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Citation for final published version:

Phillips, Nicola and Paterson, Colin 2020. Growing sports physiotherapy experts takes a village. Technical, creative and contextual learning doesn't happen in a vacuum. *British Journal of Sports Medicine* 54 , pp. 499-501. 10.1136/bjsports-2019-101333

Publishers page: <http://doi.org/10.1136/bjsports-2019-101333>

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Growing Sports Physiotherapy Experts takes a Village. Technical, creative and contextual learning doesn't happen in a vacuum.

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Competing interests:
There are no competing interests for either of the two authors

Contributorship
Both authors contributed equally to the manuscript, including writing and creating the model illustrated

Acknowledgements

IFSPT and ACPSEM for the work done in creating professional competencies and standards, which form the basis of the model for developing expertise.

FROM ROOKIE TO EXPERT

The quality of sport and exercise physiotherapy has risen dramatically in the last few decades. Scope of practice still varies across the world but physiotherapy/physical therapy consistently builds on a broad medical knowledge that underpins advanced decision-making and problem solving. We work to support performance, prevent injury and provide clinical care. Pre-registration physiotherapy education provides the starter toolkit that ensures the entry level physiotherapist practices safely.

How can physiotherapists ensure that they keep developing post-qualification, so that they can work at the highest level? To develop expertise—with an emphasis on the ‘expert’ part of that term—requires physiotherapists to keep abreast of advances in practice through both theoretical and experiential learning. The purpose of this editorial is to highlight how the International Federation of Sports Physical Therapy (IFSPT) can help a physiotherapist with this journey.

Sports and exercise physiotherapy expertise, as defined by the International Federation of Sports Physical Therapy (IFSPT)[1], is detailed on the IFSPT website[2]. A modified model is presented in supplementary material with this paper. It describes competencies required as a Registered International Sports Physical Therapist (RISPT) status[2].

DEVELOPING EXPERTISE

Fig.1 describes a model of how a physiotherapist advances from novice to expert in decision-making and skill development. *Technical learning* relates to science and general physiotherapy skills, largely attained at a novice level. *Creative learning* involves adapting decision-making and techniques to individual clinical presentations.

Contextual learning develops the self-awareness and ability to adapt behaviours to fit in with the wider cultural and situational circumstances in which they operate, sometimes even shaping that culture when appropriate [3,4]. Part of contextual learning involves communicating in different environments. Technical/Strength & Conditioning coaches, sports scientists, osteopaths, chiropractors, soft tissue therapists and sports physiotherapists all contribute specific knowledge and skills to the support team; this requires each to understand of each other’s language. Not everyone gets to this expert level which takes practice and the longest time.

All 3 modes of learning are needed to make complex clinical decisions in a sports context under significant time and environmental constraints. Being able to adapt an approach, whilst still being effective, is typical of expert behaviour. Novices often have technical knowledge and skill, acquired from their academic, but lack experience on which to base their practice decisions [5].

Conversely, an ability to “fit in” without the underpinning knowledge and technical skill may initially seem appropriate for less experienced practitioners but has inherent risks when more complex decision-making is required. For example, a novice or limited scope practitioner may

be very familiar with a sport, through participation or as a spectator and can therefore speak the contextual language of the environment but may not have depth and breadth of technical and creative learning to solve an atypical, complex clinical problem.

INCORPORATING FORMAL AND NON-FORMAL LEARNING

Figure 1 highlights that physiotherapists need to combine formal (planned, organised) and non-formal (unplanned, near-spontaneous, deliberate) learning. Non-formal learning is often difficult for the individual to recall or detect and results in tacit knowledge generation [6]. This is the “practical know how” referred to when observing experts in action and is the characteristic sought by junior practitioners. Combining formal and non-formal learning with reflective practice is the best way to gain new knowledge and seems to be essential for developing expertise [5]. The key is to create strong formal learning foundations, whilst steering through a range of non-formal practical opportunities in the mud and sweat of sport, from grassroots to high performance. This often means volunteering at pitch side or competition events.

Barriers to non-formal learning are lack of opportunity to work alongside experts, which can be addressed through creating more shadowing and supervised or supported practical experiences. Unfortunately, once that expertise is gained, it can be difficult to retain those volunteers to mentor the next generation, as they have moved on to paid work in sport. These expert physiotherapists may not have the capacity to accept volunteers (in the pressure cooker of elite sport) and may not be aware of their value in allowing others to shadow them. Experts may not have time to, or see the value in, shadowing a colleague in a different sporting environment as part of ongoing learning. We believe a football physiotherapist and a ballet physiotherapist can learn from each other. An upper limb and a lower limb expert physiotherapist can learn from each other too.

Individuals, sports governing bodies, sports and exercise medicine communities need to engineer practical learning opportunities. Creating this community of learning would change culture to acknowledge the importance of peer support. We know of areas of good practice globally and UK examples of these practical learning opportunities include;

* The Association of Chartered Physiotherapists in Sport and Exercise Medicine (ACPSEM), has a pilot scheme in South Wales to facilitate supervised practical learning. Students and early career physiotherapists get supervised practice at sporting events. More experienced supervisors also get mentoring from expert sports physiotherapists, thus creating learning opportunities at all stages of the novice-expert continuum. This community of practice provides incentives for experts to share their knowledge and time.

- Some universities, such as Cardiff University and Brighton University, provide shadowing and supervised learning opportunities at sporting events to allow students pre-registration exposure within the specialty.

- The ACPSEM pathway requires novices to gain 100 hours of shadowing/supervised practice to gain the Bronze award, all applicants need a named mentor and experienced sports physiotherapists must mentor colleagues in order to gain Registered International Sports Physical Therapist status.

Continued development of sports physiotherapy expertise requires all individuals within the sporting community to work together. How can we engineer a better structure for that all important “practical know how”, to complement some excellent formal learning available. Volunteering—when it is supported by mentoring and structured reflective practice—provides an excellent learning community. It differs sharply from “free labour”, where the labourer is not gaining knowledge, skills or a network.

Our challenge, as a profession and as individual physiotherapists, is to reflect on our role in cultivating the 3 learning types required for expertise—technical, creative, and contextual learning. Which do we need to spend more time on? How can we support more junior physiotherapists to learn? There is a need to recognise the value of contextual learning and its inevitably, spontaneous, and sometimes frankly chaotic, environment. As a community, we have a responsibility to embrace volunteering as a tool to develop the three knowledge types, whilst ensuring the professional service we provide is valued.

Reference List

1. Bulley C. and Donaghy M. (2005) Sports Physiotherapy Competencies: The First Step Towards a Common Platform for Specialist Professional Recognition. *Physical Therapy in Sport* 2005; 6(2): 103-108.
2. IFSPT (2019)<https://ifspt.org/competencies/> accessed 9.9.19
3. Kutz MR. Toward a conceptual model of contextual intelligence: a transferable leadership construct. *Leadersh Rev* 2008; 8:18–31.
4. Eraut M. Non-Formal Learning and Tacit Knowledge in Professional Work. *British Journal of Educational Psychology* 2000; 70 (1): 113-136.
5. Paterson C, Chapman J. Enhancing Skills of Critical Reflection to Evidence Learning in Professional Practice. *Physical Therapy in Sport* 2013; 14 (3):133-138.
6. Winter S, Collins D. Why Do We Do, What We Do? *Journal of Applied Sport Psychology* 2015; 27 (1): 35-51, DOI: 10.1080/10413200.2014.941511