

Institution: Bournemouth University		
Unit of Assessment: 24		
Title of case study: The development of athletic talent: Driving policy change in national sporting organisations		
Period when the underpinning research was undertaken: September 2015-July 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Professor Tim Rees	Professor in Sport	01/09/2015 - current
Period when the claimed impact occurred: September 2015-July 2020		
Is this case study continued from a case study submitted in 2014? No		
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>The development of sporting talent is central to elite sport, and is an aim of Sport England, the Lords Olympic and Paralympic Legacy Committee, and the All-Party Parliamentary Group for Sport, but there has been a relatively impoverished understanding of what underpins the development of the world's best sporting talent. Rees has led a number of research projects, co-created with sporting organisations in the UK across multiple sports, which have highlighted that the key factors involved in producing elite athletes include early developmental experiences, individualised coaching, and social group membership. These insights have changed the working practices of thousands of coaches and athletes across more than 20 sports, including Olympic sports to cricket and rugby.</p>		
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>Professor Tim Rees' research centres on the development of talent in elite sport. Previously funded by UK Sport ("The Great British Medallists Project") and the England and Wales Cricket Board (The ECB: "<i>The development and validation of a psychological profiling system for elite cricket players</i>"), since his arrival at BU in September 2015, he has continued to publish his research in a number of high-impact journals.</p> <p>The initial driver for the research was UK Sport's desire to generate a better understanding of what underpins the development of world class sporting talent (i.e. Gold Medal winners). Research by Rees and research collaborators at Bangor University; the University of Kaiserslautern, Germany; the University of Queensland, Australia; Queen's University, Canada and University College London, published in 2016 in <i>Sports Medicine</i>, found that "<i>the task for researchers, practitioners and policy makers of generating a clear understanding of what is known and what is thought to be true regarding the development of sporting talent is particularly challenging</i>" [R1].</p> <p>For the first time, Rees et al. provided an authoritative, balanced, comprehensive, fully referenced and critical review of the literature, which now serves as a key point of reference: (a) for researchers in talent identification and development in sport, as well as a guide to future research; and (b) for practitioners and policy makers in sport seeking an overarching, evidence-based understanding of the current state of knowledge in the area, as well as a guide for translating that knowledge into action. This output has become the gold standard review and has, to date, been downloaded over 46,000 times (see https://link.springer.com/article/10.1007/s40279-016-0476-2).</p>		

Subsequent research by Rees has examined distinctions between serial medalling, super-elite athletes who have won multiple gold medals at Olympic Games or World Championships and those of matched, funded, elite athletes, who had not medalled at either a World Championship or an Olympic Games [R2] [R3]. His initial paper, [R2], used qualitative methods to highlight eight key aspects of the athletes' psychosocial biographies which differentiated the two groups of athletes. His subsequent paper, [R3], used novel methods from bioinformatics (pattern recognition analysis) to indicate that a combination of psychosocial attributes, the total volume of practice plus play and physical activity discriminated between the super-elite athletes and elite athletes with an accuracy of 97%. Overall, the results showed the importance of early developmental experiences in the production of super-elite athletes, demonstrating the necessity of psychological screening.

For a sport such as cricket, there has been a lack of understanding as to how talented players can successfully transition from the county academies to the ECB's England Development Pathway (EDP) and on through the U17s, U19s and into the Test side. Rees' research has helped develop this understanding. He has highlighted the importance of group memberships and social identity for coping with transitions [R4], as well as demonstrating that social group memberships also enhance resilience in the face of negative performance feedback [R5]. Overall, the findings suggest the importance of assessing players' group memberships and monitoring 'at-risk' players who report belonging to relatively few pre-transition groups. The work also highlights that groups are not just a context but also a critical psychological resource for athletes.

3. References to the research (indicative maximum of six references)

R1-R5 were published in high quality journals, following a rigorous peer-review process. The overall project (for which the outputs R1-R3 contributed) was nominated for *Times Higher Education* "Research Project of the Year" 2016.

R1 Rees, T., Hardy, L., Güllich, A., Abernethy, B., Côté, J., Woodman, T., Montgomery, H., Laing, S. and Warr, C., (2016). The Great British Medallists project: A review of current knowledge on the development of the world's best sporting talent. *Sports Medicine*, 46(8), 1041-1058. [DOI: 10.1007/s40279-016-0476-2](https://doi.org/10.1007/s40279-016-0476-2).

R2 Hardy, L., Barlow, M., Evans, L., Rees, T., Woodman, T. and Warr, C., (2017). Great British medallists: Psychosocial biographies of super-elite and elite athletes from Olympic sports. *Progress in Brain Research*, 232, 1-119. [DOI: 10.1016/bs.pbr.2017.03.004](https://doi.org/10.1016/bs.pbr.2017.03.004)

R3 Güllich, A., Hardy, L., Kuncheva, L., Laing, S., Barlow, M., Evans, L., Rees, T., Abernethy, B., Côté, J., Warr, C., and Wraith, L. (2019) Developmental biographies of Olympic super-elite and elite athletes - a multidisciplinary pattern recognition analysis. *Journal of Expertise*, 2(1), 23-46. https://www.journalofexpertise.org/articles/volume2_issue1/JoE_2019_2_1_G%C3%BCllich.pdf

R4 Rees, T., Haslam, A., Coffee, P., and Lavalley, D. (2015). A social identity approach to sport psychology: Principles, practice, and prospects. *Sports Medicine*, 45(8), 1083-1096. DOI: [10.1007/s40279-015-0345-4](https://doi.org/10.1007/s40279-015-0345-4)

R5 Green, J., Rees, T., Peters, K., Sarkar, M. and Haslam, S. (2018). Resolving not to quit: Evidence that salient group memberships increase resilience in a sensorimotor task. *Frontiers in Psychology*, 9, 1-12. Article 2579. [DOI: 10.3389/fpsyg.2018.02579](https://doi.org/10.3389/fpsyg.2018.02579)

4. Details of the impact (indicative maximum 750 words)

Rees' close working relationship with UK Sport, the ECB, and England Rugby has allowed him to share his research at the very highest level of a number of sports, via Senior Management Groups, Performance Directors, and practitioners (coaches, psychologists, physiologists,

performance analysts). Publication of the research in open access format [e.g., R1 and R3] has allowed the research a wide reach across physicians, sports medicine specialists, physiotherapists, exercise physiologists, team doctors and trainers alike, helping to bridge the gap between science and practice. R1 has been tweeted about by over 300 people, including Olympians, the IOC and leading sports coaches. A piece written by Rees, based on the 2016 article, has been read over 130,000 times [E1]. R1 has formed the backdrop for numerous other online media including the BBC and CBC [E2]. Further, the then Chair of the Office for Students and former Chief Adviser on Delivery to Prime Minister Tony Blair, delivered a keynote at the Sport Performance Summit in London in 2016 [E4b], referencing Rees' research [R1], and subsequently stating that he was *"struck by the similarities that I saw between these characteristics and those I had seen in top performers in government"* [E3].

The former Head of England Development Programme at England and Wales Cricket Board and subsequent Performance Director at the Lawn Tennis Association and Manchester City AFC, states that the Great British Medallists Study [R1-3] is *"the primary piece of empirical research that underpins talent identification, selection, confirmation, and development practice across Olympic, Paralympic and professional sport domains in the UK...Performance Directors, National Coaches and sports scientists working for more than 40 National Governing Bodies of Sport and the four home country institutes of sport have consistently used the results and conclusions from this research to inform the design and continuous improvement of the ways in which talent is defined, profiled, evaluated and understood"* [E5]. He further notes that as a result of Rees' research, *"leaders and coaches are better equipped to understand the non-linear nature of talent development, the management of difficult or maverick behaviour and how to maximise the likelihood of more people turning their raw potential into elite performance"* [E5].

UK Sport

The research (pre-print versions of both R1 and R2) was presented at UK Sport's annual "World Class Performance Conference", held in London in November 2015 and attended by hundreds of performance directors, managers, coaches, sports scientists, and medicine personnel. Pre-print iterations of R1 and R2 were used (and continue to be used) in strategic planning by UK Sport for the Rio 2016 and Tokyo 2020 Games [E5, E6]. Rees' findings [from R1 – R3] have also been used to reshape UK Sport's talent development pathway [E6]:

- Psychological profiling of athletes is now relatively routine.
- Coaches are helped to develop constructive ways to work with extreme perspective personalities.
- The talent data capture processes of governing bodies of sport are being upgraded to ensure that the athletes most likely to form the "super-elite" are identified earlier.

England & Wales Cricket Board and Lawn Tennis Association

The findings of Rees' research into the importance of group memberships and social identity [R4, R5] has significantly influenced national junior player development programmes in both cricket and tennis. The former Head of the England Development Programme, England and Wales Cricket Board states that, within cricket, *"Greater emphasis has been placed upon the development of training environments that provide higher levels of peer and social support whilst also enabling individuals to remain connected to wider social groups at home"* [E5].

Building on this, the Lawn Tennis Association's (LTA) own player development strategy has been informed by the same research. The former Performance Director at the LTA states that: *"the two new National Academies opened in September 2019 are hosted by leading schools that provide access to a wider social setting and peer group. Equal emphasis is placed on personal, social and academic development as tennis skills and game style. The National Academies invest significant time and effort to integrate players into the wider school and local community whilst also maintaining contact with family and friends at home"* [E5]. Overall, the research has impacted on the journeys into and through talent development programmes of more than 2,000 high potential young athletes [E5].

England Rugby

The former Lead for Psychology: International Performance Department at England Rugby states that *“Professor Tim Rees’s research has changed the way we think about the development of elite sporting talent”* [E7]. As a result of Rees’ emphasis on the importance of developmental experiences and psychological screening of young athletes [R2, R3], England Rugby now routinely engages in psychological profiling and monitors player dropout and de-selection for possible re-entry of players into England Rugby’s talent system [E6]. The continued influence of this work led to the formation of a Board to oversee further development of the ideas. The former UK Sport Head of Research and Innovation, and subsequent England Rugby Athletic Performance Manager, Head of Performance at Team Sky and now Director of Sport at Millfield School stated: *“The knowledge gained from exposure to Rees’ research remains part of my day-to-day thinking and influences my practice in the way we support and develop young talent”* [E6].

5. Sources to corroborate the impact (indicative maximum of 10 references)

E1 Rees, T., 2017. Busting three myths around elite sports performance. [online] *The Conversation*. Available at: <https://theconversation.com/busting-three-myths-around-elite-sports-performance-72763>

E2 Additional examples of media coverage.

E3 Office for Students (2020). *Testimonial email*, 24 April.

E4 Office for Students (2016) *Presentation given at the Sport Performance Summit, London*. Available at: <https://leadersinsport.com/event/the-sport-performance-summit-london-2016/>

E5 Manchester City AFC, Lawn Tennis Association, UK Sport / England and Wales Cricket Board (2020). *Testimonial email*, 18 January 2020.

E6 UK Sport / England Rugby / Team Sky / Millfield School (2020). *Testimonial letter*, 26 November 2020.

E7 England Rugby (2020). *Testimonial letter*, 7 December 2020.