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Effective badminton player development systems: evidence from Asia and Europe
In 2014, the Badminton World Federation commissioned Leeds Beckett University to examine player development systems in:

- Indonesia
- Korea
- Denmark
- Spain

The report was finalised in 2016.
Overall results in world level competition 2012-2016 (points system)

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Country</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>China</td>
<td>154</td>
</tr>
<tr>
<td>2</td>
<td>Indonesia</td>
<td>37</td>
</tr>
<tr>
<td>3</td>
<td>Denmark</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td>Japan</td>
<td>31</td>
</tr>
<tr>
<td>5</td>
<td>South Korea</td>
<td>22</td>
</tr>
<tr>
<td>6</td>
<td>Spain</td>
<td>17</td>
</tr>
<tr>
<td>7</td>
<td>Malaysia</td>
<td>15</td>
</tr>
<tr>
<td>8</td>
<td>Thailand</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Russia</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Great Britain</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Chinese Taipei</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>Taiwan</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: points based on 4 points for gold, 2 points for silver, and 1 point for bronze.
What did we do?

Literature review on player development and coaching

Review of badminton federation strategies & resources

Interviews with player development experts: PDs, head coaches, head of player development, sports science experts
<table>
<thead>
<tr>
<th>Year</th>
<th>Countries</th>
<th>Interviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>England</td>
<td>Interviews with 18 coaching and player development experts in the FA, Premier League, Championship</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>12 country systems</td>
<td>58 experts</td>
<td>2 sports</td>
</tr>
<tr>
<td>2016</td>
<td>Indonesia, South Korea, Denmark and Spain</td>
<td>Interviews with 9 coaching and player development experts from badminton associations notably performance directors, head coaches, sports science</td>
<td></td>
</tr>
</tbody>
</table>
The ‘traditional’ model of player development
But ...
And ...
How can badminton performance directors and coaches make sense of these challenges and changes...?

What does effective player development look like in European football and four world leading badminton playing nations....?
Systems
Effective learning environments

- System embedded in socio-cultural context and resources
- System is coherent and enjoys stakeholder buy-in
- Clear vision, culture, priorities, planning and resource
- Effective workforce
- Clear performance model
- Appropriate training infrastructure
- Clear development model

Clear development model
Effective learning environments

- System embedded in socio-cultural context and resources
- Clear vision, culture, priorities, planning and resource
- Effective workforce
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- Appropriate training infrastructure

System is coherent and enjoys stakeholder buy-in
Warning: don’t borrow and uncritically use systems and practices from other successful countries!!!!!!

System embedded in socio-cultural context and resources

National attitudes towards badminton

Participation levels

Educational philosophy and practices

Relationship between ‘masters’ and ‘apprentices’

Sporting infrastructure – clubs, schools, facilities, coaching, funding
Effective learning environments

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- Effective workforce
Clear long-term vision and strategy (often using models)

Clear culture – ‘how we operate’

Clear planning framework with time-lined priorities

Resources – cultural, physical, financial – to support the vision

Underpinned by appropriate research and development

Different approaches between Asian and European countries
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Effective workforce

Appropriate training infrastructure

Clear development model

Clear performance model

System embedded in socio-cultural context and resources

Effective learning environments
Clear performance model

Playing style component of performance model not as important as in football

Playing style to win tournaments

Depends on player, coach and club

More physical and mental focus, then technical skills and tactical

Focus on technical skills and tactical variation

The new kid: combines Asian and European style for something new
Clear performance model

Playing style to win tournaments

Player characteristics (PPSTT)

Physical/physiological
Psychological
Social/lifestyle
Tactical
Movement/technical
<table>
<thead>
<tr>
<th>Country</th>
<th>Physical/Physiological</th>
<th>Psychological</th>
<th>Social/lifestyle</th>
<th>Movement/technical</th>
<th>Tactical</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Korea</td>
<td>Speed&lt;br&gt;Strength&lt;br&gt;There is a big emphasis on physical development in South Korea</td>
<td>Discipline&lt;br&gt;Enthusiasm&lt;br&gt;‘Addiction to badminton’&lt;br&gt;Good listeners and learners&lt;br&gt;Motivation to improve&lt;br&gt;Self-learning&lt;br&gt;Fighting spirit</td>
<td>Most training coordinated through centralised regional/national centres&lt;br&gt;Considerable importance attached to education – with the commitment to education and badminton, there is little scope for athletes who have problems with lifestyle</td>
<td>Good footwork technique&lt;br&gt;Fast movement around court&lt;br&gt;Hard hitters</td>
<td>‘Decision making in games is not encouraged, they are very coach reliant’</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Target physical development components – some centralised guidance&lt;br&gt;Physical testing is used – by dedicated physios etc.&lt;br&gt;Benchmark physical data has been developed within the sport to assess players</td>
<td>Small scale psychology programme in place (although it does not appear integrated with the coaching programme)&lt;br&gt;Psychological testing is used&lt;br&gt;In relation to selection, the Indonesians talked about mental toughness</td>
<td>Social and lifestyle issues not mentioned during research (that does not mean they are not important to Indonesia)</td>
<td>Technical development is not within the remit of the PBSI – this is left to the players, coaches and clubs&lt;br&gt;However, mention of posture, step, skill, in selection assessments</td>
<td>Tactical development is not within the remit of the PBSI – this is left to the players, coaches and clubs</td>
</tr>
<tr>
<td>Denmark</td>
<td>It was acknowledged that Danish players cannot compete with Asian players in terms of physical strength and fitness, and movement around the court</td>
<td>Dedicated to getting to the top of the sport&lt;br&gt;Focus&lt;br&gt;Take responsibility&lt;br&gt;Self-managed&lt;br&gt;Self-reliant&lt;br&gt;Working hard&lt;br&gt;Reflective</td>
<td>Recognition of the unique character of Danish players and their need to be individuals and express themselves</td>
<td>Less movement around court&lt;br&gt;Loose grip on racket to quickly change from forehand to backhand grip&lt;br&gt;‘Excellent/beautiful stroke production’&lt;br&gt;Excellent ‘hitting technique’&lt;br&gt;‘Huge array of technical weapons’&lt;br&gt;Low levels of unforced errors</td>
<td>Intelligent (intelligence seen as a key characteristic to beat Asian competition)&lt;br&gt;Adaptable/fluid&lt;br&gt;Good decision makers&lt;br&gt;Use variation&lt;br&gt;Use improvisation&lt;br&gt;‘Use deception’&lt;br&gt;Can make own decisions irrespective of coach</td>
</tr>
<tr>
<td>Spain</td>
<td>Developed physical characteristics</td>
<td>Resilience&lt;br&gt;Persistence&lt;br&gt;Leaders&lt;br&gt;Independent, autonomous learners&lt;br&gt;Self-management&lt;br&gt;Desire to win ‘champion belief’</td>
<td>Family support</td>
<td>Significant emphasis on technical skills linked to tactical components&lt;br&gt;Good footwork</td>
<td>Strong tactical understanding&lt;br&gt;Ability to set ‘spider’s webs’</td>
</tr>
</tbody>
</table>
Effective learning environments

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- Clear performance model
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- Effective workforce

Effective workforce

Clear performance model

Clear development model

Appropriate training infrastructure

Effective learning environments
Clear development model

- Understanding of principles of human development
- Long-term approach
- Age-stage differentiation
- Holistic PPSTT development
- Careful use of selection strategies
Long-term approach

5-6 years

25 years
## Age-stage approach

<table>
<thead>
<tr>
<th>Phase</th>
<th>South Korea</th>
<th>Indonesia</th>
<th>Denmark</th>
<th>Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>5-6 years</td>
<td>6 years</td>
<td>6 years</td>
<td>4 years</td>
</tr>
<tr>
<td>Engage</td>
<td>6-12 years</td>
<td>6-9 years</td>
<td>6-12 years</td>
<td>5-11 years</td>
</tr>
<tr>
<td>Technique</td>
<td>12-15 years</td>
<td>10-12 years, and 13-15 years onwards</td>
<td>12-16 years</td>
<td>10-14 years</td>
</tr>
<tr>
<td>Tactics</td>
<td>15-18 years</td>
<td>Not clear</td>
<td>16-17 years</td>
<td>14-18 years</td>
</tr>
<tr>
<td>Compete</td>
<td>19 years and over</td>
<td>20 years and over</td>
<td>18 years and over</td>
<td>19 years and over</td>
</tr>
<tr>
<td>Other notes</td>
<td>Physical development support at all ages</td>
<td>Centralised programme starts at 12, competition for selection at 16 years</td>
<td>Physical development support 14 years upwards</td>
<td>Physical development support from 14 years onwards</td>
</tr>
</tbody>
</table>

- **South Korea**: Physical development support at all ages. Centralised programme starts at 12. More serious competition exposure at 12.
- **Denmark**: Physical development support 14 years upwards. Centralised (regional) programme starts at 12.
- **Spain**: Physical development support from 14 years onwards. Centralised (regional) programmes start at around 10 years.
Holistic PPSTT development

Player characteristics (PPSTT)

Physical/physiological

Psychological

Tactical

Movement/technical

Social/lifestyle
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Appropriate training infrastructure
Appropriate training infrastructure

- Facilities – local, regional, national
- Equipment
- Centralised training, squads etc.
Effective learning environments

- System is coherent and enjoys stakeholder buy-in

- Clear vision, culture, priorities, planning and resource

- Effective workforce

- Appropriate training infrastructure

- Clear development model

- Clear performance model
Effective workforce

- Centrality of the coach
- Clear workforce structure and roles
- Effective coaches
- Coach development and education
- Quality assurance and qualification
Effective learning environments

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- Effective workforce
- Clear development model
- Appropriate training infrastructure
Effective learning environments

- Goal focused, individualized, and challenging
- Constructively aligned practice structure
- Developmentally appropriate competition
Engagement in multiple sports (sampling)

Single sport practice structure

Unstructured play

Structured practice
- Games based
- Skills based
The importance of competition in Spain

“I think the competitive component in badminton is an important factor in all the developmental stages. It’s not like other sports where you can accumulate competitive experience even during training, and you can show it in competition. In badminton, this is not possible, even in inferior categories. If that competitive experience is not existent... the level of game and effectiveness that you show during competition, from the bottom down in age, it needs some practice time until it is relatively similar to the level of training” (8)
Effective learning environments

- System embedded in socio-cultural context and resources
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System is coherent and enjoys stakeholder buy-in

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System is coherent and enjoys stakeholder buy-in.
Effective learning environments

System embedded in socio-cultural context and resources

System is coherent and enjoys stakeholder buy-in

Clear vision, culture, priorities, planning and resource

Effective workforce

Clear performance model

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Effective learning environments

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Embedded systems

Research, strategy, and planning

Infrastructure and workforce
Research/sports science and the coach
Research/sports science and the coach

A misunderstood relationship

Evidence informed rather than evidence determined

The coach is central; the coach’s judgement is crucial

Important role for coach education and development

Important role for PDs managing roles/politics
Summary and conclusions

- Successful countries are moving towards a more comprehensive ‘systems’ approach to player development
  - Research and strategy
    - Infrastructure and workforce
    - Embedded system
  - Systems attend to the all the dimensions discussed (to a greater or lesser degree)
  - System coherence and buy-in is crucial
Summary and conclusions

• We need to re-think the research/sports science vs coach relationship
  • Research/sports science as a discretionary tool
• The model provides a thinking tool and check and challenge for player development system designers
Acknowledgements

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• Performance directors, head coaches, talent coaches, sport scientist personnel in Indonesia, Korea, Denmark and Spain.
• My co-colleagues: Sergio Lara-Bercial, Dr AJ Rankin-Wright, Mike Ashford, Dr Lisa Whitaker and Professor James McKenna
Thanks for listening

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