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To cite this article: Adam L. Kelly, Kathryn Johnston, Kevin Till, et al. (20 Aug 2026): Principles of talent identification in sport: The Talent Identification and Development Environments in Sport (TIDES) Society position statement, Journal of Sports Sciences, DOI: [10.1080/02640414.2026.2705709](https://doi.org/10.1080/02640414.2026.2705709)

To link to this article: <https://doi.org/10.1080/02640414.2026.2705709>



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Published online: 20 Aug 2026.



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Principles of talent identification in sport: The Talent Identification and Development Environments in Sport (TIDES) Society position statement

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ABSTRACT

With growing evidence in the field of talent identification in sport, policy makers and practitioners are left with a broad range of theoretical and practical considerations. As sport necessitates answers, and often quickly, creating a list of evidence-informed principles for ethical and athlete-centred talent identification is needed. As such, 56 researchers and practitioners from the Talent Identification and Development Environments in Sport (TIDES) Society met to establish a working group and discuss, debate and identify guiding principles that are believed to influence talent identification in sport. A formal online meeting was held to openly discuss ideas and suggestions that were captured through video/audio recordings and note taking. A final list of 13 principles were centred on (a) health and well-being, (b) sociocultural influences and sport-specific context, (c) language and terminology, (d) timing and efficiency, (e) entry and exit points, (f) heuristics and biases, (g) objectivity and subjectivity, (h) shared mental models, (i) inter- and trans-disciplinary teams and (j) education and reflection. The TIDES Society suggests using these 13 principles to guide conversations when making decisions about ways to structure and practice talent identification, with the hopes of making more effective, efficient, and ethical talent identification environments.

ARTICLE HISTORY

Received 23 May 2025
Accepted 5 May 2026

KEYWORDS

Guiding principles; sporting talent; athlete identification; talent selection; talent development; athlete development

Introduction

Talent identification (TI) is a topic of ongoing discussion across several fields, particularly in sport (Parra-Martinez & Wai, 2023). In sporting contexts, TI has been defined as the process of recognising athletes with potential at an earlier age to become expert performers in the future

(Williams & Reilly, 2000; Williams et al., 2020). Over the past three decades, literature on this topic has increased considerably (Baker et al., 2020; Johnston et al., 2018), coinciding with a surge in the number of roles dedicated to supporting, leading and researching TI in sport environments. The growth and attention on TI in sport has

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created opportunities for investigation and reflection on the utility, reliability and validity of TI environments in sport and their procedures.

Early research in this area highlighted a number of problems, most of which remain applicable today. For example, Abbott and Collins (2002) highlighted that talent identification models based on static and uni-dimensional approaches likely lead to missed opportunities for athletes and sports due to the premature deselection of many talented children, emphasising the value of dynamic and multi-dimensional methods for TI in sport. Since this early work, research has indicated (a) imbalances between data collection rates and data utilisation rates, where collection far exceeds ability to meaningfully use findings in practice, (b) the preponderance of cross-sectional research designs that might miss the temporal aspects of TI, (c) survivor effects where research focuses on those who 'survive' the competitive sport environment, and not those who potentially 'could have' made it and (d) a lack of knowledge mobilization between research and practice (i.e., the collaborative process that involves sharing knowledge between researchers and interest-holders to create new understanding and impact) (Fürst, 2024; Matthews et al., 2024; Taylor & Collins, 2019; Till & Baker, 2020).

That said, the reality is that many sport interest-holders and sport organisations have no choice but to make TI decisions, particularly as athletes get closer to high-performance levels within their respective sport (e.g., adulthood) as a way to manage limited resources as well as prepare for their future senior teams and competitions (e.g., Shelley et al., 2025). This leaves practitioners in a difficult position, as the available evidence remains difficult to navigate without any consensus from the scientific communities involved. Martindale et al. (2012) presented five key areas for talent development research and practice in sport, which continue to guide the discipline: (a) long-term aims and methods, (b) wide ranging coherent messages and support, (c) emphasis on appropriate development rather than early selection, (d) individualised and ongoing development and (e) integrated, holistic and systematic development. More recently, within talent identification in sport literature, Barraclough et al. (2022) emphasised three key areas for researchers to consider when designing studies in order to help advance knowledge, including (a) the timespan of the research design, (b) the use of mono-disciplinary or multi-disciplinary variables and (c) the fidelity of the methodological approaches to the assessment of talent. What remains clear throughout this research, is the need for better communication between researchers and

practitioners to provide guiding principles on 'what to do and how to do it', grounded in the current scientific evidence.

The development of the Talent Identification and Development Environments in Sport (TIDES) society

Despite the aforementioned increase in research on TI, talent selection (i.e., the ongoing process of identifying athletes at various stages of development who demonstrate prerequisite levels of performance) and talent development (i.e., the process of providing athletes a suitable learning environment to realise their potential) over the last three decades (Williams & Reilly, 2000; Williams et al., 2020), a formal international society for researchers and practitioners within this discipline was missing. To fill this gap, a group of four researchers¹ met and arranged for a formal meeting to take place, inviting researchers and practitioners in the TI space from around the world. Twenty-two international guests from six countries were invited to attend the Talent Identification and Development Environments in Sport (TIDES) Society inaugural meeting in January 2024, with a total of 15 members on the call. To date, the TIDES Society membership continues to grow with 69 current members spanning 16 countries (as of 23 October 2024). The group has worked to create the overarching vision of the TIDES Society, which is to provide a space for high-quality discussion, debate, inquiry, innovation, collaboration and outputs in this field. Ultimately, the group's mission is to develop, advance and disseminate knowledge related to the identification, selection and development of athletes across sports.

The need for a position statement

With the TIDES Society vision and mission in mind, coupled with the lack of research synthesis and evidence-informed guidance available for sport organisations and interest holders, the membership believed a position statement, which would act as a guiding document to steer important conversations before, during and after TI practices have taken place, was important to establish. Given the culmination of perspectives from leading international academics and experienced applied sport interest-holders (i.e., policy makers, practitioners) working with governing bodies and sport organisations responsible for policy and systems, the TIDES Society was well placed to develop a position statement in this area. These guiding principles are intended to help clarify fundamental concepts, define core concepts that underpin the notion of sporting talent, identification and selection, whilst

bringing awareness to and forewarning those in decision-making and action-taking roles about the important considerations for ethical and responsible TI practices. The overarching goal of this position statement was, therefore, to use the collective expertise of the international TIDES Society to develop practical, evidence-informed principles of TI.

Methods

TIDES society members

A total of 56 individuals (80% of the total TIDES Society membership at that time, listed as co-authors of this position statement) contributed, spanning four continents (Europe being the most represented [$n = 46$], then North America and Oceania [both $n = 4$] and Africa [$n = 1$]) and 13 countries. Members were mostly male-identifying ($n = 46$), followed by female-identifying ($n = 8$) and non-binary ($n = 1$) and were predominantly white (Caucasian; $n = 50$), followed by African Origins ($n = 1$), Central and South American Origins (both $n = 1$), other European origins ($n = 1$), West Central Asian and Middle Eastern origins ($n = 1$) and not disclosed ($n = 1$). Most participants identified as being able-bodied ($n = 52$), with some ($n = 2$) identifying with a disability and one preferred to not disclose ($n = 1$).

In terms of experience, the cumulative number of years members had been coaching sport or working in an applied role that involves TI, was 662 ($M = 12.0$ years per person; $SD \pm 7.8$), ranging from 0 to 35 years. The cumulative number of years members had been researching sport science, was 622 ($M = 11.3$ years; $SD \pm 6.8$), ranging from 1 to 30 years. The cumulative number of published peer-reviewed full-text articles (not including 'in press', 'under review', 'revised' or 'resubmitted') members had published, was 1863 ($M = 34.5$ articles; $SD \pm 50.7$), ranging from 0–256 articles. Only one co-author who was involved in the initial discussion (Step 1) did not complete the survey (Step 3), thus their demographic and background information was not included above.

Procedure

For the purposes of this position statement, TI was broadly used to capture aspects of identifying sporting talents (i.e., the aptitudes themselves or the possessors of those talents). Due to the interrelationships and interconnected stages of cultivating talent (Zhao et al., 2024), it is important to note that these TI principles may also include elements of talent selection and talent development. The TI principle was defined as a proposition that serves as the foundation for a system of belief or behaviour or for a chain of

reasoning (adapted from Oxford Languages, n.d.). To arrive at a list of key principles for TI, a three-step process was undertaken, including (a) capturing knowledge (Step 1), (b) developing principles (Step 2) and (c) determining alignment (Step 3).

Step 1: Capturing knowledge

To maximise inclusivity and diverse perspectives within the group, all members of the TIDES Society were invited to participate in the development of the position statement, with the sole inclusion criterion being current TIDES Society membership. As a starting point, TIDES Society members ($n = 48$ at the time) were invited to attend a meeting on 12 June 2024 via Microsoft Teams (Microsoft Corporation, Redmond, WA, USA) to discuss TI research, both within and outside the TIDES Society, that would be insightful for the creation of TI recommendations for those working in an applied role. Twenty-eight members attended the meeting (duration = 129 min), with an additional 13 members inputting via email who were unable to join the meeting, mainly due to time differences (total member inputs $n = 41$, 85%). The TIDES members were provided questions to reflect upon before the meeting, including (a) "What do you think are the key principles of TI (note, these principles need consideration from a policy/system perspective and a practitioner/on the ground perspective)?", (b) "What are some of the pitfalls and challenges when it comes to TI in practice?" and (c) "What are some of the good practice examples that you have evaluated when it comes to TI in practice?". The meeting was recorded and reviewed by the lead author team ($n = 5^2$), and notes were taken to summarise discussions.

Step 2: Developing principles

Using the information gathered in Step 1 and the video/audio recordings of the meeting, the first author conducted content analysis with semantic-level coding, whereby meaning units were inductively derived directly from the data rather than from pre-existing theory (Hsieh & Shannon, 2005). Initial codes were iteratively grouped into candidate themes through constant comparison (Braun & Clarke, 2006). These themes were then critically reviewed by four 'critical friends' (the lead author team), who challenged interpretations, refined category boundaries and enhanced analytical rigour and credibility (Smith & McGannon, 2018).

After the principles were refined, a final list of 13 unique principles was generated. Once the principles were identified, 13 individuals with principle-specific experience (i.e., had a minimum of two peer-reviewed articles within their respective TI principle) were asked to write a description of

each principle on 30 July 2024. This included a brief description (maximum 35 words) and a full description (maximum 175 words) of one principle related to their expertise. Principle information was collected and managed using REDCap (Research Electronic Data Capture, Vanderbilt, Nashville, TN, USA), a secure, web-based software platform designed to support data capture for research studies (Harris et al., 2009).

Step 3: Determining alignment

The 13 TI principles, including brief and full descriptions, were circulated to TIDES Society members ($n = 69$ at the time) to determine the degree of alignment and importance by the membership. The principles were distributed in the form of a survey on 23 October 2024 via REDCap. After adding demographic and background information (i.e., age, location, years of experience, connection to sport), members were asked to respond to two key questions on a 5-point Likert scale for each of the 13 TI principles to confirm their level of agreement (i.e., “How much do you agree that this principle should be included as a principle for TI?”; 1 = Strongly disagree, 5 = Strongly agree) and their rating of importance (i.e., “How important is this principle for TI?”; 1 = Not at all important, 5 = Extremely important). These two questions helped capture the harmony of opinions for each TI principle as well as the importance of each TI principle to include in the final output, respectively. There was also an open-text box for members to provide optional comments or suggested edits for ways to enhance, clarify or alter each of the 13 TI principles.

Following 55 responses from members (only one co-author who was involved in the initial discussion (Step 1) did not complete the survey (Step 3)), the lead author team exported the data from REDCap into Microsoft Excel (Microsoft Corporation, Redmond, WA, USA) and R (R Core Team, Boston, MA, USA). Basic descriptives were generated for each principle (e.g., medians, inter-quartile range [IQR], percentages for each Likert option, means [M] and standard deviations [SD]) for ‘agreement’ and ‘importance’, independently. The same lead author team from Step 1 processed the feedback and updated a draft manuscript, which was then shared with the 13 individuals from Step 2 and updated accordingly. This manuscript was then shared with all contributing members to confirm authorship prior to journal submission.

Principle scores

The list of principles is presented in Table 1, including a brief description. The degree of agreement amongst members are shown in Table 2, whilst the degree of perceived

importance amongst members is shown in Table 3. In terms of the degree of agreement, the principle with the lowest average rating was Principle 9 ($M = 4.18 \pm 0.77$), and the principle with the highest average rating was Principle 1 ($M = 4.82 \pm 0.47$). In terms of importance, the principle with the lowest average rating was also Principle 9 ($M = 4.00 \pm 0.82$), and the principle with the highest average rating was also Principle 1 ($M = 4.73 \pm 0.56$). To see both agreement and importance with their respective principle means, please see Figure 1. As well, Figures 2 and 3 include violin plots showing the distribution of scores and boxplots of agreement and importance ratings indicating the summary statistics, respectively.

13 principles of talent identification in sport

The TIDES Society developed this position statement and guiding principles for applied sport interest-holders (i.e., policy makers, practitioners) when designing, implementing and evaluating TI environments in sport. This offers the first internationally co-produced, evidence-informed position statement on TI in sport, synthesising insights from leading academics and applied sport interest holders across policy and practice. Its novelty lies in translating diverse expertise into a unified set of guiding principles that not only clarify core concepts of TI in sport but also grounded in ethical, responsible and system-level considerations for decision-makers.

It is important to acknowledge incorporating all these principles will be difficult for policy makers and practitioners working in TI environments, with each being highly contextual and not equally weighted. Therefore, all principles should be considered relative to the specific sports context and resources allocated/prioritised accordingly on a case-by-case basis. Each of the 13 principles of TI in sport are described below, emphasising its importance, offering practical guidance for applied sport interest-holders and providing key considerations. These principles are listed in a way that each one builds on the former principle. In other words, Principle 1 will need to be considered for Principle 6 to have its full impact.

Put the person before the athlete

Above all else, it is vital that applied sport interest-holders remember that TI environments are often designed to identify children and young people—therefore they need to meet the needs of these groups (Kelly et al., 2022). By ‘putting the person before the athlete’, sport organisations and interest holders are accounting for the rights of children and young people before their sporting talents. Although this may seem obvious, it is important to emphasise the potential for this principle to be overlooked as

Table 1. The 13 principles of talent identification in sport.

#	Principle	Brief Description
1	Put the person before the athlete	There is a person behind every athlete. It is vital that the health and well-being of this person, generally a child or young person within TI systems, is prioritised, protected and put before their sporting talents.
2	Understand the sociocultural context	TI doesn't happen in a vacuum, rather it occurs in dynamic environments with a variety of traditions and beliefs. These have implications for what we view and value as talent and where we look for it.
3	Outline the sport-specific landscape and what the sport wants	Every sport has unique characteristics, environmental structures, subcultures and objectives. To maximise effectiveness, it is vital that the context-specific landscape of a sport is considered when designing TI systems.
4	Establish a common and clear language	How language is used in TI environments matters. Blurry or undefined terms can lead to confusion, inconsistencies and contradictions, which affects the entire sports system as well as all interest-holders involved.
5	Engage a broad base of athletes and delay identification for as long as possible	TI decisions are more likely to be accurate nearer to the outcome. Therefore, delaying identification for as long as possible and engaging a broad base of athletes is recommended.
6	Provide multiple entry and exit points	Talented athletes develop at different rates and can be identified at different timepoints. As such, it is crucial to provide multiple entry and exit points within talent development programmes.
7	Recognise possible biases and implement strategies to address them	Humans are far from perfect decision-makers. There are many quirks of the mind that can lead to questionable choices during TI, especially when it comes to selecting athletes for a team/group.
8	Acknowledge that making prognoses about athletes using the 'coach's eye' is not easy	Coaches must make TI and selection decisions for their teams and programmes. Those highly challenging decisions demand an integrated TI approach, including both subjective observation information (i.e., based on 'coach's eye') and objective assessment data.
9	Co-create a shared mental model for different ages and stages of development	A shared understanding and appreciation of what talent looks like is fundamental to any TI and development environments. This should be multidimensional and sport-specific, considering the various ages and stages of development.
10	Consider what objective measures can be used to support decision making	TI decisions should be supported by valid and reliable objective, sport-specific assessments. This will help protect against some of the related weaknesses of subjective approaches.
11	Align and work across inter- and trans-disciplinary teams	A holistic approach should be adopted within TI environments. To achieve this, there is a need for inter- and trans-disciplinary teams working in a unified approach and strive towards a common goal.
12	Design and implement an education framework	To help guide applied sport interest-holders involved in TI environments, an educational framework is required. This must be flexible to confounding factors, meet the needs of applied interest-holders and, most importantly, be underpinned by scientific evidence.
13	Evaluate talent identification processes regularly	Although common in most sports, the process of TI is still being assessed and validated. Researchers and applied sport interest-holders should, therefore, see their current approach as a 'work in progress'.

Table 2. Degree of agreement metrics for each principle.

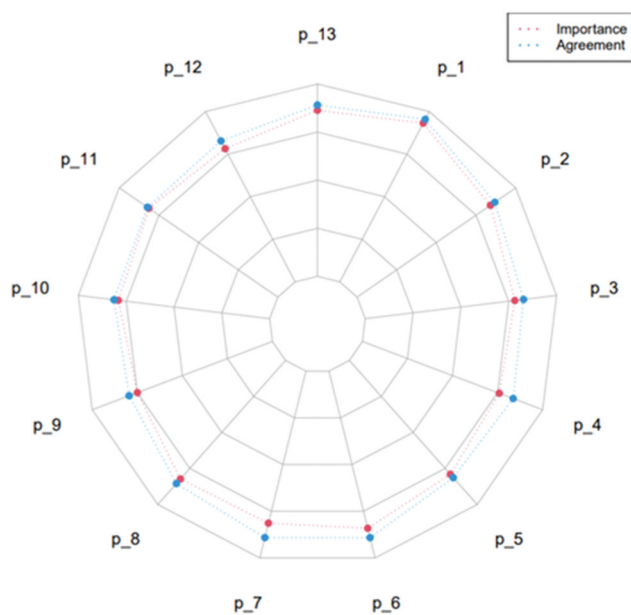
Principle #	Median	IQR	Mean and SD (Out of 5)	% Votes for 1 (I Strongly disagree)	% Votes for 2 (I slightly disagree)	% Votes for 3 (I neither agree nor disagree)	% Votes for 4 (I somewhat agree)	% Votes for 5 (I strongly agree)
1	5	0.0	4.82 ± 0.47	0%	0%	4%	11%	80%
2	5	1.0	4.47 ± 0.69	0%	2%	5%	36%	56%
3	4	1.0	4.31 ± 0.72	0%	2%	9%	45%	44%
4	4	1.0	4.35 ± 0.70	0%	0%	13%	40%	47%
5	5	1.0	4.25 ± 0.91	0%	5%	15%	29%	51%
6	5	1.0	4.56 ± 0.57	0%	0%	4%	36%	60%
7	5	1.0	4.56 ± 0.57	0%	0%	4%	36%	60%
8	5	1.0	4.42 ± 0.76	0%	4%	5%	36%	55%
9	4	1.0	4.18 ± 0.77	0%	4%	11%	42%	44%
10	4	1.0	4.25 ± 0.80	0%	4%	11%	42%	44%
11	4	1.0	4.29 ± 0.66	0%	0%	11%	49%	40%
12	4	1.0	4.31 ± 0.79	2%	0%	9%	44%	45%
13	5	1.0	4.56 ± 0.57	0%	0%	4%	36%	60%

organised youth sport becomes more professionalised, with the potential to leave children and young people vulnerable to exploitation (Vičar & Moudr, 2021). As a starting point, policy makers should ensure that the implementation of their TI environment considers children's rights (i.e., United Nations Convention on the Rights of the Child (UNCRC) is an international human rights treaty adopted in 1989 that sets out the civil, political,

economic, social and cultural rights of all children (defined as individuals aged under 18 years); United Nations 1989). UNICEF (n.d.) have provided useful, comprehensive guidelines on how those working in TI environment should protect and realise the UNCRC and ensure they are putting appropriate procedures in place. For example, the health and well-being of children should be paramount, and, therefore, as a minimum, policy makers should ensure

Table 3. Degree of importance metrics for each principle.

Principle #	Median	IQR	Mean and SD (Out of 5)	% Votes for 1 (Not at All Important)	% Votes for 2 (Slightly Important)	% Votes for 3 (Moderately Important)	% Votes for 4 (Very Important)	% Votes for 5 (Extremely Important)
1	5	0.0	4.73 ± 0.56	0%	0%	5%	16%	78%
2	4	1.0	4.36 ± 0.70	0%	2%	7%	44%	47%
3	4	1.0	4.13 ± 0.82	0%	4%	16%	44%	36%
4	4	2.0	4.04 ± 1.02	2%	5%	22%	29%	42%
5	4	1.0	4.16 ± 0.98	2%	5%	13%	35%	45%
6	4	1.0	4.36 ± 0.70	0%	0%	13%	38%	49%
7	4	1.0	4.25 ± 0.82	0%	2%	18%	33%	47%
8	4	1.0	4.29 ± 0.85	0%	4%	15%	31%	51%
9	4	1.5	4.00 ± 0.82	0%	4%	22%	45%	29%
10	4	1.5	4.16 ± 0.90	0%	4%	22%	29%	45%
11	4	1.0	4.25 ± 0.75	0%	2%	13%	44%	42%
12	4	1.0	4.13 ± 0.90	2%	0%	9%	44%	45%
13	5	1.0	4.45 ± 0.72	0%	0%	4%	36%	60%

**Figure 1.** Radar plot of mean scores for each principle. The radar plot shows each of the 13 principles around the perimeter in the order in which they were presented to the participants (i.e., principle 1, 2, 3, etc.) in a clockwise fashion, with the mean response indicated in a coloured dot within the web. Each ring from the centre indicates a likert number (i.e., outermost being 5, then 4, 3, etc.) differences between agreement and importance are denoted by colour.

practitioners have a background check and child protection training before being employed in TI roles to ensure children and young people are prioritised and protected (Lang & Papaefstathiou, 2020).

Understand the sociocultural context

TI and talent development are not performed in isolation; instead, both are influenced by their sociocultural context. Cultural values and beliefs can impact conditions for

development and what we value as talent (Henriksen & Stambulova, 2023; Henriksen et al., 2010). Different contexts, for instance, place importance on different sports, value certain performance or playing styles or even exhibit place of birth effects due to inequities or biases. These characteristics interact with personal characteristics to impede or facilitate development (Baker et al., 2018a; Bronfenbrenner & Morris, 2006). A lack of sensitivity to the unique characteristics of the environment that sport, athletes, coaches, parents and funders operate in can promote a 'copy and paste' methodology (O'Sullivan et al., 2024). However, this fails to appreciate the complex ecosystem that influences the macro- and micro-sporting environments and subsequent TI that occurs within this context (Bennett et al., 2019). Utilising both 'zoomed in' (i.e., a close look at the select details) and 'zoomed out' (i.e., seeing the big picture) perspectives, policy makers and practitioners should remain sensitive to the influence of sociocultural factors within their context and reflect on the symbiotic relationship between TI and sociocultural variables (Cahill & MacNamara, 2024).

Outline the sport-specific landscape and what the sport wants

The landscape of different sports, regions and nations can be highly contextual. Each has its own unique characteristics, structures, subcultures and objectives. This is important to recognise because, for example, the nature of environments promoting short-term success have been shown to be different from those with long-term goals (Güllich et al., 2023). When sports, clubs or national sport environments are successful, people often want to replicate them. However, this approach can be detrimental to effectiveness unless due consideration is given to the specific nature of the contexts at hand (English et al., 2018). A scoping review of functional and dysfunctional talent development environmental features has provided clear, practical guidance

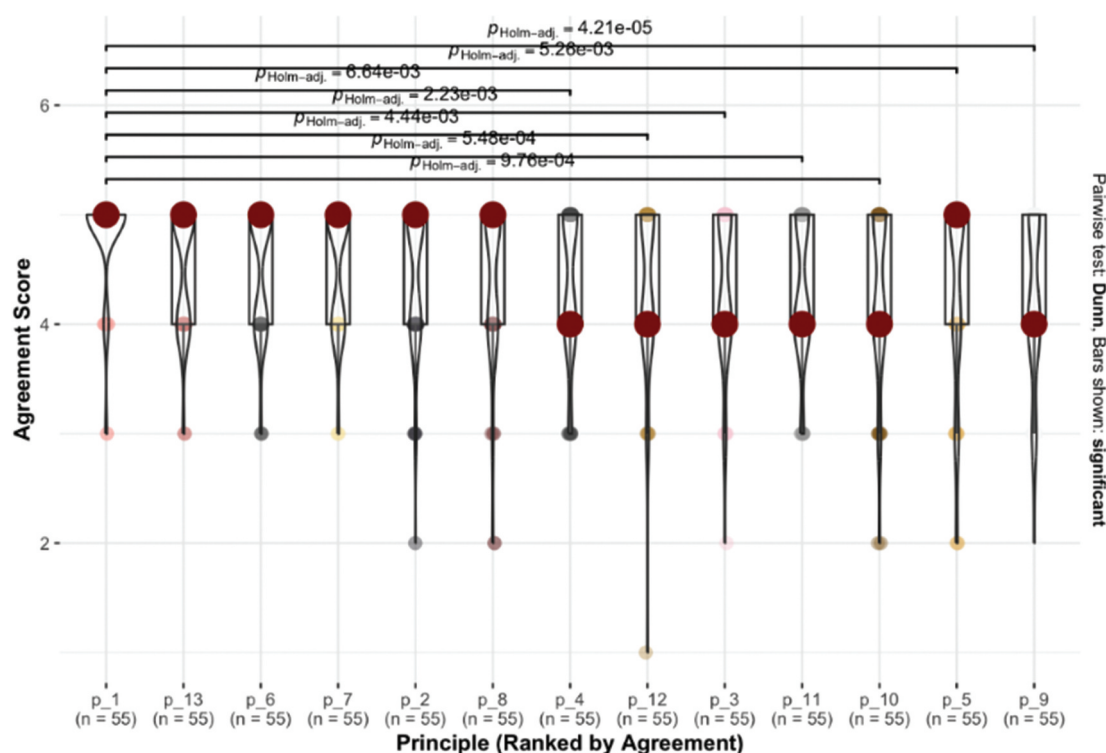


Figure 2. Agreement scores ranked by principle. To interpret this plot, it is important to recognise that the principles are not in an incremental order (i.e., principle 1, then 2, then 3, etc.), rather they are in decreasing order of the median of how participant scored that principle based on their perceived agreement with that principle. For instance, the most agreed upon principle based on median was P1 (principle 1), and the least agreed upon by median was P9. As well, the violin plot (distribution shape) shows the distribution of scores for each principle, with wider sections indicating that many participants gave that score and vice versa. The range of principle scores for each principle is indicated by max and min ratings, and the IQR is indicated by the boxes. The boxplot (summary statistic) includes horizontal lines (the median, 25th and 75th percentile) with the vertical whiskers indicating the minimum and maximum scores. The dots that have a deeper colour indicate more people voted for that score. Finally, the horizontal lines at the top (pairwise comparisons (p-values)) indicate the statistical difference between the median scores for the principles. Where the dot starts on the left and where the dot ends on the right indicates a statistically significant ($\alpha = 0.05$) difference. Importantly, only significantly different pairs are shown with the horizontal black bars. In this case, P1 is statistically different from P3, P4, P5, P9, P10, P11, P12.

for applied sport interest-holders through guidelines and a range of case studies to support policy makers and practitioners reflect on what may (or may not) work in their own sport-specific landscape (Hauser et al., 2022). Tools such as the Talent Development Environment Questionnaire (TDEQ; Martindale et al., 2010) can be used by applied sport interest-holders to evaluate the strengths and 'priorities for improvement' of any given TI environment. These assessments provide a mechanism to help guide ongoing improvements and monitoring on a context-specific basis (Martindale et al., 2023), including TI environments and the principles that follow.

Establish a common and clear language

The field of TI in sport has various blurry or undefined terms (e.g., talents, elite; Grainger et al., 2024), which can cause confusion and contradiction in both research and practice due to inconsistencies in conceptualisation and

operationalisation (Baker et al., 2024). This ambiguity and lack of clarity is thought to be a consequence of practitioners, researchers and other sport interest-holders employing language that is often vague, nebulous and missing appropriate nuance (Johnston et al., 2023). Transparency and consistency in terminology are vital in improving scientific rigour with regards to central issues, such as sample descriptions and measurement precision, as well as enhance knowledge mobilization (McAuley et al., 2022). From an applied perspective, alignment in how language is used and what different words mean for various interest-holders will help improve performance evaluation and potential in TI (Johnston et al., 2021). Understanding that language can shape one's perceptions, motivations and behaviours means the blurriness (i.e., conceptual vagueness) of a term should be carefully considered by policy makers and practitioners to determine its value in a TI environment (Johnston et al., 2023).

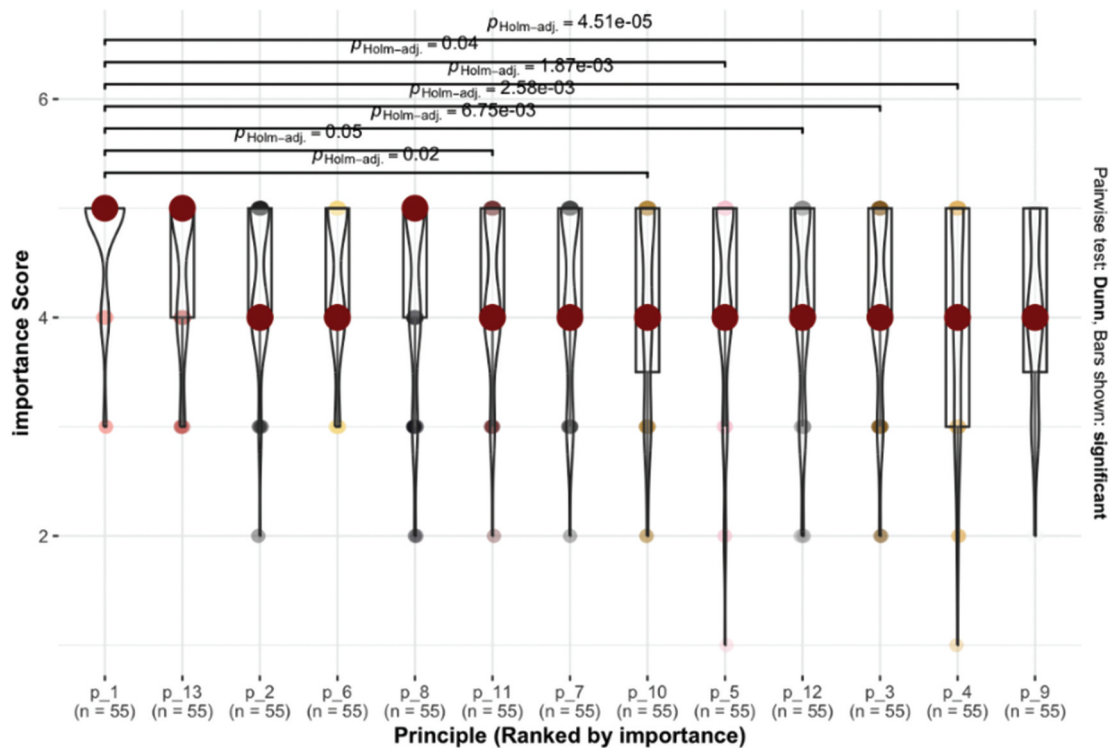


Figure 3. Importance scores ranked by principle. To interpret this plot, it is important to recognise that the principles are not in an incremental order (i.e., principle 1, then 2, then 3, etc.), rather they are in decreasing order of the median of how participant scored that principle based on their perceived agreement with that principle. For instance, the most agreed upon principle based on median was P1, and the least agreed upon by median was P9. As well, the violin plot (distribution shape) shows the distribution of scores for each principle, with wider sections indicating that many participants gave that score and vice versa. The range of principle scores for each principle is indicated by max and min ratings, and the IQR is indicated by the boxes. The boxplot (summary statistic) includes horizontal lines (the median, 25th and 75th percentile) with the vertical whiskers indicating the minimum and maximum scores. The dots that have a deeper colour indicate more people voted for that score. Finally, the horizontal lines at the top (p-values) indicate the statistical difference between the median scores for the principles. Where the dot starts on the left and where the dot ends on the right indicates a statistically significant ($\alpha = 0.05$) difference. Importantly, only significantly different pairs are shown with the horizontal black bars. In this case, P1 is statistically different from P3, P4, P5, P9, P10, P11, P12.

Engage a broad base of athletes and delay identification for as long as possible

The main purpose of a TI environment is to identify young athletes with the greatest potential to excel in the long-term—this involves predicting the future. TI environments should, therefore, begin when applied sport interest-holders feel confident that they can more accurately identify those individuals nearer to the outcome (e.g., adulthood) (Till & Baker, 2020). Talent is, indeed, a complex and misunderstood phenomenon that lacks robust research evidence; it is difficult to assess and potentially leads to unhealthy behaviours. To overcome these issues and create more effective, efficient and ethical TI environments, it is suggested that policy makers and practitioners engage a broad base of athletes and delay identification for as long as possible (e.g., until after maturity whenever possible). Such an approach may result in more effective utilisation of resources, widen the pool of potential talent at later

time points, as well as foster multiple outcomes for everyone involved within the sport in the long term (i.e., performance, participation and personal development) (Erikstad et al., 2021)—which would likely drive a more efficacious environment (Abbott & Collins, 2002; Vaeyens et al., 2009).

Provide multiple entry and exit points

Selection decisions form a fundamental, highly important process within TI environments. Traditional TI and selection processes may include trial periods, whereby judgements on ability and perceived potential are made by coaches or recruiters during training or competition (Neely & Dugdale, 2022). Recent guidance, however, advocated methods that allow for more representative and considerate judgements (Baker, Schorer, et al., 2018a). Contemporary research has also highlighted the non-linear nature of talent development in sport

(e.g., Coutinho et al., 2016; Gulbin et al., 2013; Verbeek et al., 2025), emphasising the need for policy makers and practitioners to provide multiple entry points. This captures the potential of later entry into sport and talent development programmes, moving away from the perceived necessity for early recruitment (Baker, Schorer, et al., 2018b). Supporting this notion, ‘talent transfer’ (i.e., the movement of an athlete from one sport to another) initiatives have also demonstrated efficacy in recent years, challenging conventional early specialisation models (MacNamara & Collins, 2015; van Harten et al., 2021). Additionally, as athletes exit a talent development programme, it is crucial for coaches and sport organisations to approach deselection in a delicate and considerate way, remembering to consider the negative (or unintended) consequences of their decisions (Slade et al., 2024).

Recognise possible biases and implement strategies to address them

Athletes face a range of possible (dis)advantages during TI, shaped by factors, such as established cut-off dates for selection (leading to phenomena including relative age effects; e.g., Hill et al., 2020, and relative growth/maturation effects; e.g., Sweeney et al., 2023), and environmental realities (leading to phenomena such as relative access to wealth effects; e.g., Kamphuis et al., 2008, and birthplace effects; e.g., Hernández-Simal et al., 2024). These system-level factors can influence practitioners’ judgements, and promote the use of mental short cuts (heuristics) and rules (biases). Given how predicting future high performers is inherently complex, practitioners may rely on these shortcuts to interpret available information (Gigerenzer & Gaissmaier, 2011). While there has been speculation around these quirks of the mind (Johnston & Baker, 2020, 2024), little is known about which quirks influence judgements and decisions about athletes, and the ‘accuracy’ of selection practices (Mann et al., 2025). Consequently, sport policy makers and practitioners are encouraged to reflect on their TI processes, consider the quality and quantity of information available about athletes and identify potential heuristics and biases shaping decision-making. Preliminary work indicates awareness of these cognitive quirks in decision-making can help reduce the reliance on the unhelpful strategies (Mann & van Ginneken, 2017). Implementing strategies (e.g., age ordered shirt numbering, considering maturity status, providing opportunities to underprivileged athletes) might support more ethical, athlete-centered procedures.

Acknowledge that making prognoses about athletes using the ‘coach’s eye’ is not easy

One of the main challenges of practitioners is identifying talented athletes and making ‘correct’ decisions (Roberts et al., 2019). It is crucial that these highly complex and potentially career defining decisions are made based on varied and suitable information. Despite this, coaches often make TI and athlete selection decisions based on their ‘coach’s eye’ (Lath et al., 2021). In most sports, practitioners observe and evaluate athletes during practice and/or competition and use this information to form an overall opinion. However, this process can be biased and differ considerably from coach to coach (Bergkamp et al., 2022). While the intuitive, subjective, experience-based and holistic coach’s eye evaluation is vital, it is important to acknowledge these evaluations are not easy (Fitzgerald et al., 2024). As such, applied sport interest-holders are encouraged to mandate, collect and integrate objective assessment data in their prognoses about athletes (see Principle 10), which will likely lead to better TI and selection decisions (Dugdale et al., 2020).

Co-create a shared mental model for different ages and stages of development

A shared mental model (SMM) refers to the common understanding and internal representation of knowledge among colleagues that helps groups make better decisions (Gershgoren et al., 2013). However, the utilisation of SMMs remains limited within TI environments (Taylor & Collins, 2020). Preliminary research in TI environments has shown how a SMM can facilitate discussion and knowledge exchange between practitioners from different departments (e.g., coaches, performance analysts, recruiters, sport scientists), with the intention of improving decision-making around TI and athlete selection (Barracough et al., 2024). Those working in TI environments are required to understand multiple facets of human development (i.e., technical, tactical physical, psychological and social components) (e.g., Reeves et al., 2018; Reilly et al., 2000; Unnithan et al., 2012). Each of these broad areas encapsulates numerous, more specific features that practitioners look for when identifying athletes for a talent development programme (Abbott & Collins, 2004). In order to more accurately and collectively align the features that an organisation is looking for when identifying athletes, policy makers should engage practitioners in the establishment and ongoing refinement of a co-created SMM of the specific features that they seek to identify at different ages and stages of development (Ashford et al., 2023; Lines et al., 2022).

Consider what objective measures can be used to support decision making

Policy makers should consider the implementation of objective and multidimensional measures to assist practitioners in the TI decision-making process (Reeves et al., 2018). The combination of the subjective ‘coach’s eye’ (Principle 8) with objective data may buffer the mutual weaknesses of these different approaches (Sieghartsleitner et al., 2019). While there are a multitude of objective measures available (e.g., maturity status, training history, athlete background, performance analysis, fitness testing, psychosocial data) (Koopmann et al., 2020), there is a need to understand what measures are appropriate, whether these measures have sufficient reliability and validity, and also how they relate back to a SMM (Principle 9) and mitigate potential biases (Principle 7) (Fortin-Guichard et al., 2023; Höner et al., 2021; Werneck et al., 2024). Therefore, policy makers and practitioners should consider the justification for each measure and ensure that the measure they are using is appropriate to the context in which the individual is being assessed (Larkin & Reeves, 2018). Without this, there is the potential for athletes to be overlooked or miss talent development opportunities due to potential subjective biases of practitioners (Sedeaud et al., 2025).

Align and work across inter- and trans-disciplinary teams

TI environments are increasingly composed of sub-disciplines, bringing varied subjective and objective data to support decision-making (see Principle 9 and Principle 10) (Burns & Collins, 2023). With more voices in the room, however, the need exists for TI environments to align and work across disciplines (i.e., inter-disciplinary teams; integrating knowledge and methods from different domains within the organisation, such as coaching, recruitment, performance analysis, sport science) as well as beyond disciplines (i.e., trans-disciplinary teams; unifying knowledge and methods outside the organisation, such as universities, local government, sport federations) (Kelly, 2023). By working across and beyond disciplines, policy makers and interest holders can develop a more holistic perspective of potentially talented athletes as well as improve TI systems and processes (e.g., decision-making accuracy, creation of a SMM) (Taylor & Collins, 2021). Although inter- and trans-disciplinary approaches are presented together here, it is important to acknowledge the fundamental differences between these concepts. As an

example, an inter-disciplinary approach would involve sport interest holders (i.e., coaches, sport scientists and other staff) working collaboratively to integrate subjective and objective data, co-develop assessment methods and build shared feedback processes for TI. At its most integrated, trans-disciplinary practice would require all interest holders to coordinate under a common theoretical framework, collectively shaping how ‘talent’ is defined, assessed and acted upon (Woods et al., 2021). In order to achieve this, it is vital that inter- and trans-disciplinary teams are managed in ways that facilitate group members working within a unified, mutually generated working approach to (a) coordinate TI activities through shared principles and language, (b) communicate coherent ideas around TI and (c) collaboratively design TI practice landscapes rich in information (Rothwell et al., 2020). Case studies illustrating the dilemmas and solutions to such team management would be a valuable addition to the TI literature.

Design and implement an education framework

The principal aim of researchers in TI is to translate contemporary knowledge into practical settings. There is still a disconnect, however, between research and applied perspectives in how such objective information can help inform their systems and processes (Kelly, 2023). A logical first step would be for researchers and applied sport interest-holders to work collaboratively to design and implement an educational framework, underpinned by TI research to help guide individuals on how to better identify talent in real-world settings. Actively involving policy makers and practitioners in the design of an education framework (i.e., co-creation) will help to meet their needs (e.g., common language; Johnston et al., 2023), creating an environment that supports ongoing coach education and development (Andrew et al., 2021). Such frameworks must consider confounding factors that can significantly impact TI environments, such as the performer (e.g., maturity status), environment (e.g., birthplace) and practice (e.g., training history) (Rees et al., 2016; Wattie et al., 2015). Importantly, however, since formal TI education is a relatively new concept and considering previous research in coach education, overly prescriptive approaches may have a limited impact on practice (Cushion et al., 2003; Downham & Cushion, 2020; Nash & Sproule, 2012), whilst developing a coherent and consistent approach may be challenging (Till & Baker, 2020). Therefore, policy makers should learn lessons from the literature and consider the following when designing and implementing TI education: (a) avoiding ‘one-size-fits-all’ approaches and embed learning specific to the

sport or environment, (b) integrating formal with informal learning approaches (e.g., mentoring), (c) designing reflective practice strategies that foster inquiry rather than surveillance and (d) adopting capability-based outcomes over simple knowledge transmission (Lyle & Cushion, 2016; Stodter & Cushion, 2017).

Evaluate talent identification processes regularly

While the identification and selection of athletes have become almost ubiquitous in talent development programmes, it is important to realise that the scientific evidence underpinning these systems and processes is still in its infancy. Recent reviews of research in this area have emphasised that the profile of holistic, high-performance athlete development is still largely incomplete, particularly with regard to aspects of psychological, emotional and social development (Baker et al., 2020; Brown et al., 2023; Dimundo et al., 2021). Moreover, how these elements interact across development and in different environments is largely unexplored. From this perspective, those charged with implementing TI environments and talent development programmes should always see these as ‘works in progress’ and cultivate strategies to regularly evaluate and develop these processes. Using a knowledge mobilisation approach may help TI environments achieve this, through: (a) knowledge creation (i.e., the refinement of primary studies into knowledge tools and products through the process of synthesising existing knowledge) and (b) the action cycle (i.e., the application of knowledge and skills previously created, with a strong emphasis on continuous evaluation, to inform future policy and systemic change) (Graham et al., 2006). By embracing innovative approaches to knowledge design, implementation and evaluation, we can systematically assess the effectiveness of these approaches, enhance the quality of decision-making and ultimately improve the outcomes associated with TI (Kelly & Turnnidge, 2023; Taylor et al., 2022).

Considerations for researchers and applied sport interest-holders

For many working in the space of TI, there is a common goal of enhancing the sport environment for all. What that looks like for each applied sport interest-holders, across various nations and sports, is diverse. We as the TIDES Society, however, believe there is still a need and a desire for this set of overarching guiding principles to help pave the way for more athlete-centred and ethical practices. Indeed, rarely do we get a chance to capture so many diverse perspectives from so many global experts in sport to form consensus in this area. Having said that, it is important to acknowledge that this TIDES

Society position statement only reflects the perspectives of its current membership and therefore represents a scholarly and applied standpoint rather than a comprehensive account of all views in the field. As such, alternative researcher and applied sport interest-holder perspectives should also be considered when interpreting and applying its recommendations (Smith & McGannon, 2018). Importantly, these guiding principles are just one step in a long journey to building more robust and applicable strategies to enhance TI, which will likely evolve over time. It will, therefore, be important that researchers and applied sport interest-holders work together to advance our knowledge and practical recommendations and to help keep meaningful conversations going through society initiatives, conferencing, working groups and other professional development opportunities, to ensure these principles stay relevant and practical for all interest-holders.

To achieve this, researchers and universities should aim to develop positive relationships with industry-partners and applied sport interest-holders by (a) building trust over a long period, (b) identifying how the sport (and the science) can benefit from research in the long term, (c) learning to speak the same language as those working in an applied field, (d) prioritising research *for* the sport and not *on* the sport (e.g., Collins et al., 2019; German Handball Federation, n.d.), (e) creating ‘win-win’ situations (i.e., the result of a negotiation where both parties work together to find a solution that meets their interests) and (f) developing impactful research in TI, which has methodological rigor, originality and significance. Likewise, those working in an applied field should consider the possible benefits of partnerships with researchers and universities, including (a) supporting with greater knowledge mobilisation (i.e., using high-quality knowledge in processes of decision-making), (b) working with expert knowledge creators to enhance practice and support with programme evaluations, (c) optimising financial and human resources, (d) building capacity, (e) ensuring approaches are evidence informed and (f) staying receptive to cutting-edge research and adapting TI practices for continuous improvement.

Conclusion

The TIDES Society agreed on a final list of 13 principles of TI in sport, centred around: (a) health and well-being, (b) sociocultural influences and sport-specific context, (c) language and terminology, (d) timing and efficiency, (e) entry and exit points, (f) heuristics and biases, (g) objectivity and subjectivity, (h) shared mental models, (i) inter- and trans-disciplinary teams and (j) education and reflection. The working group suggests these principles are used to inform

decision-making, guide practices and assess systems and procedures, which will ultimately lead to enhanced TI practices. It is important to acknowledge that, despite more than two decades of growing research and discourse, progress in translating knowledge into meaningful, consistent improvements in TI practice has remained limited. Moving forward, there are many future directions that can build from this work. For example, whilst it is clear that TI is closely connected to both talent selection and talent development, each of these practices may be improved by creating their own guiding principles. It might even make sense for these principles to be separated for certain stakeholder groups, such as administrative and operations staff members, policy makers, coaches, scouts, to ensure they are bespoke to their individual roles. Regardless of future research and practice developments, it is essential that everyone keeps children and young people at the centre of TI.

Notes

1. This included authors 1, 5, 6 and 7.
2. This included author 1, 2, 3, 4 and 56.

Acknowledgements

We would like to thank the entire TIDES Society for their contributions through discussions, both formal in informal. We would also like to thank Yiru Wang for her help with the data visualisations.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The author(s) reported there is no funding associated with the work featured in this article.

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