004)
- Artefacts
- Espoused values
- Basic assumptions

Environment effectiveness
Successful history of producing elite athletes

Individual development & achievements

Team achievements

Success Factors (ESF) model
Henriksen et al., 2010
The HEA research methodology

- **Case study design**: real life phenomena in real-life context and in real time.

- The two working models guide data collection through: (a) **interviews** with young athletes and key figures in their environment, (b) **observations** of the everyday life in the ATDE including informal talks to the members, and (c) **analysis of available documents**.

- Interview transcripts, observation notes and written documents are analysed to provide two comprehensive descriptions of the ATDE in focus: (a) **the ATDE structure**, and (b) **the ATDE’s factors contributing to its effectiveness** in talent development.

- During analysis, **the working models are transformed into empirical models** that capture the unique features of the ATDE and serve as a summary of the case.
The HEA models in use

• The HEA exists for a bit more than a decade.
• First, it has been tested and developed through empirical investigations of a number of successful ATDEs environments:
  – The Danish national 49’er sailing team (Henriksen et al., 2010a)
  – The IFK Växjö track and field club in Sweden (Henriksen et al., 2010b)
  – The kayak team of the Wang elite sport high school in Norway (Henriksen et al., 2011)
  – The AGF soccer team in Denmark (Larsen et al., 2013)
  – Unpublished master’s theses (e.g., Petersen, 2014; Pyrdol, 2013) that have investigated environments in karate, cycling, soccer, swimming, badminton - all in Scandinavia
• Second, the HEA models were applied to study one less successful ATDE in Denmark: the Seaside golf team (Henriksen et al., 2014)
• Third, the HEA expanded internationally and was used to study, for example, Canadian elite trampoline environment Skyriders (Seanor et al., 2017) and a Victorian Football League club in Australia (Pink et al., 2015; 2018).
Successful ATDEs in Scandinavia (Henriksen, 2010)

To identify common and unique characteristics among three successful ATDEs in Scandinavia
Macro-environment

Non-athletic domain

Non-athletic environment

Micro-environment

Athletic domain

 Community of current and former elite athletes

Mentors

School coach

Club coaches

National team coaches

School management

Olympiatoppen experts

Federation

Strand Club

“Kayak Norway” club community

Family

Non sport friends

Elite sport friends

School

Norwegian culture

Culture of kayaking

Timeline - Towards an even more uncompromising approach

Group of prospective elite athletes
ESF model
Wang Kayak

Ressources
The sea
Infrastructure
Learning environment

Barrieres
Finances

Process
• Large volume of interval-based training
• Frequent testing and competition
• Basis training
• Diversification

Individual development
Autonomy & responsibility
Strong work ethic
Social skills

Open training community with proximal role models and a clear hierarchy

Process
• Sport is about winning
• Clear elite sport philosophy

The goals

The athletes
• A versatile sport profile is a strength
• Discipline outmatches innate potential

The system
• Never change a winning system
• Coordinated environment

Cultural paradigm

Environment effectiveness
Sports results
School grades
Recognition
Shared features of successful ATDEs

- Training groups with supportive relationships
- Proximal role models
- Support of sporting goals by the wider environment; co-ordination of sport and education
- Support for the development of psychosocial skills
- Training that allows for diversification
- Focus on long-term development rather than on today results
- Strong and coherent organizational culture (!)
- Integration of efforts (e.g., club, school, parents, community, business, etc.).

What about a less successful ATDE?
The Golfers
Recreational players
Talented players

School
management

Visionary focus on elite

Timeline

What’s the vision?

Educational system

Teachers
School

Family

Home club

Coaches
Sport

Friends
Boarding
School

Non-athletic domain

Macro-environment

Micro-environment

ATDE
Seaside
golf

School experts

Elite golfers

Federation

Golf culture

Athletic domain

Youth culture

Non-athletic domain
ESF model
Seaside
golf

Incoherent culture

- Coaches and athletes arrive late
- No warm up
- Loose structure, no sanctions
- School, sport and board in separation

Espoused values

- ‘The responsible global citizen’
- School, sport and board in unison

Basic assumptions

- We are a business
- Academia is our core product
- No demands allows for growth
- Coaches are not role models

Artefacts

- Coaches and athletes arrive late
- No warm up
- Loose structure, no sanctions
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Basic assumptions

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Process

- Training is fragmented, formal and individualized
- Only golf-training

Environment lack of effectiveness

- No senior elite players
- Few applicants
- Drop-out

Ressources

- Proximity of facilities
- Food program
- Skilled coaches

Barriers

- Finances
- Winter facilities
The HEA applied principles (for SPC)

- Conduct the interventions inside the athletes’ **natural setting** rather than in the office
- **Involve the athletes’ environment** (e.g., coaches, managers, teammates) in the intervention
- Aim to **optimize the entire environment** around the athlete or team (if necessary)
- See the athletes as **whole human beings** and to facilitate the development of a holistic package of psychosocial resources (e.g., knowledge, skills, attitudes, network) that will be of use for the athletes both in and outside of sport.

Larsen, Alfermann, Henriksen & Christensen (2014); Henriksen & Stambulova (2017); Henriksen, Storm & Larsen (in press).
Guidelines to optimize ATDE

- Begin with considering the **current goals** of the ATDE: Do you think the ATDE is currently optimal to achieve the goals? If no, continue with the following:

- Look at the existing **connections between different components of the ATDE**: are these connections optimal? Compare with the ATDE working model: which connections are weak or non-existent? Consider how to establish them.

- Look at the ATDE’s **preconditions**. Think about how to properly use the **resources** available and compensate for the **barriers**.

- Look at the ATDE’s **processes**: Are the activities involved well serve **holistic development** of young athletes? What more can be done?

- Analyze the ATDE’s **organizational culture**: What is the overall atmosphere in the ATDE? What key people in the ATDE communicate about what, how, and why they do? Are these consistent with what and how they really do? Does this culture serve well the current ATDE goals? If not, decide what aspect(s) of the culture is best to change.
Organizational culture change

- Possible resistance to change
- The HEA adopts Schein’s (1990) stage like approach to a culture change:
  - **The unfreeze stage** is aimed at persuading the ATDE members that the change (although uneasy) is necessary for “the “survival” (more exactly – for reaching the ATDE goals)
  - **The change stage** is aimed at developing new cultural norms/values and learning relevant behaviors and skills
  - **The refreeze stage** is aimed at facilitating internalization of learned behaviors and skills that is turning espoused values into enacted values (or basic assumptions those are not questioned anymore).

Henriksen (2015); Henriksen & Stambulova (2017); Henriksen et al., (in press)
Cultural leader at the ATDE

• **Cultural leader** is a person who has a power position in the ATDE and feels responsible and motivated to create, maintain (if necessary) to change the organizational culture.

• The HEA stresses that in ATDEs a coach is often a cultural leader but not all coaches are aware about this.

• Coaches introduce norms and values and then use a number of **cultural embedding mechanisms** (Schein, 2010) to reinforce the norms and values (e.g., what the coach regularly pays attention to or control; how the coach react to critical incidents, allocate resources and rewards, select and deselect, use role models and set traditions/rituals).

• The HEA suggests that sport psychology practitioners should work on increasing **coaches’ awareness of their cultural leadership role** and help them to develop **relevant skills**.
Applied cases published


- The intervention was aimed at creating a **culture for goal directedness** at U17 team at a football academy in Denmark. Three stages were followed with a coach being actively involved by facilitating development and internalization of the goal setting skills (using the cultural embedding mechanisms).


- The intervention was aimed at **creating a high (quality) performance culture** at the national orienteering team. Examples of values developed and then internalized in the team: “We make each other better”, “We discuss strategies and techniques among us”, “We talk to, rather than about each other”. One of the good strategies used: “the positive story of the day” emphasizing the values.
What is next?

• The HEA has a high potential to shape athletes’ career pathways and facilitate successful and healthy athletic careers contributing positively to their life careers.

What more can be done:

• The HEA models can be contextualized in regard to various national and sport contexts/cultures

• More case studies of both successful and less successful ATDE are needed

• More applied interventions from the HEA perspective are needed to complement the HEA guidelines on how to maintain successful and “repair” the less successful ATDEs

• Helping coaches to recognize and master their role as cultural leaders (e.g., through including the HEA into coaching education)

Thank you!