

# Comparing Apples and Oranges? The Need for Greater Qualitative Clarity in Talent Development Research

Kevin Gavin<sup>1,2,3</sup>, Jamie Taylor<sup>1,2,4</sup>, Áine MacNamara<sup>1</sup>, and Stephen Behan<sup>1,2</sup>

<sup>1</sup>School of Health and Human Performance, Faculty of Science and Health, Dublin City University, Ireland

<sup>2</sup>Insight SFI Research Centre for Data Analytics, Dublin City University, Ireland

<sup>3</sup>Department of Sport, Exercise and Nutrition, Atlantic Technological University, Ireland

<sup>4</sup>Grey Matters Performance Ltd. Stratford upon Avon, England

Correspondence: Kevin Gavin, kevin.gavin@atu.ie

## Abstract

The field of talent development (TD) research and practice has grown significantly over the last two decades, drawing on a range of complex modeling, such as the biopsychosocial and bio-ecological framings, to re-evaluate prescriptive approaches to talent systems. In line with recognition of the social complexity of TD and to promote transferability of findings to practice, we argue the need for researchers to provide greater qualitative clarity in describing the systemic context where research is conducted. By outlining the contextual factors and sport-specific nuances, we suggest that this qualitative clarity will enable researchers to conduct more meaningful cross-study comparisons and promote a more nuanced understanding of TD across diverse sporting contexts. Most importantly, qualitative clarity will enable practitioners to consider the relative transferability of research findings to their own context and to leverage this knowledge to inform evidence-informed practice.

## Keywords

talent system, talent development environment, qualitative clarity, evidence-informed practice

## Introduction

The last two decades have seen a significant increase in talent development (TD) research and practice (Baker et al., 2020), with literature primarily centred on exploring the characteristics and developmental journey of elite athletes (e.g., Henriksen & Stambulova, 2023). Over this period, there has been a notable shift in research focus towards understanding the role of the environment in which athletes develop. These Talent Development Environments (TDEs) have been conceptualized as “all aspects of the coaching situation” that

affect an athlete’s development (Martindale et al., 2005, p. 354). Building on earlier work of Martindale and colleagues (2005, 2007), Henriksen (2010) emphasized the socially situated nature of TD and a consideration of the broader context and organizational culture in which the athlete develops (Henriksen & Stambulova, 2023; Mathorne et al., 2020). Recognizing the importance of environmental factors (Henriksen, 2010; Li et al., 2014), high performance sporting organizations have invested significant resources (e.g., financial, personnel, time) to support the development of

youth athletes systematically (Till et al., 2019; Williams et al., 2020). For example, the 2020 UEFA Training Facility and Youth Investment Landscape report revealed that European youth soccer academies collectively invest €870 million annually, allocating these funds to areas such as coaching, education, training facilities, and medical staff (UEFA, 2020).

More recently, research has begun to consider not only the characteristics of TDEs, but how environmental factors affect athletes' pathway experiences (Taylor & Collins, 2022). This focus has allowed for a deeper consideration of TD through multiple lenses, something that has been a feature of educational thinking and, specifically, notions of curriculum for the past century (Dewey, 1986). Different levels of curriculum have been suggested, with the intended curriculum being planned content and objectives, the enacted curriculum being what is implemented in practice, and the experienced curriculum being the effect on the individual participant (Clemmons et al., 2022). The outcome of this research is that curriculum thinking is now embedded in policy and practice in high performance sport settings (e.g., CIMSPA, 2019).

In particular, the conceptualization of curriculum as the totality of athlete experience has led to recognition that TD is a collective effort involving various stakeholders and multiple contexts (e.g., school, club, regional, national) (Bjørndal & Ronglan, 2018; Curran et al., 2021, 2022). In recognition of these dynamics, integration among stakeholders to support athlete coherence has increasingly become an important topic of interest in both research and practice (Webb et al., 2016). That is, coherence is the extent to which the different elements of an athlete's experience across environments are mutually reinforcing (Taylor & Collins, 2022). This coherence can be horizontal, across a level of performance, or vertical, over the longer term, building toward the individual long-term developmental needs (Taylor & Collins, 2021). Empirical investigations in TD systems have suggested that many athletes' curricula are characterized by significant incoherence within and between

the different environments that athletes inhabit (Curran et al., 2021; Sweeney et al., 2022). Therefore, it has been suggested that coherent athlete experience can be enabled by integrated practice between athletes, stakeholders, and systems (Taylor et al., 2022). In essence, a step toward the greater recognition of the highly contextual and socially situated nature of TD (e.g., Vaughan et al., 2022), is made by not only considering the individual characteristics of the athlete but also the extent to which the athlete is matched to, and developed by, multiple environments.

## Talent Development Models

Despite the recognition of the social circumstance, which encompasses the conditions and factors surrounding an individual or group that shape their experiences and opportunities (e.g., family support) (Taylor et al., 2021), and the biopsychosocial complexity of TD, both literature and practice have a history of reductive approaches, resulting in the frequent and somewhat prescriptive modeling of athletes' pathways (Bailey & Collins, 2013). Historically, these types of models tend to divide athlete development into distinct stages, to describe changes in athletes and their environments (Coutinho et al., 2016), and in practice, to have sometimes taken a step further by prescribing pedagogic approaches to be used at a given age or stage. Prominent examples of TD models include the Developmental Model of Sport Participation (DSMP; Côté & Fraser-Thomas, 2007) and the Long-Term Athlete Development (LTAD) model (Balyi & Hamilton, 2004). These models are stage-based, whereby participants must demonstrate certain abilities or characteristics before transferring from one stage to the next. For instance, the DSMP stages are determined by participants' chronological age, while stages in the LTAD are based on participants' chronological and biological age (Gallant & Bélanger, 2021).

Theoretical models, such as the LTAD and DSMP, serve as a useful means for capturing a wide range of evidence (Bailey et al., 2010), and have made a meaningful contribution to TD literature (Coutinho et al., 2016). Moreover, for

those at the upper echelons of talent systems these models may provide the comfort of a useful fiction suggesting that the actions of stakeholders can be directed. While this may explain their continued use within sporting associations and national governing bodies (NGBs) (Bjørndal et al., 2017), recent research has challenged their utility, arguing that they are based on presumed sets of logic that are highly questionable (Bailey & Collins, 2013). In particular, despite the idiosyncratic, nonlinear, dynamic, and social complexity of TD (Cobley, 2016; Sweeney et al., 2022), these models present TD as conceptually simple, linear, and predictable (Bailey & Collins, 2013; Collins & MacNamara, 2022). Similar critiques of best practice models have been generated from an ecological dynamics perspective suggesting that practice cannot emerge devoid of context and the desire for the homogenisation of practice should be avoided (O'Sullivan et al., 2023). This concern is further compounded by the challenge in precisely defining the qualitative stages incorporated within these models due to the lack of clarity surrounding the indicators that facilitate the identification of transitions between these stages (Coutinho et al., 2016).

Additionally, these models are often characterized by a pyramid approach resulting in the progression of the highest performing athletes to subsequent stages, and in parallel the deselection of large numbers of athletes (Bjørndal & Ronglan, 2018). However, research has challenged the veracity of this assumption for TD, highlighting weak correlations between junior and senior performance (Barth et al., 2022; Güllich et al., 2023). Moreover, the use of very specific sample groups in their development may limit the application of these models to other sports and cultures (Coutinho et al., 2016). For example, the literature underpinning the DMSP framework is predominantly based upon North American athletes (Côté, 1999), while recent reviews and revisions of the model have also been predominantly framed within a North American context (e.g., Côté & Fraser-Thomas, 2007; Côté & Vierimaa, 2014). As such, the specific ages and stages of the model may offer limited

transferability to the significant range of alternative TD systems and contexts across nations (Baker et al., 2020) and the differences in developmental provision between North America and other contexts, even within the same sport (e.g., Holt, 2002). In response to these criticisms, MacNamara and Collins (2014) highlighted the need to move beyond best practice TD models. Instead, they suggest a consideration of principles of TD (e.g., coaching, coherence) and process markers of development (e.g., psychological factors, support factors), together with guidelines about the implementation of these in applied practice (MacNamara & Collins, 2014).

## Conceptual Clarity

Against this backdrop, recent literature has highlighted a range of conceptual and theoretical inconsistencies when referring to individual athletes and conceptions of talent (Baker et al., 2023). Specifically, the use of various vaguely or undefined (i.e., blurry) terminologies has been acknowledged as a source of confusion and contradiction within athlete development research and practice (Johnston et al., 2023). This lack of conceptual clarity has been attributed to the language employed by coaches, practitioners, and researchers, which is “often vague, nebulous, and lacking appropriate nuance” (Johnston et al., 2023, p. 2). Noteworthy examples of these blurry terminologies include “environment” (Hauser et al., 2022), “talent” (Johnston & Baker, 2022), “sampling” (Murata et al., 2022), “early specialization” (Mosher et al., 2020), “coach’s eye” (Lath et al., 2021), “positive youth development” (Bruner et al., 2022), and “mental skills” (Dohme et al., 2017). In an attempt to achieve conceptual clarity of these terms, Johnston et al., (2023) proposed the development of a glossary or dictionary containing frequently used terms for which a consensus has been established.

In both academic and applied settings, one of the more frequently cited examples of blurry terminologies is the use of the term “elite” to describe higher performing athletes (McAuley et al., 2022). This has resulted in confusion

regarding how this term is defined, with elite status previously inferred based solely on athletes' accumulated training or general experience in a sport (Swann et al., 2015). Furthermore, the term elite has been inconsistently applied to heterogeneous research samples, ranging from Olympic champions to "athletes who were simply part of a competitive team" (Swann et al., 2015, p. 2). While appearing to be less of an issue in more contemporary literature, such discrepancies pose challenges in deriving valid conclusions and applying findings in research synthesis or transferability to practice (McAuley et al., 2022; Swann et al., 2015). To mitigate this ambiguity, McKay et al., (2021) developed a participant classification framework which establishes clear and specific criteria for categorizing athletes across a variety of sports. This framework offers a structured approach that allows researchers to classify participants into one of the six defined tiers based on their training volume, performance metrics, and skill level. This standardized classification system ensures that researchers and practitioners have a common language for describing the calibre and training status of individuals or groups (McKay et al., 2021).

## Comparing Apples and Oranges

Amidst this justified call for improved conceptual clarity and the increasingly utilized participant classification framework (McKay et al., 2021), it is important to acknowledge the complexities and contextual nuances of TD (Storm et al., 2022). These complexities manifest across the talent system, which can be considered at three levels (Taylor et al., 2022). The "micro level" represents the individual interactions that occur in day-to-day TD practice (Taylor et al., 2022). The "meso level" represents collections of these micro systems, typically in the form of TDEs or individual organizations such as academies or clubs (Taylor et al., 2022). Last, the "macro level" represents the interactions between organizations typically at a national or international level (e.g., NGBs) (Taylor et al., 2022). This is important, because, beyond

clarity of language, the complexity of TD has significant implications for the relevance and generalizability of research findings beyond the context of investigation (Baker et al., 2020). Moreover, these complexities pose challenges that restrict the utility of McKay and colleagues' (2021) classification framework to TD samples.

At the micro level, consideration for the spectrum of inter- and intra-individual differences amongst athletes demands a comprehensive understanding of multifaceted factors, including the athletes' maturational status, their evolving psycho-behavioral skills, and the influence of their coaches and peers in shaping their developmental journey (Sweeney et al., 2022). At the meso level, TDEs or individual organizations can exhibit significant variations in size, structure, and composition (Cobley et al., 2020). For example, English professional football academies can vary considerably, as evidenced by the Elite Player Performance Plan (EPPP) (Premier League, 2011), which categorizes clubs based on a range of factors, such as funding received, staffing, infrastructure, planning, productivity, and player selection age (Mitchell et al., 2021). At the macro level of the talent system, interactions between organizations within a national or international context introduce further complexities. As one example, Norwegian handball is characterized by a decentralized and egalitarian structure, which emerges from the interplay between club-based practice and competition, sport school programs, regional athlete development initiatives provided by the sports' NGB, and youth and junior international team initiatives (Bjørndal & Ronglan, 2020). In this context, no single entity holds instructional authority over others, and no party assumes sole responsibility for TD (Bjørndal & Ronglan, 2020). This is in sharp contrast to English professional football academies, which operate within a more structured model guided by the EPPP (Premier League, 2011). This model categorizes players into distinct phases based on age while also outlining specific guidelines for monitoring and evaluating player progression and for a points-based system to track player journeys across their development towards

senior level (Mills et al., 2014; Mitchell et al., 2021).

## The Need for Greater Qualitative Clarity - Guiding Future Research

The field of sport coaching research has previously been criticized for a lack of transferability to coaches' practice contributing to a persistent researcher-practitioner gap (Lyle, 2018). This issue is often attributed to a lack of detailed information within research samples and specificity regarding the research context, thereby hindering practitioners' ability to associate with and apply the research findings to their own coaching contexts (Gould, 2016; Lyle, 2018). Gould (2016) further emphasizes that researchers have paid insufficient attention to dissemination, exacerbating the challenge of bridging the gap between research and practice. Consequently, Lyle (2018) emphasizes the need for a re-evaluation of research outputs in terms of "utility, availability, accessibility, and transferability" (p.11). Considering the complexities and contextual nuances across the talent system, the researcher, therefore, not only needs to cater to fellow researchers aiming for comparative research, but also to the practitioner aiming to critically consider transferability of findings to their unique TDE.

Moving forward, if our ambition is to support adaptive action in practice, we need to move beyond notions of best practice devoid of context (cf. O'Sullivan et al., 2023), toward a view underpinned by evidence-informed practice (Neelen & Kirschner, 2020). This will require a move beyond the critiqued simplified fiction of TD models to offering the practitioner greater context. Consequently, in addition to categorizing participants against an established framework of relative eliteness (e.g., McKay et al., 2021), we propose the need for greater qualitative clarity in outlining the social situation of TD research samples. This clarity should present enough information about the sample and the context of data collection for the reader to comprehend a level of nuance in presented data. Depending on the particular framing of the research, this clarity could be developed with the use of various models; for

example, the specific framing of a talent system at macro, meso, and micro levels (cf. Taylor et al., 2022), or use of alternative models such as the biopsychosocial framework (John et al., 2019), the bioecological model (Henriksen et al., 2014), or an ecological dynamics view (Davids & Araújo, 2019). In this sense, our call for greater qualitative clarity is not loaded with specific epistemological priors, it is simply a call for a move beyond basic demographic information and offering an appropriate level of detail to support transferability. As an example of what might be considered good practice, Bjørndal and Ronglan (2018) offer significant detail in their exploration of players' developmental experiences in Norwegian handball. At the macro level of the talent system, the authors outline how the NGB is responsible for organizing various sport activities at a national scale. At the meso level, they illustrate the role of local voluntary-driven clubs as the "basic organisational unit of the handball system...in which athletes spend most of their time" (Bjørndal & Ronglan, 2018, p. 6). Finally, at the micro level, they acknowledge individual athlete experiences within the talent system, from interactions with volunteer coaches at the club level to engagements with professional coaches in specialized sports programs in schools (Bjørndal & Ronglan, 2018).

Our suggestion is that qualitative clarity of this sort will not only enhance the external validity of research findings, but also allow for a nuanced understanding of TD across diverse sporting contexts. Furthermore, practitioners will be better equipped to understand the transferability of those findings to their own settings and leverage this knowledge to inform evidence-informed practice and tailor their approaches to suit the unique needs and challenges of their own athletes and environments. While there may be a valid concern from those seeking to meet the requirements of journal word counts, we would argue that as per the above example, this contextual information does not need to be comprehensive, it just requires that enough information be provided so that the reader can

make sense of circumstance. In this sense, regardless of research methodology, the context in which athletes develop will have significant implications for the transferability of findings. If we want TD research to have an effect on the real world, we urge editors to be accommodating of additional word count to support transferability and critical application.

## Conclusion

Advances in TD research have acknowledged the role of contextual factors and the limitations of prescriptive best practice models, along with ongoing discussions related to the need for greater conceptual clarity. Based on the practical need to navigate the complexities of TD and promote the use of findings for evidence-informed practice, we suggest the need for greater qualitative clarity when describing the context of TD research samples. This approach will enable researchers to conduct more meaningful cross-study comparisons, fostering a stronger evidence base for effective TD strategies while simultaneously empowering practitioners to make informed decisions and optimize TD within their unique contexts.

## Authors' Declarations

The authors declare that there are no personal or financial conflicts of interest regarding the research in this article.

The authors declare that the research reported in this article was conducted in accordance with the Ethical Principles of the *Journal of Expertise*.

## ORCID iDs

Kevin Gavin

<https://orcid.org/0000-0002-7985-5436>

Jamie Taylor

<https://orcid.org/0000-0002-9958-0871>

Áine MacNamara

<https://orcid.org/0000-0002-8110-6784>

Stephen Behan

<https://orcid.org/0000-0003-3085-2792>

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