Managing Sport and Leisure

ISSN: 2375-0472 (Print) 2375-0480 (Online) Journal homepage: https://www.tandfonline.com/loi/rmle21

Design thinking and sport for development: enhancing organizational innovation

Greg Joachim, Nico Schulenkorf, Katie Schlenker & Stephen Frawley

To cite this article: Greg Joachim, Nico Schulenkorf, Katie Schlenker & Stephen Frawley (2019): Design thinking and sport for development: enhancing organizational innovation, Managing Sport and Leisure, DOI: 10.1080/23750472.2019.1611471

To link to this article: https://doi.org/10.1080/23750472.2019.1611471

Published online: 16 May 2019.

MANAGING SPORT AND LEISURE
https://doi.org/10.1080/23750472.2019.1611471

Design thinking and sport for development: enhancing organizational innovation

Greg Joachim, Nico Schulenkorf, Katie Schlenker and Stephen Frawley

UTS Business School, University of Technology Sydney, Ultimo, Australia

ABSTRACT

Rationale/purpose: To determine if the field of sport for development (SFD) presents opportunities for the employment of design thinking approaches toward enhancing organizational innovation.

Design/methodology/approach: We undertook a scoping study to determine if and how SFD research and practice aligns with five established themes of design thinking practice.

Findings: Design thinking indicators are present across the breadth of SFD research. A total of 14 SFD articles display total thematic alignment with design thinking practice, particularly in regard to five key indicators of such alignment: (a) deep user understanding, (b) diversity of perspectives, (c) testing for user feedback, (d) futuristic thinking, and (e) bias toward action.

Practical implications: Five key indicators represent logical points of entry for the employment of design thinking in SFD research and practice.

Research contribution: Design thinking has become popular in the broad field of management, but this is the first study of the concept in the sport management domain.

ARTICLE HISTORY
Received 30 November 2018
Accepted 23 April 2019

KEYWORDS
Design thinking; sport for development; sport management; innovation; scoping study

The field of sport for development (SFD) has experienced significant growth and diversification over the past 15 years (Schulenkorf, 2017; Schulenkorf, Sherry, & Rowe, 2016). Research over this time period has been approached from various angles and disciplines. From the sport management perspective, studies have traditionally focused on the broad areas of programing and design, sustainable management and capacity building, the creation and leveraging of impacts and outcomes, and the advancement of concepts and theory (Schulenkorf, 2017). Meanwhile, management scholars have highlighted the need for further investigations to address current issues and future challenges in the field. In particular, management concepts such as organizational innovation (Hoeber, Doherty, Hoeber, & Wolfe, 2015; Svensson & Hambrick, 2018), leadership, entrepreneurship, and design thinking have been identified as fruitful areas for SFD research (Schulenkorf, 2017).

The last of these suggested research topics – *design thinking* – is a human-centered approach to generating innovation in non-design fields. It provides a way for non-design practitioners, such as many of those who design and deliver SFD programs, to incorporate the *ostensive* (thinking) and *performative* (doing) dimensions of expert design practice into their own non-design practice in pursuit of organizational

CONTACT Greg Joachim greg.joachim@uts.edu.au UTS Business School, University of Technology Sydney, 14 Ultimo Rd, Ultimo, NSW 2007, Australia

innovation (Carlgren, Rauth, & Elmquist, 2016). As such, design thinking may well provide SFD practitioners with improved opportunities for program design and delivery – particularly in social contexts in which the resources or capacity for extra-operational activities such as pursuing innovation are limited (e.g. Svensson & Hambrick, 2016).

The need for improved designs in sport programs (as a function of management) has become apparent in the literature. For instance, program design is seen as a significant factor in the success of youth sport development programs (Jones, Edwards, Bocarro, Bunds, & Smith, 2017). In the SFD context specifically, program and intervention design have gained greater importance as research in the field has begun to shift toward a focus on the managerial aspects of programs (Bruening et al., 2015; Schulenkorf, 2017; Sugden, 2006). Against this background – and in line with the focus of this special issue – we answer the call for research addressing human-centered design thinking for social innovation. In particular, we undertook a scoping study of recent SFD research as a means of determining if, and in what ways, the field presents opportunities for the meaningful employment of design thinking approaches, specifically toward enhancing organizational innovation. In doing so, we not only determined the extent to which design thinking mentalities and/or approaches already exist within SFD research and practice, but also the various ways in which they manifest. Building on our findings, we offer both theoretical and practical implications for SFD management. Theoretically, our research contributes to the recommended shift toward the study of design thinking in the SFD context and is, to our knowledge, the first study of design thinking not only in the field of SFD but also in the broader field of sport management. Practically, our study provides specific recommendations for SFD organizations, particularly those with limited organizational capacity, regarding logical points of entry for employing design thinking in the pursuit of organizational innovation.

Literature review

Drawing from literature on social innovation, Svensson and Hambrick (2018) offered a broad definition of *innovation* specifically framed for the SFD context: "The implementation of new or improved ways of promoting social change … includ[ing] program, process, and socially transformative advances focused on improving the ability of an organization to promote social change" (p. 2). This definition provides a broad space within which to explore and consider the topic of organizational innovation in SFD. In examining the past and present of SFD research, Schulenkorf (2017) recently provided a path for pursuing such innovation: through research into leadership, entrepreneurship, and design thinking.

First, leadership has enjoyed increasing attention in SFD research (Schulenkorf, 2017; Welty Peachey & Burton, 2017; Welty Peachey, Burton, Wells, & Chung, 2018). Specifically, concepts such as *servant leadership* have helped to expand the scope of leadership – beyond traditional leadership – to a broader consideration of the psychological needs and well-being of followers. Leaders in SFD have been shown to display the characteristics of servant leadership in practice, resulting in followers who are empowered to deliver on the goals of the organization (Wells & Welty Peachey, 2016; Welty Peachey, Burton, et al., 2018). Second, more research is focusing on exploring entrepreneurship, especially as a concept interrelated to leadership (Svensson & Seifried, 2017). In particular, research has found social entrepreneurship (i.e. attempting to positively impact society without an expectation of profit) important in SFD practice. The development of such entrepreneurship has had positive impacts on not only organizations, but also individual entrepreneurs within an organization (Cohen & Welty Peachey, 2015).

Further, social entrepreneurship is an essential trait when facing increasing (and often conflicting) organizational demands, as it aids in keeping the organization focused on its core mission and vision (Svensson & Seifried, 2017).

Finally, design thinking is the only topic of the three that has yet to be explored in SFD, despite the fact that design thinking has already been employed toward social innovation within the broader field of management (Brown & Wyatt, 2010). The lack of design thinking studies is even more surprising given that design has been repeatedly identified as critical to the success of sport programs (see Jones et al., 2017; Schulenkorf, 2017) and has also been shown to contribute to achieving specific sport and social development goals such as social capital development (Bruening et al., 2015; Darcy, Maxwell, Edwards, Onyx, & Sherker, 2014) and leadership ability (Gould & Voelker, 2010). Given the apparent absence of design thinking in sport management research, it seems timely to provide a more detailed overview of the concept, including its development in the broader field of management, and its applicability to the SFD sector.

Roger Martin introduced design thinking to the management lexicon in 2006, describing the concept as a means of "approaching managerial problems as designers approach design problems" (Dunne & Martin, 2006, p. 512). Martin saw this change in approach as a way to add value to MBA programs by moving managerial problem solving away from the traditional approaches of deduction and induction – both of which are based in past outcomes – toward abduction, which is a means of generating entirely new ideas through leaps of logic. Martin's (2010) approach to design thinking was to move through the *knowledge funnel*, which he illustrates using the example of McDonald's and the creation of their Speedee service system. First, a *mystery* is identified which, in this case, was how the increased mobility of postwar Americans would change their dining habits (if at all). Then a *heuristic* – or "rule of thumb" – is formulated. The heuristic for McDonald's was that newly mobile Americans would want food that was prepared quickly but was also tasty. Finally, an *algorithm* is developed that codifies practice, addressing the mystery and heuristic. The Speedee service system standardized food preparation to ensure the speed and tastiness that newly mobile Americans were thought to desire, ultimately becoming the algorithm for McDonald's.

While Martin introduced design thinking as a means of creating value, it was Tim Brown (2008), CEO of the design consultancy IDEO, who centered that value creation around human end users and brought the concept into the popular management discourse. In Brown's (2008, 2009) view, design thinking is a methodology that allows organizations to focus all of their innovation activities on achieving human-centered outcomes, a feat achieved through a three-step cycle of inspiration, ideation, and implementation. Problems and opportunities are identified in the inspiration phase, before ideas about how to approach them are generated in the ideation stage. The most ideal solution – that is, the solution that best serves the needs, wants, and desires of the end user – is finally realized in the implementation stage when it is turned over to those end users.

Martin and Brown both understood design thinking to be psychological in nature. As the nature of his knowledge funnel suggests, Martin (2009) saw design thinking as a dynamic interplay between analytical and intuitive thinking. This view relies upon the practitioner's ability to engage in leaps of abductive logic – jumping ahead in reasoning and then testing a hypothesis rather than merely analyzing history to inform their next steps (Martin, 2009). This is similar to *integrative thinking*, which Brown (2009) defined as a personality trait of design thinking practitioners. This calls for a design thinker to be analytical but also capable of seeing all aspects of a problem in order to generate novel solutions.

Both approaches enable a design thinker to engage in abduction, the form of reasoning that Martin felt was missing from management education and practice. Because abduction enables non-designers to transcend traditional approaches to solving problems and pursuing innovation, it continues to be of critical importance to design thinking practice (Carlgren et al., 2016; Johansson-Sköldberg, Woodilla, & Çetinkaya, 2013).

The importance of abduction is foregrounded by the design perspective, which considers abduction in two forms. Dorst (2011, 2015) refers to these as *abduction-1* (or *normal abduction*) and *abduction-2* (or *design abduction*). Normal abduction resembles the traditional problem solving that most organizations employ (i.e. that which Martin had hoped to move managers away from). In using normal abduction, designers know *how* they would like to go about creating value but not the *thing* that will go through the *how* to create that value. In other words, designers revolve between inductive and deductive approaches to solve this equation. Most organizations in management stop at this point and settle for a solution that is "good enough" (i.e. the cheapest, easiest, etc.). Design abduction, meanwhile, begins with only the *value* to be created and not the *thing* or the *how*.

Dorst (2015) uses the example of the desire for a burst of energy in the morning to illustrate the difference between the two forms of abduction. The desired value or outcome – a burst of energy – is known in both cases. If coffee (the thing) is a known (and desired) means of achieving a burst of energy, then only normal abduction is needed to determine that a satisfactory means of generating coffee is needed (the how). In this case, the team may design and test a brewing machine. However, if it is not known if coffee would achieve such an energy burst (let alone how such coffee would be made), then designer abduction is required to fill in both blanks: the thing and the how. In this scenario, coffee – and various ways of making coffee – may be tested before a solution is found. Alternatively, coffee and various ways of brewing it may be abandoned altogether – and a different thing tested – if those tests don't succeed in creating the desired burst of energy.

Dorst (2015) posits that it is design abduction that can best help organizations in pursuing innovation and that the use of this reasoning can be meaningfully accomplished through the creation of logical frames that link the how to the value. These frames are usually defined by the context in which the problem is being solved, making this reasoning a matter of perspective.

Against this background, Carlgren et al. (2016) identified *problem framing* as one of five core themes characterizing design thinking practice, along with *user focus*, *experimentation*, *visualization*, and *diversity*. User focus is concerned with developing empathy with end users through activities such as ethnographic research, carrying out informal conversations with those users, or developing empathy maps. Problem framing allows practitioners to interrogate and reconceptualize the problem at hand through the use of techniques such as "how-might-we-questions". Visualization sees design thinkers structuring gathered data in a visual way (through sketching, storyboarding, wireframing, etc.) and/or developing rough representations of ideas using whatever materials they have on hand. Experimentation allows design thinkers (and users) to engage with hard (physical objects) or soft (role playing, etc.) prototypes in order to identify deeper insights. Finally, diversity allows integrative thinking to occur by ensuring that a diversity of perspectives (determined from the organization's hierarchy or even through personality tests) contributes to a democratic spirit.

Carlgren et al. (2016) concluded that taken together, these five themes of design thinking provide a robust framework for considering – and identifying – the concept of design thinking in practice. In particular, where all five themes

are represented by existing organizational practice, it is thought that the intentional alignment of these activities toward design thinking outcomes – toward achieving design abduction outcomes rather than normal abduction outcomes – would be the only thing standing between such an organization and the human-centered innovations that design thinking purports to offer. This is significant for SFD research and practice, as it suggests that SFD organizations may already be engaging in design thinking activities and can thus enjoy enhanced organizational innovation with relatively minor tweaks to their pursuit of such innovation. Considering this, we have adopted this thematic design thinking framework as the lens through which we have aimed to understand if, and to what extent, extant SFD research and practice displays design thinking potential as a means of organizational innovation.

Methodology

In line with the purpose of this research, we undertook a scoping study of SFD research as a means of (a) determining if and in what ways the SFD field currently features design thinking mentalities; and (b) how the field presents opportunities for the meaningful employment of design thinking approaches, specifically toward enhancing organizational innovation. We opted for a scoping study approach as it allows for the review and rapid mapping of the existing literature in a field regardless of differences in study design and without the need to account for research quality per se (Arksey & O'Malley, 2005; Daudt, van Mossel, & Scott, 2013; Levac, Colquhoun, & O'Brien, 2010). Moreover, the process of conducting a scoping review is iterative in nature, allowing researchers reflexivity in moving toward a better-focused research question as they become more familiar with the literature being reviewed. Thus, the approach taken for this study ensured a comprehensive (but by design, not exhaustive) review and thus allowed for the identification of gaps in the existing research without compromising the overall quality of the scoping study itself (Arksey & O'Malley, 2005).

For our scoping study, we employed the five-stage framework developed and outlined by Arksey and O'Malley (2005): (a) identify the research question; (b) identify relevant studies; (c) select studies; (d) chart the data; and (e) collate, summarize, and report the results. The Arksey and O'Malley framework has proven popular and durable, having already been successfully utilized in prior scoping studies in sport management and governance (e.g. Dowling, Leopkey, & Smith, 2018) as well as topic-specific SFD work (e.g. Gardam, Giles, & Hayhurst, 2017).

Identification of research question

Broad search parameters are recommended in the first stage of a scoping study in order to ensure no relevant studies are overlooked (Arksey & O'Malley, 2005). However, the pursuit of a broad research question has the potential of resulting in an unwieldy number of studies to analyze (Daudt et al., 2013). This potential problem can be overcome in two ways: by clearly defining terms in the research question (Levac et al., 2010) and through revision and refining of the research question as the researchers become familiar with the literature being reviewed (Arksey & O'Malley, 2005).

Considering this advice, we began our study with a two-part research question: (a) to what extent (if any) do the current organizational activities of SFD studies and/or programs align with Carlgren et al.'s (2016) five themes of design thinking, and (b) does the nature of this alignment suggest opportunities for the meaningful employment of design thinking in SFD?

In addition to providing a comprehensive framework through which to identify and analyze design thinking activity in practice, the use of the five themes of design thinking – user focus, problem framing, visualization, experimentation,

and diversity (Carlgren et al., 2016) – provided the clear definition of terms suggested by Levac et al. (2010). The broader second component of the question, meanwhile, guided our scoping study without restricting it. This was in line with Arksey and O'Malley's (2005) suggestion to allow for revision and refinement of the research question. Indeed, this structured but open-ended approach allowed us to subsequently employ thematic analysis as a relevant and useful tool for making sense of our findings, even as we undertook our initial charting of the identified studies.

Identification of relevant studies

Stage 2 involves identifying relevant studies for consideration in addressing the evolving research question. While it is essential to be as comprehensive as possible in this effort (Arksey & O'Malley, 2005), researchers must also strike a balance between comprehensiveness and the limited resources available to them, such as time and financial support (Daudt et al., 2013; Levac et al., 2010). In our case, this balance was struck by deciding to focus specifically on the abstracts of articles, rather than full papers. Considering scoping studies do not account for research quality per se, and given that we focused on indicators of design thinking alignment, we selected this approach as an efficient and effective way of ensuring an inclusive and meaningful review.

The identification of relevant studies begins with the identification of relevant journals. To this end, we were guided by our socio-managerial focus and a specific interest in advancing studies through possibilities represented by design thinking. As such, we excluded sociology, physical education, and sport science outlets. Instead, we included only leading sport management and SFD journals that were indexed and highly ranked or rated: *Journal of Sport Management* (*JSM*), *Sport Management Review* (*SMR*), *European Sport Management Quarterly* (*ESMQ*), *Managing Sport and Leisure* (*MSL*), and the SFD-specific *Journal of Sport for Development* (*JSFD*).

Next, we followed Arksey and O'Malley's (2005) recommendation of a manual search of the literature to ensure all relevant studies were considered. Because of the journal's focus on SFD research, we began with all original research articles published in *JSFD* ($n = 48$) from its establishment in 2013 through 28 July 2018 (Volume 6, Issue 11). To ensure consistency and currency across the board, this manual search was subsequently extended to all issues of the remaining journals for the same timeframe.

Study selection

To select relevant studies to include in the review, researchers must develop specific inclusion and exclusion criteria (Arksey & O'Malley, 2005). Hence, our search included only those studies from the chosen journals which contained the phrase "sport[-]for[-]development" in the article title, abstract, or keywords. Excluded, then, were studies published in our target journals that did not specifically identify (in title, abstract, or keywords) as SFD but that may be classifiable as SFD upon inspection of the full article. For example, Misener, Taks, Chalip, and Green's (2015) study of how sport events may or may not lead to increased sport participation may have SFD implications. However, it was not selected given the absence of SFD terminology in the title, abstract, or keywords. Similarly, while our focus on the key phrase "sport[-]for[-]development" allowed us to capture and include articles relating to extensions of the phrase such as "sport[-]for[-]development and peace", it excluded articles using variations such as "sport for peace". We acknowledge that this chosen approach leads to an incomplete representation of all available SFD-related literature; however, rather than limiting our study, we argue that focusing our review on those studies which explicitly identify as SFD contributes toward a transparent, clear, and cohesive

base of evidence in the field. Indeed, the focus on title, keywords, and abstract to identify studies for review is not unprecedented in sport management (e.g. Hermens, Super, Verkooijen, & Koelen, 2017; Schulenkorf et al., 2016). Finally, in an attempt to ensure consistency, we did not consider any studies that were in press or advance online publications. We decided to exclude these articles for consistency reasons, as in press studies were not available for all of the journals reviewed.

Overall, our search resulted in 32 research articles from *JSM*, *SMR*, *ESMQ*, and *MSL* that identified as SFD. Together with the 48 articles from *JSFD*, the total number of articles selected for review was 80 (see Table 1).

Our scoping study confirms previous SFD research which has suggested that SMR has been the leading sport management outlet for SFD research over the past 5 years (see Schulenkorf, 2017). Somewhat surprisingly, our search also revealed only one SFD-related article published in *ESMQ*, and no articles on SFD published in MSL during this time period. The present special issue seems timely, then, given the rising significance of SFD in the wider sport management literature and MSL's aim of seeking "submissions from those investigating new and innovative areas of research and practice in sport and leisure management" (Adams, n.d., para. 2).

Charting the data

Stage 4 involved sorting – or "charting" – key data from these 80 selected articles. We used Microsoft Excel to conduct a clear and precise charting of articles according to the journal of publication, EndNote shortcode, abstract, category (research or research/practice), and qualitative indicators (if any) of each of the five themes of design thinking adopted from Carlgren et al.'s (2016) framework. These indicators are key phrases extracted from Carlgren et al.'s discussion of each theme and are listed in Table 2.

For the most accurate charting process, the lead author read each abstract twice to ensure comprehension and precision. Specifically, the first reading enabled a high-level understanding of what the article was about while the second reading was concerned with identifying the presence of any design thinking indicators from Table 2. As a next step, the co-authors engaged in cross-author checking (Patton, 2015) to ensure accurate interpretations of abstract phrases as indicators of design thinking themes (see Daudt et al., 2013, for a similar approach). In instances in which the authors disagreed with the charting of a particular indicator, all authors engaged in critical discussions until a consensus was reached. The final chart of all reviewed articles is included in the Appendix.

Table 1. Number of selected studies from each sport management journal.

Journal	*n*
Journal of Sport for Development	48
Journal of Sport Management	14
Sport Management Review	17
European Sport Management Quarterly	1
Managing Sport and Leisure	0
Total	80

Collating, summarizing, and reporting results

Lastly, in Stage 5, an analytical framework or thematic analysis was employed in order to construct a narrative around the literature reviewed (Arksey & O'Malley, 2005). In order to ascertain both the scope (Research Question A) and the nature (Research Question B) of design thinking indicators in SFD research and practice, we conducted both a frequency and thematic analysis. The findings are presented and discussed in the following section, highlighting the practical possibilities for design thinking in SFD that our scoping study ultimately revealed.

Findings and discussion

This scoping study of SFD research sought to (a) determine to what extent (if any) the SFD field

Table 2. Indicators of design thinking alignment (by Design Thinking Theme).

Theme	Indicators
User focus	User orientation
	Customer focus
	Human-centeredness
	Active user involvement
	Deep user understanding
	Empathetic
	Curious
	Non-judgmental
	Ethnographic approach
Problem framing	Unconstrained view of the problem
	Question the problem
	Problem exploration
	Problem Focus
	Futuristic thinking
	Identifying pain points
	Comfortable with complexity and ambiguity
	Open to unexpected
	Widen the problem
	Identify larger problem space
	Creating many alternatives
Visualization	Prototyping
	Making tangible
	Thinking through doing
	Bias towards action
	Making sense of data
Experimentation	Iteration and testing
	Action orientation
	Curious and creative
	Playful and humoristic
	Optimistic and energetic
	Learning-oriented
	Eager to share
	Working on multiple solutions
	Test to obtain user feedback
Diversity	Collaboration
	Systemic perspective
	Integrate diverse outside perspectives
	Media
	Background research
	Combinations of different skills and personalities
	Considering ideas from other fields
	Integrative thinking
	Open to differences in personality
	Democratic spirit
	Diversity of perspectives

currently features design thinking mentalities; and (b) how the field presents opportunities for the meaningful employment of design thinking approaches, specifically toward enhancing organizational innovation. The thematic design thinking framework developed by Carlgren et al. (2016) was used as a means of achieving both of these aims. A frequency analysis was first undertaken to understand the extent to which design thinking themes were present in recent SFD research and practice, while a subsequent thematic analysis revealed the nature of the ways in which these mentalities manifested. Both analyses revealed how such alignment might be leveraged by using design thinking in research and practice as a means of enhancing organizational innovation.

Frequency analysis

We conducted a frequency analysis as a means of establishing the extent to which recent SFD

research resembles design thinking practice in management. Carlgren et al. (2016) established that organizations engaging in design thinking conducted at least one activity that related back each of the five themes of design thinking. To be totally aligned with design thinking practice, then, SFD research and practice should thus include one indicator from each of the five themes of design thinking. Considering this, the concentration of any such indicators becomes a similarly important consideration. The frequency with which each of the five themes of design thinking was represented across the dataset is presented in Table 3.

All 80 reviewed articles presented at least one design thinking indicator (see Table 3), in at least one theme. This indicates that design thinking traits were present (to at least a nominal extent) across the breadth of recent SFD research. In fact, the theme of visualization alone featured at least one indicator from each of the 80 reviewed articles. Experimentation, meanwhile, was present in only 20 of the articles. While this wide spread of themes across the studied articles was an important finding in itself, the range of indicator concentration (i.e. the number of articles that presented indicators in one, two, three, four, or all five themes) contained further promise still. Fourteen articles (charted in Table 4) presented at least one indicator from all five themes of design thinking practice and thus represented total alignment with the thematic design thinking framework (as such, we henceforth refer to these articles as *totally aligned*).

Recalling that Arksey and O'Malley (2005) recommend revision of the research question through iterations of a scoping review, we undertook a further frequency analysis to determine if the frequency of specific indicators among totally aligned articles varied significantly from the larger (total) population of articles. This subsequent analysis was important to determine if there was something intrinsically different about these articles (see Table 4). That is, in addition to their complete set of indicators, were there any trends among the specific indicators present in these articles?

Indeed, such trends were immediately apparent. Five indicators were found to be more heavily concentrated among totally aligned articles than they were across the total population of articles: (a) deep user understanding, (b) diversity of perspectives, (c) test to obtain user feedback, (d) futuristic thinking, and (e) bias toward action. These concentrations are outlined in Table 5.

These trends of indicator concentrations led us to believe that there may be thematic links between and among the totally aligned articles – that the articles may, as a group, display unique traits or perspectives beyond the fact that they all present indicators in each of the five themes (which could otherwise be mere coincidence). In light of this, we undertook a thematic analysis in an attempt to go beyond the descriptive, to make deeper sense of the frequency observations and to generally build on the overall picture that had emerged.

Table 3. Number of articles presenting indicators under each design thinking theme.

Theme	Articles presenting indicators ($N = 80$)
Visualization	80
Problem framing	74
Diversity	63
User focus	60
Experimentation	20

Thematic analysis

Our first frequency analysis revealed that the totally aligned articles displayed thematic alignment with design thinking management practice but such alignment did not, of course, indicate that design thinking practice was purposefully employed by the respective SFD organizations or program. In other words, in order to enjoy the benefits of enhanced organizational innovation, any SFD organization would still have to intentionally engage with design thinking to enable and leverage desired outcomes.

Table 4. Completed chart of articles presenting total design thinking alignment.

Journal	Citation	Indicators present				
		User focus	Problem framing	Visualization	Experimentation	Diversity
JSFD	(Walters et al., 2018)	Human-centeredness User orientation	Problem exploration Futuristic thinking	Making sense of data	Test to obtain user feedback Optimistic & energetic	Diversity of perspectives
JSFD	(Meir, 2017)	User orientation	Unconstrained view of the problem Problem exploration Identifying pain points Futuristic thinking	Bias toward action Making sense of data	Optimistic & energetic Learning-oriented	Diversity of perspectives
JSFD	(Wells & Welty Peachey, 2016)	User orientation Deep user understanding	Problem exploration	Making sense of data	Test to obtain user feedback Optimistic & energetic	Diversity of perspectives Open to differences in personality
JSFD	(Mandigo et al., 2016)	User orientation Deep user understanding	Widen the problem Identify larger problem space	Making sense of data Bias towards action	Test to obtain user feedback	Diversity of perspectives Considering ideas from other fields
JSFD	(Bean & Forneris, 2016)	User orientation Deep user understanding	Problem exploration Futuristic thinking	Making sense of data	Test to obtain user feedback Action orientation	Diversity of perspectives
JSFD	(Cooper et al., 2016)	User orientation Deep user understanding	Problem exploration	Making sense of data	Test to obtain user feedback Learning-oriented	Collaboration
JSFD	(Beacom & Golder, 2015)	User orientation Deep user understanding	Problem exploration Futuristic thinking	Bias toward action Making sense of data	Action orientation Learning-oriented	Systemic perspective Considering ideas from other fields
JSFD	(Gannett, Kaufman, Clark, & McGarvey, 2014)	User orientation	Problem exploration Open to unexpected	Making sense of data	Test to obtain user feedback	Systemic perspective Open to differences in personality
JSFD	(Whitley et al., 2013)	User orientation Deep user understanding	Problem exploration Identifying pain points	Making tangible Making sense of data	Test to obtain user feedback	Systemic perspective Diversity of perspectives
JSFD	(Burnett, 2013)	User orientation	Problem exploration	Making sense of data	Test to obtain user feedback	Diversity of perspectives Collaboration
JSFD	(Schulenkorf, 2013)	User orientation	Identify larger problem space Widen the problem	Making sense of data Making tangible	Test to obtain user feedback	Diversity of perspectives
JSM	(Welty Peachey, Cunningham, et al., 2015)	User orientation Deep user understanding	Problem exploration	Making sense of data	Test to obtain user feedback	Diversity of perspectives Open to differences in personality
JSM	(Welty Peachey, Bruening, Lyras, Cohen, & Cunningham, 2015)	User orientation	Problem exploration Widen the problem Identify larger problem space	Making sense of data	Learning-oriented	Diversity of perspectives
SMR	(Olushola et al., 2013)	User orientation Deep user understanding	Problem exploration Widen the problem Identify larger problem space	Making sense of data Making tangible	Test to obtain user feedback	Diversity of perspectives

Note: JSFD = Journal of Sport for Development; JSM = Journal of Sport Management; SMR = Sport Management Review.

Table 5. Concentration of articles presenting key indicators.

Theme	Indicator	Totally aligned articles ($n = 14$)	All other articles reviewed ($n = 66$)
User focus	Deep user understanding	8 (57%)	16 (24%)
Diversity	Diversity of perspectives	11 (79%)	24 (36%)
Experimentation	Test to obtain user feedback	11 (79%)	4 (6%)
Problem framing	Futuristic thinking	4 (29%)	4 (6%)
Visualization	Bias toward action	3 (21%)	1 (1.5%)

The second frequency analysis assisted to this end by highlighting five design thinking indicators that were more heavily concentrated in totally aligned articles than in the larger population of reviewed articles (see Table 5). The higher concentrations suggested that these indicators were useful lenses through which to critically identify and analyze thematic similarities and differences among the totally aligned articles. We therefore undertook a thematic analysis as a means of making these comparisons. Such an analysis was critical in order to establish not only that there was alignment with design thinking practice, but also to determine the ways in which alignment existed and, consequently, how such alignment was leveraged in research and practice.

Deep user understanding (theme: user focus)

In design thinking practice, deep user understanding – which indicates alignment with the broader theme of user focus – is often the result of "extensive qualitative research" (Carlgren et al., 2016, p. 46). Our findings aligned with this claim. Deep user understanding manifested in a number of ways as there were a variety of different user groups represented across these studies, including coaches, coordinators, participants, or general "stakeholders" (some combination of coaches, participants, administrators, etc.). While most of the reviewed articles clearly articulated the user group being targeted (that is: the users which the program was designed to primarily serve), it was also clear that other groups of stakeholders – such as those administering SFD programs – might also stand to benefit incidentally from their involvement with the program (without being users, as such).

Many of the approaches to achieving such deep user understanding are common in academic research at large and within SFD in particular, ranging from the use of pre- and post-questionnaires (e.g. Welty Peachey, Cunningham, Lyras, Cohen, & Bruening, 2015) to highly focused approaches such as narrative inquiry (e.g. Cohen & Welty Peachey, 2015). However, novel approaches did stand out. Such unique approaches to deep user understanding went beyond traditional approaches to qualitative research and indicated a desire to access and establish empathy, another key feature of the user focus theme (Carlgren et al., 2016).

One example of such a novel approach was Wells and Welty Peachey's (2016) study of servant leadership in Street Soccer USA. Rather than attempting to understand the users (here, the leaders) by seeking the perspectives of those users, they instead sought the perspective of the followers. This lens allowed for a holistic understanding of not just the users themselves, but also the ways in which they fit within the organizational context. Similarly, Mandigo, Corlett, and Ticas (2016) considered the views of not just pupils but also the views of influential adults in their lives, such as teachers and school directors. This depth was further enhanced by the use of a 3-year longitudinal approach. Beacom and Golder (2015) likewise studied pupils, focusing on developing critical practitioners as a means of overcoming systemic patterns of thought toward disability sport. In this case, the deep user understanding was performed by the participants themselves as a component of their critical reflection on

their practice, though the findings had implications for future placement learning activities.

Taken together, these different approaches highlight that deep user understanding is best achieved by considering multiple angles of the users involved. In SFD, this may usefully take the form of including disconnected (or subjugated) local voices in the design of programs, thus closing the gap between those who deliver SFD programs and those who stand to benefit from them (Nicholls, Giles, & Sethna, 2011). Techniques for achieving such deep user understanding include informal conversations with users, the development of empathy maps, and ethnographic research (Carlgren et al., 2016). Pursuing deep user understanding and actively involving users in design thinking practice is the core of Brown's (2009) foundational model of design thinking in which human users are kept at the center of all practice. Where SFD practitioners are already pursuing deep user understanding, Brown's three-stage model of ideation, inspiration, and implementation may represent a valuable means of focusing their practice on enhancing organizational innovation through design thinking. This recalls and aligns with another of the five themes of design thinking – diversity – and also provides a future pathway for SFD research and practice that would aim to achieve deep user understanding, particularly as a component of a design thinking practice.

Diversity of perspectives (theme: diversity)

The diversity of perspectives indicator relates to the broader design thinking theme of diversity. Rather than referring to demographic diversity (although that can certainly occur incidentally), diversity of perspectives instead relates to a diversity of skills, personalities, and even hierarchal positions (Carlgren et al., 2016). This indicator manifested in a variety of ways.

Multiple studies of homogenous stakeholder groups have demonstrated such diversity, such as in Whitley, Wright, and Gould's (2013) study of 19 coaches, in which data were collected from five different focus groups. While the coaches might have had a similar hierarchical perspective, views from the ground differed among coaches operating in different geographic locations. Similarly, Walters, Spencer, Farnham, Williams, and Lucas (2018) were able to generate a diversity of perspectives through the use of multiple data collection methods – individual interviews and focus groups – with the same participants. Elsewhere, diversity of perspectives manifested as the consideration of views from multiple – and different – stakeholder groups. Such approaches ranged from the study of merely two groups (e.g. the participants and partners studied by Meir, 2017) to more comprehensive studies (such as Burnett's, 2013, study which considered the perspectives of managers, participants, and the significant others of participants). This variety of approaches to pursuing diversity of perspectives highlights that SFD researchers and practitioners are already capable of achieving diversity (and apparently desire to do so), yet an intentionally multidimensional approach may yield still greater insights.

One example of such an approach was the pursuit of a diversity of perspectives as a function of time. In totally aligned articles, this was achieved by incorporating interviews with both past and present players (Olushola, Jones, Dixon, & Green, 2013) and by conducting interviews over the course of an entire season (Bean & Forneris, 2016). Such approaches revealed how a diversity of perspectives emerged or evolved over time as a function of other variables and, in the process, highlighted potential obstacles and opportunities that could not be foreseen by studying past outcomes alone. Despite this potential, achieving a diversity of perspectives as a function of time was less common among the articles we reviewed. Although this multidimensional concern for diversity was promising as an indicator of design thinking alignment in SFD, the voices of potential beneficiaries of the program – participants, volunteers, coaches, and so on – were all but absent in the design

of programs that were ostensibly being studied and improved with a goal of converting such potential users into actual users (Nicholls et al., 2011). Engagement with design thinking may help SFD organizations to close this loop in the pursuit of organizational innovation.

Practically, attempting to understand the potential user recalls Martin's (2009, 2010) knowledge funnel, which we highlighted in the literature review as being concerned with identifying and interpreting a mystery before developing a heuristic for approaching it, and refining that heuristic into an algorithm for operational practice. Recall that in developing their Speedee service system, McDonald's aimed to cater to a market that was still emerging. In successfully doing so, they likely had a hand in shaping that market. By considering the potential user, McDonald's effectively solved a problem for Americans that Americans didn't know they had. Alignment of SFD articles with this indicator suggests that pursuing a diversity of perspectives – especially as a function of time – is but one way that SFD researchers and practitioners may solve problems for their users in unexpected but useful ways.

Futuristic thinking (theme: problem framing)

Unconstrained and futuristic thinking was found to be a critical mindset in the pursuit of user-centered innovation within Carlgren et al.'s (2016) design thinking theme of problem framing. Interestingly, all of the totally aligned articles that demonstrated futuristic thinking adopted similar perspectives: that future outcomes would transcend the program at hand and have larger positive effects. These articles tended to focus their futuristic thinking through a lens of the program itself and/or those who delivered the program.

A focus on the program itself was apparent in Bean and Forneris's (2016) study of the Nunavik Youth Hockey Development Program, which drew on identified themes and subthemes of program successes and challenges to offer not only recommendations, but also future directions for the program. Likewise, Meir (2017) studied the Leadership and Empowerment through Sport organization in a manner that displayed obvious futuristic thinking. Rather than stopping with empirical observations, Meir sought to connect those observations to theoretical perspectives as a means of informing not only future practice in the program, but also future development of the same. As a result, his study not only identified issues within the program (such as community engagement with the program) but also went on to suggest a specific theory-backed way to potentially overcome those shortcomings: in this case, the use of participatory action research in future studies. SFD work has been accused of generating only short-lived (Schulenkorf, 2013) or modest outcomes (Sugden, 2010) as well as being, at times, overambitious (Coalter, 2010). Considering these criticisms, such a focus on ensuring the longevity of the program itself is welcome and can be a component of design thinking practice in SFD.

Futuristic thinking was also presented through a focus on the program as a function of those who delivered it. For instance, the study of service learning students by Beacom and Golder (2015) displayed futuristic thinking through a focus on developing critical practitioners who would go on to correct stigmatizing attitudes toward disabled athletes. The notion that these students would carry their critically reflective attitudes and lived experience into their studies and careers beyond that single class was an obvious consideration of future outcomes. Such a concern for outcomes beyond those enjoyed by immediate stakeholders signals more than just a concern for sustainability: It can also be seen as a response to concerns that SFD impacts are fleeting at best or neo-colonial at worst (for a detailed critique on neo-colonialism in SFD, see Darnell & Hayhurst, 2011).

Despite different foci, these studies share a multidimensional concern for outcomes – an aim to not only achieve positive outcomes in

the short term, but for these short-term gains to ultimately translate into long-term gains. This reflects a widening of the problem space, which in turn leads to a widening of the solution space (Carlgren et al., 2016). The result of this ambitious embracing of ambiguity is an expansion of the scope of SFD work itself. Such an expansion has the effect of demonstrating that such programs can be sustainable and are capable of achieving more than only modest outcomes that some – such as Sugden (2010) – have suggested might be the upper limit of SFD programs. Where organizations are already capable of futuristic thinking, the implementation of design thinking can focus their efforts on achieving design abduction, as outlined by Dorst (2011). Unlike traditional approaches to innovation, design abduction begins with only the value that the organization wishes to create. In this case, that value has been identified (at least broadly) through futuristic thinking. From there, the organization can work backwards to uncover what thing (most likely their users) will be put through a *working principle* (some creative phenomenon developed by the organization) to create the desired value. Practical techniques for achieving such framing include the use of "how-might-we-questions" or separating available data into "FOG" (facts, opinions, guesses) so as to better synthesize findings (Carlgren et al., 2016).

Test to obtain user feedback (theme: experimentation)

Despite the wording, the test to obtain user feedback indicator relates to the broader theme of experimentation rather than user focus, and the difference is subtle but distinct. Carlgren et al. (2016) described experimentation within design thinking (which often includes working on multiple solutions at once) as "a bias towards testing and trying things out in an iterative way, and moving between divergent and convergent ways of thinking" (p. 47), a definition that focuses on learning as an organizational pursuit. Testing to obtain user feedback, then, is merely one means by which this iterative process of learning manifested in the SFD literature.

For example, recall that the Walters et al. (2018) study of Marist Institute graduates displayed futuristic thinking in considering the ways in which current practice would inform future practice and outcomes. One means by which this futuristic thinking was achieved was testing for user feedback. This testing was considered iterative as it resembled a feedback loop of continuous testing and subsequent improvements. Olushola et al. (2013) assumed a similar focus in their study of female African American high school basketball players. Their testing for user feedback aimed to identify key values to ensure flexibility in future operations of the program rather than employing a standardized operating procedure. This suggests that the authors saw the future as flexible rather than fixed, thus calling for an iterative approach to learning and experimentation. Such iterative testing represents one way by which SFD researchers and practitioners can identify and test the working principle needed to achieve design abduction, as described at the end of the previous section (Dorst, 2011).

Elsewhere, this iterative nature of testing for user feedback took varying and more straightforward forms. These included pre and post methods of data collection (e.g. Burnett, 2013; Welty Peachey, Cunningham, et al., 2015), consideration of program sustainability based on user feedback (Schulenkorf, 2013), or merely a desire to utilize obtained user feedback in future practice of the studied program(s) in particular (e.g. Cooper, Blom, Gerstein, Hankemeier, & Indovina 2016; Gannett, Kaufman, Clark, & McGarvey 2014; Wells & Welty Peachey, 2016) or the field of SFD in general (e.g. Bean & Forneris, 2016; Mandigo et al., 2016; Whitley et al., 2013). These types of phrases are not altogether uncommon in academic studies, of course, but the multitude of different approaches to gathering user feedback underscores that there is

more than one way to skin this particular cat. Clearly the manner in which user feedback is gathered is less important than the fact that it is being gathered at all. More critical still is the manner in which the gathered feedback is employed (Brown & Wyatt, 2010; Johansson-Sköldberg et al., 2013). All of these articles referred to user feedback not as the end goal, but as an intermediate step of a larger process: as one means of learning (through action). Such iterative testing for user feedback as a means of learning signals an orientation toward action, as well as a willingness to endure (and even welcome) intermediate failures as a feature of iterative progress (Carlgren et al., 2016).

Unfortunately, due to limited resources, many SFD organizations simply cannot afford to fail intermediately in the pursuit of success, let alone to fail repeatedly. As a result, they are largely limited to the use of normal abduction in their approaches to problems and/or opportunities – that is, the traditional approaches whereby most managers settle for what's good enough (Dorst, 2011, 2015). This has the potential to stall progress in programs such as the ones studied by Walters et al. (2018) and Olushola et al. (2013), both of which demonstrated a clear desire to be learning organizations. Because this desire (and their organizational practices) suggested a compatibility with design thinking, the concept may provide a way for both to achieve greater organizational innovation. Indeed, practical (and low-stakes) techniques for experimentation are still available even when resources are limited. These include the use of soft prototyping (role play, etc.) and, where possible, a physical space that is flexible enough to allow for experimentation without added expense (Carlgren et al., 2016).

Bias toward action (theme: visualization)

The bias toward action indicator occurred almost exclusively among totally aligned articles. A bias toward action indicates alignment with the broader theme of visualization and refers not to a willingness to take action in general, but to a willingness to learn through doing – and to likely fail along the way. As a method for visualization, it relates to the creation of visual aids and even prototypes (Carlgren et al., 2016). In the case of recent SFD research, a bias toward action manifested in two primary ways: (a) undertaking practice as a means of learning immediately and improving future practice, and (b) in more quickly building effective practice by basing it on existing knowledge (perhaps from other fields).

Meir (2017) used the study of current practice in SFD programs in a novel way: by beginning with pilot programs. The program itself was a test, indicating a pull toward action rather than getting mired in prolonged planning. Taking such immediate action is atypical of the approach traditionally taken by the academic researchers upon whom many SFD organizations have come to rely (Welty Peachey & Cohen, 2015). Because such work is often experimental, time must be taken to review relevant literature, establish or develop theoretical links, and to choose a proper methodology – all before any practical action is taken. So, while immediate action and (rapid, repeated) failure is encouraged within design thinking practice, the link between research and practice needs to be carefully negotiated to allow both parties to benefit from a bias toward action.

Relying on existing infrastructure may be a means of bridging this possible gap between researchers and design thinking practitioners in SFD, and two totally aligned articles took this approach. Mandigo et al. (2016) relied on physical education programs in order to take immediate action, ultimately applying their findings toward improvements in the program. Similarly, Beacom and Golder (2015) drew on existing theory from outside of SFD (specifically, critical pedagogy) to jump immediately into action on a small scale with an aim to grow from there. In each of these cases, the

researchers and/or practitioners used immediate action as a source of feedback and learning – an approach that can be employed as the testing of a working principle (the phenomenon that users are put through in order to create a desired value) (Dorst, 2011). Such a cycle also evokes Brown's (2009) three-stage process of inspiration, ideation, and implementation. A design had already been implemented in all of the articles presenting the bias toward action indicator, but Brown's process allows for (indeed, calls for) the three stages to be repeated toward ever-improving outcomes.

Overall, bias toward action, as demonstrated by the totally aligned articles that presented the indicator, was perhaps the most critical point of difference between design thinking in practice and existing SFD research and practice. While academic research, by its very nature, tends to proceed deliberately toward any eventual action in the field, design thinking practice is founded on the notion of physically trying ideas – whether they be prototypes or pilot programs – as soon as reasonably possible, and with the involvement of the stakeholders who will actually use the final output (Brown, 2008, 2009; Carlgren et al., 2016). However, as we have discussed, many SFD organizations – and academic researchers – simply cannot afford to fail. While a lack of resources is a commonly cited obstacle, there is also a justified concern that to expose a stakeholder group such as participants to a program that is only half-baked would represent a tremendous risk to those participants (Welty Peachey & Cohen, 2015). Where SFD programs are aimed at marginalized populations, the risk is greater still. Should a program fail to accomplish outcomes, the effect on participants might not be neutral, and indeed could be catastrophically negative. Any attempt to engage in design thinking, then, must take care to involve would-be users in a responsible manner. While a bias toward action is ideal in the pursuit of greater organizational innovation, it must be undertaken with care.

Conclusion and implications

By making the action and the thinking of expert designers accessible to non-design practitioners, design thinking has been shown to positively enhance the innovation efforts of organizations in a management context (Carlgren et al., 2016; Johansson-Sköldberg et al., 2013). While it has yet to be empirically studied in an SFD, our scoping study has confirmed the presence of design thinking indicators in recent SFD research and practice. Having demonstrated the presence and differing frequencies of these indicators, we have further analyzed emergent trends among and between the indicators presented by the 14 totally aligned articles. Having analyzed the similarities and differences in the ways in which the five key indicators were present in these totally aligned articles – deep user understanding, diversity of perspectives, test to obtain user feedback, futuristic thinking, and bias toward action – we are able to confidently suggest that any or all of these indicators represent valuable points of entry for SFD organizations that might desire to incorporate design thinking into their practice, especially as a means of pursuing organizational innovation.

Carlgren et al. (2016) found design thinking to be simultaneously something that *is* and whatever it *becomes* in practice. Consideration of both the idea and the enactment is necessary when attempting to understand design thinking. Adopting this view, we can conclude that design thinking already is in SFD, especially where research and practice has presented total alignment with the thematic design thinking framework. Considering this, to enjoy the full innovation-enhancing potential of design thinking, organizations should employ the concept, allowing it to become what it will within their operational context. As we outlined in our thematic analysis, there are valuable points of crossover between recent SFD work and existing design thinking models. Where existing approaches align with the key indicators in such ways, practitioners can

meaningfully engage with these models in order to focus their organizational innovation efforts toward achieving abduction and generating the human-centered outcomes that design thinking is capable of delivering.

Our study also highlights that such a dynamic conceptualization of design thinking couples well with the thematic design thinking framework to provide a fruitful way of discussing and studying design thinking in practice. Future work concerning the use of design thinking to pursue organizational innovation in SFD (as well as in the broader field of sport management) can use this framework as a guide. In particular, it might be most immediately used in further scoping studies that either expand on our focus here by including more journals over a longer period of time, or in different thematic areas (such as sport development) as a contribution toward a wider understanding of the extent to which the broader field of sport management aligns with design thinking practice.

Meanwhile, empirical work may involve the implementation of models of design thinking through research interventions, or even the study of design thinking as an organic phenomenon, should SFD practitioners adopt the practice from management (the field from which much SFD work is derived; see Schulenkorf, 2017). These interventions could meaningfully study and seek to capitalize upon phenomenon revealed in this article (such as the fact that stakeholders other than those in the target population of a program stand to benefit from being involved with the program) or to approach larger issues that continue to plague the field of SFD, such as those relating to the SFD program delivery. The field of SFD has been accused of displaying neo-colonial tendencies (Darnell & Hayhurst, 2011) and despite an apparent awareness of this issue, many programs continue to be designed and delivered by international actors (and from higher-income countries, in particular) (Schulenkorf et al., 2016). Design thinking may provide a means by which this gap can finally be meaningfully reconciled. Local voices can be restored through user focus and the seeking of empathy, not just through the techniques mentioned in this paper (informal conversations, empathy maps, etc.) but through the involvement of the users themselves in pursuing the understanding that such techniques can generate.

Work along these lines may represent a compelling branch of SFD research that ESMQ and MSL could pursue should they wish to increase the extent of their (so far) limited SFD publications. To this end, we call for the undertaking of a variety of investigations and case studies to examine – and learn from – design thinking outcomes in sport management. Not only will such studies advance evidence in SFD and sport management, but they will also contribute to a developing canon of applied design thinking practice in the broader field of management.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by an Australian Government Research Training Program Scholarship.

ORCID

Greg Joachim http://orcid.org/0000-0002-3920-0427
Nico Schulenkorf http://orcid.org/0000-0002-7235-5340
Katie Schlenker http://orcid.org/0000-0001-9917-8973
Stephen Frawley http://orcid.org/0000-0002-7552-3856

References

Adams, A. (Ed.). (n.d.). Aims and scope. In *Managing sport and leisure*. Retrieved from https://www.tandfonline.com/toc/rmle20/current

Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International*

Journal of Social Research Methodology, *8*, 19–32. doi:10.1080/1364557032000119616

Beacom, A., & Golder, G. (2015). Developing disability sport: The case for a critical pedagogy. *Journal of Sport for Development*, *3*(5), 71–88. Retrieved from https://jsfd.org/

Bean, C., & Forneris, T. (2016). Exploring stakeholders' experiences of implementing an ice hockey programme for Inuit youth. *Journal of Sport for Development*, *4*(6), 7–20. Retrieved from https://jsfd.org/

Bean, C., Forneris, T., & Fortier, M. (2015). Girls just wanna have fun: understanding perceptions of effective strategies and outcomes in a female youth-driven physical activity-based life skills programme. *Journal of Sport for Development*, *3*(4), 28–40. Retrieved from https://jsfd.org/

Blom, L. C., Gerstein, L., Stedman, K., Judge, L., Sink, A., & Pierce, D. (2015). Soccer for peace: Evaluation of in-country workshops with Jordanian coaches. *Journal of Sport for Development*, *3*(4), 1–12. Retrieved from https://jsfd.org/

Brown, T. (2008). Design thinking. *Harvard Business Review*, *86*(6), 84–92. Retrieved from https://hbr.org/

Brown, T. (2009). *Change by design: How design thinking transforms organizations and inspires innovation*. New York, NY: HarperCollins.

Brown, T., & Wyatt, J. (2010). Design thinking for social innovation. *Stanford Social Innovation Review*, *8*, 30–35.

Bruening, J. E., Peachey, J. W., Evanovich, J. M., Fuller, R. D., Murty, C. J. C., Percy, V. E., … Chung, M. (2015). Managing sport for social change: The effects of intentional design and structure in a sport-based service learning initiative. *Sport Management Review*, *18*, 69–85. doi:10.1016/j.smr.2014.07.002

Burnett, C. (2013). GIZ/YDF and youth as drivers of sport for development in the African context. *Journal of Sport for Development*, *1*(1), 4–15. Retrieved from https://jsfd.org/

Carlgren, L., Rauth, I., & Elmquist, M. (2016). Framing design thinking: The concept in idea and enactment. *Creativity and Innovation Management*, *25*, 38–57. doi:10.1111/caim.12153

Coalter, F. (2010). The politics of sport-for-development: Limited focus programmes and broad gauge problems? *International Review for the Sociology of Sport*, *45*, 295–314. doi:10.1177/1012690210366791

Cohen, A., & Welty Peachey, J. (2015). The making of a social entrepreneur: From participant to cause champion within a sport-for-development context. *Sport Management Review*, *18*, 111–125. doi:10.1016/j.smr.2014.04.002

Coleby, J., & Giles, A. R. (2013). Discourses at work in media reports on Right To Play's "Promoting Life-Skills in Aboriginal Youth" program. *Journal of Sport for Development*, *1*(2), 39–52. Retrieved from https://jsfd.org/

Cooper, J. W., Blom, L. C., Gerstein, L. H., Hankemeier, D. A., & Indovina, T. P. (2016). Soccer for Peace in Jordan: A qualitative assessment of program impact on coaches. *Journal of Sport for Development*, *4*(6), 21–35. Retrieved from https://jsfd.org/

Cottingham, M., Blais, D., Gearity, B., Bogle, K., & Zapalac, R. (2015). A qualitative examination of Latin American Wheelchair sport practitioners' marketing practices. *Journal of Sport for Development*, *3*(5), 11–22. Retrieved from https://jsfd.org/

Darcy, S., Maxwell, H., Edwards, M., Onyx, J., & Sherker, S. (2014). More than a sport and volunteer organisation: Investigating social capital development in a sporting organisation. *Sport Management Review*, *17*, 395–406. doi:10.1016/j.smr.2014.01.003

Darnell, S. C., & Hayhurst, L. M. C. (2011). Sport for decolonization. *Progress in Development Studies*, *11*, 183–196. doi:10.1177/146499341001100301

Daudt, H. M., van Mossel, C., & Scott, S. J. (2013). Enhancing the scoping study methodology: A large, inter-professional team's experience with Arksey and O'Malley's framework. *BMC Medical Research Methodology*, *13*(48).

Devine, A., Carrol, A., Naivalu, S., Seru, S., Baker, S., Bayak-Bush, B., … Marella, M. (2017). 'They don't see my disability anymore' – The outcomes of sport for development programmes in the lives of people in the Pacific. *Journal of Sport for Development*, *5*(8), 4–18. Retrieved from https://jsfd.org/

Dorst, K. (2011). The core of 'design thinking' and its application. *Design Studies*, *32*, 521–532. doi:10.1016/j.destud.2011.07.006

Dorst, K. (2015). *Frame innovation*. Cambridge, MA: MIT Press.

Dowling, M., Leopkey, B., & Smith, L. (2018). Governance in sport: A scoping review. *Journal of Sport Management*, *32*, 438–451. doi:10.1123/jsm.2018-0032

Dunne, D., & Martin, R. (2006). Design thinking and how it will change management education: An interview and discussion. *Academy of Management Learning & Education*, *5*, 512–523. doi:10.5465/amle.2006.23473212

Edwards, M. B. (2015). The role of sport in community capacity building: An examination of sport for development research and practice. *Sport Management Review*, *18*(1), 6–19. doi:10.1016/j.smr.2013.08.008

Ekholt, D. (2013). Sport and crime prevention: Individuality and transferability in research. *Journal of Sport for Development*, *1*(2), 1–12. Retrieved from https://jsfd.org/

Forber-Pratt, A. J. (2015). Paralympic sport as a vehicle for social change in Bermuda and Ghana. *Journal of Sport for Development*, *3*(5), 35–49. Retrieved from https://jsfd.org/

Gadais, T., Webb, A., & Garcia, A. (2017). Using report analysis as a sport for development and peace research tool: The case of El Salvador Olimpica Municipal's programme. *Journal of Sport for Development*, *6*(10), 12–24. Retrieved from https://jsfd.org/

Gallant, D., Sherry, E., & Nicholson, M. (2015). Recreation or rehabilitation? Managing sport for development programs with prison populations. *Sport Management Review*, *18*(1), 45–56. doi:10.1016/j.smr.2014.07.005

Gannett, K. R., Kaufman, Z. A., Clark, M. A., & McGarvey, S. T. (2014). Football with three 'halves': A qualitative exploratory study of the football3 model at the Football for Hope Festival 2010. *Journal of Sport for Development*, *2*(3), 47–59. Retrieved from https://jsfd.org/

Gardam, K., Giles, A., & Hayhurst, M. C. (2017). Sport for development for Aboriginal youth in Canada: A scoping review. *Journal of Sport for Development*, *5*(8), 30–40. Retrieved from https://jsfd.org/

Gould, D., & Voelker, D. K. (2010). Youth sport leadership development: Leveraging the sports captaincy experience. *Journal of Sport Psychology in Action*, *1*, 1–14. doi:10.1080/21520704.2010.497695

Halsall, T., & Forneris, T. (2016). Challenges and strategies for success of a sport-for-development programme for First Nations, Métis and Inuit youth. *Journal of Sport for Development*, *4*(7), 39–57. Retrieved from https://jsfd.org/

Hamilton, A., Foster, C., & Richards, J. (2016). A systematic review of the mental health impacts of sport and physical activity programmes for adolescents in post-conflict settings. *Journal of Sport for Development*, *4*(6), 44–59. Retrieved from https://jsfd.org/

Hancock, M., Lyras, A., & Ha, J. P. (2013). Sport for development programmes for girls and women: A global assessment. *Journal of Sport for Development*, *1*(1), 15–24. Retrieved from https://jsfd.org/

Hanrahan, S. J., & Ramm, M. D. L. F. (2015). Improving life satisfaction, self-concept, and happiness of former gang members using games and psychological skills training. *Journal of Sport for Development*, *3*(4), 41–47. Retrieved from https://jsfd.org/

Harris, K., & Adams, A. (2016). Power and discourse in the politics of evidence in sport for development. *Sport Management Review*, *19*(2), 97–106. doi:10.1016/j.smr.2015.05.001

Hermens, N., Super, S., Verkooijen, K. T., & Koelen, M. A. (2017). A systematic review of life skill development through sports programs serving socially vulnerable youth. *Research Quarterly for Exercise and Sport*, *88*, 408–424. doi:10.1080/02701367.2017.1355527

Hills, S., Gómez Velásquez, A., & Walker, M. (2018). Sport as an analogy to teach life skills and redefine moral values: A case study of the 'Seedbeds of Peace' sport-for-development programme in Medellin, Colombia. *Journal of Sport for Development*, *6*(10), 25–37. Retrieved from https://jsfd.org/

Hoeber, L., Doherty, A., Hoeber, O., & Wolfe, R. (2015). The nature of innovation in community sport organizations. *European Sport Management Quarterly*, *15*, 518–534. doi:10.1080/16184742.2015.1085070

Inoue, C., & Forneris, T. (2015). The role of special Olympics in promoting social inclusion: An examination of stakeholder perceptions. *Journal of Sport for Development*, *3*(5), 23–34. Retrieved from https://jsfd.org/

Inoue, Y., Funk, D., & Jordan, J. S. (2013). The role of running involvement in creating self-sufficiency for homeless individuals through a community-based running program. *Journal of Sport Management*, *27*(6), 439–452. doi:10.1123/jsm.27.6.439

Inoue, Y., Heffernan, C., Yamaguchi, T., & Filo, K. (2018). Social and charitable impacts of a charity-affiliated sport event: A mixed methods study. *Sport Management Review*, *21*(2), 202–218. doi:10.1016/j.smr.2017.06.005

Johansson-Sköldberg, U., Woodilla, J., & Çetinkaya, M. (2013). Design thinking: Past, present and possible futures. *Creativity and Innovation Management*, *22*, 121–146. doi:10.1111/caim.12023

Jones, G. J., Edwards, M. B., Bocarro, J. N., Bunds, K. S., & Smith, J. W. (2017). An integrative review of sport-based youth development literature. *Sport in Society*, *20*, 161–179. doi:10.1080/17430437.2015.1124569

Jones, G. J., Wegner, C. E., Bunds, K. S., Edwards, M. B., & Bocarro, J. N. (2018). Examining the environmental characteristics of shared leadership in a sport-for-development organization. *Journal of Sport Management*, *32*(2), 82–95. doi:10.1123/jsm.2017-0274

Lecrom, C. W., & Dwyer, B. (2013). Plus-sport: The impact of a cross-cultural soccer coaching exchange. *Journal of Sport for Development*, *1*(2), 1–16. Retrieved from https://jsfd.org/

Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: Advancing the methodology. *Implementation Science*, *5*(69).

Lopes, J. T. (2015). Adapted surfing as a tool to promote inclusion and rising disability awareness in Portugal. *Journal of Sport for Development*, *3*(5), 4–10. Retrieved from https://jsfd.org/

MacIntosh, E., Arellano, A., & Forneris, T. (2016). Exploring the community and external-agency partnership in sport-for-development programming. *European Sport Management Quarterly*, *16*(1), 38–57. doi:10.1080/16184742.2015.1092564

Mandigo, J., Corlett, J., & Ticas, P. (2016). Examining the role of life skills developed through Salvadoran physical education programs on the prevention of youth violence. *Journal of Sport for Development*, *4*(7), 25–38. Retrieved from https://jsfd.org/

Marshall, S. K., & Barry, P. (2015). Community sport for development: Perceptions from practice in Southern Africa. *Journal of Sport Management*, *29*(1), 109–121. doi:10.1123/jsm.2012-0301

Martin, R. (2009). *The design of business: Why design thinking is the next competitive advantage*. Boston, MA: Harvard Business Press.

Martin, R. (2010). Design thinking: Achieving insights via the "knowledge funnel". *Strategy & Leadership*, *38*(2), 37–41. doi:10.1108/10878571011029046

Mataruna, L., Range, D., Guimaraes, A., & Melo, T. (2015). Rio 2016 and disability – an analysis of the Sport-For-Development discourse and the legacies for disabled people. *Journal of Sport for Development*, *3*(5), 50–60. Retrieved from https://jsfd.org/

Mayrand, N. S. (2013). Possibilities and dangers at the nexus of sport and development discourses: An analysis of racialized and de-historicized spaces. *Journal of Sport for Development*, *2*(3), 0–11. Retrieved from https://jsfd.org/

Meir, D. (2017). "Leadership and empowerment through sport": The intentions, hopes, ambitions and reality of creating a sport-for-development organisation in Cape Town. *Journal of Sport for Development*, *5*(8), 19–29. Retrieved from https://jsfd.org/

Meyer, K. L., & Roche, K. M. (2017). Sports-for-development gender equality impacts from basketball programme: Shifts in attitudes and stereotyping in Senegalese youth and coaches. *Journal of Sport for Development*, *5*(9), 49–57. Retrieved from https://jsfd.org/

Misener, L., & Schulenkorf, N. (2016). Rethinking the social value of sport events through an asset-based community development (ABCD) perspective. *Journal of Sport Management*, *30*(3), 329–340. doi:10.1123/jsm.2015-0203

Misener, L., Taks, M., Chalip, L., & Green, B. C. (2015). The elusive "trickle-down effect" of sport events: Assumptions and missed opportunities. *Managing Sport and Leisure*, *20*(2), 135–156.

Mwaanga, O., & Adeosun, K. (2017). Decolonisation in practice: A case study of the Kicking AIDS Out programme in Jamaica. *Journal of Sport for Development*, *5*(9), 58–69. Retrieved from https://jsfd.org/

Nicholls, S., Giles, A. R., & Sethna, C. (2011). Perpetuating the 'lack of evidence' discourse in sport for development: Privileged voices, unheard stories and subjugated knowledge. *International Review for the Sociology of Sport*, *46*, 249–264. doi:10.1177/1012690210378273

Obadiora, A. H. (2016). The influence of sport participation on quality of life perceptions among inmates in Nigerian prisons. *Journal of Sport for Development*, *4*(6), 36–43. Retrieved from https://jsfd.org/

Olushola, J. O., Jones, D. F., Dixon, M. A., & Green, B. C. (2013). More than basketball: Determining the sport components that lead to long-term benefits for African-American girls. *Sport Management Review*, *16*, 211–225. doi:10.1016/j.smr.2012.07.002

Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed). Thousand Oaks: Sage.

Reis, A. C., Vieira, M. C., & Sousa-Mast, F. R. D. (2016). "Sport for development" in developing countries: The case of the Vilas Olímpicas do Rio de Janeiro. *Sport Management Review*, *19*(2), 107–119. doi:10.1016/j.smr.2015.01.005

Rock, K., Valle, C., & Grabman, G. (2013). Physical inactivity among adolescents in Managua, Nicaragua: A cross-sectional study and legal analysis. *Journal of Sport for Development*, *1*(1), 48–59. Retrieved from https://jsfd.org/

Romeo-Velilla, M., Beynon, C., Murphy, R. C., McGee, C. E., Hilland, T. A., Parnell, D., … Foweather, L. (2013). Formative evaluation of a UK community-based sports intervention to prevent smoking among

children and young people: SmokeFree Sports. *Journal of Sport for Development*, *2*(3), 0–11. Retrieved from https://jsfd.org/

Schulenkorf, N. (2013). Sport for development events and social capital building: A critical analysis of experiences from Sri Lanka. *Journal of Sport for Development*, *1*(1), 25–36. Retrieved from https://jsfd.org/

Schulenkorf, N. (2016). The Contributions of special events to sport-for-development programs. *Journal of Sport Management*, *30*(6), 629–642. doi:10.1123/jsm.2016-0066

Schulenkorf, N. (2017). Managing sport-for-development: Reflections and outlook. *Sport Management Review*, *20*, 243–251. doi:10.1016/j.smr.2016.11.003

Schulenkorf, N., Sherry, E., & Rowe, K. (2016). Sport for development: An integrated literature review. *Journal of Sport Management*, *30*, 22–39. doi:10.1123/jsm.2014-0263

Sherry, E., & O'May, F. (2013). Exploring the impact of sport participation in the Homeless World Cup on individuals with substance abuse or mental health disorders. *Journal of Sport for Development*, *1*(2), 17–25. Retrieved from https://jsfd.org/

Sherry, E., Schulenkorf, N., Seal, E., Nicholson, M., & Hoye, R. (2017). Sport-for-development: Inclusive, reflexive, and meaningful research in low- and middle-income settings. *Sport Management Review*, *20*(1), 69–80. doi:10.1016/j.smr.2016.10.010

Siefken, K., Schofield, G., & Malcata, R. (2014). Engaging urban Pacific women in healthy lifestyle behaviour: An outcome evaluation of a workplace-based physical activity intervention in Vanuatu. *Journal of Sport for Development*, *2*(3), 0–11. Retrieved from https://jsfd.org/

Simard, S., Laberge, S., & Dusseault, M. (2014). Empowerment revisited: How social work integrated into a sports programme can make a difference. *Journal of Sport for Development*, *2*(3), 1–13. Retrieved from https://jsfd.org/

Smith, L., Wegwood, N., Llewellyn, G., & Shuttleworth, R. (2015). Sport in the lives of young people with intellectual disabilities: Negotiating disability. *Identity and Belonging*. *Journal of Sport for Development*, *3*(5), 61–70. Retrieved from https://jsfd.org/

Spaaij, R., & Schulenkorf, N. (2014). cultivating safe space: Lessons for sport-for-development projects and events. *Journal of Sport Management*, *28*(6), 633–645. doi:10.1123/jsm.2013-0304

Spaaij, R., Schulenkorf, N., Jeanes, R., & Oxford, S. (2018). Participatory research in sport-for-development: Complexities, experiences and (missed) opportunities. *Sport Management Review*, *21*(1), 25–37. doi:10.1016/j.smr.2017.05.003

Stewart-Withers, R., Sewabu, K., & Richardson, S. (2017a). Rugby union driven migration as a means for sustainable livelihoods creation: A case study of iTaukei, indigenous Fijians. *Journal of Sport for Development*, *5*(9), 1–20. Retrieved from https://jsfd.org/

Stewart-Withers, R., Sewabu, K., & Richardson, S. (2017b). Talanoa: A contemporary qualitative methodology for sport management. *Sport Management Review*, *20*(1), 55–68. doi:10.1016/j.smr.2016.11.001

Sugden, J. (2006). Teaching and playing sport for conflict resolution and co-existence in Israel. *International Review for the Sociology of Sport*, *41*, 221–240. doi:10.1177/1012690206075422

Sugden, J. (2010). Critical left-realism and sport interventions in divided societies. *International Review for the Sociology of Sport*, *45*, 258–272. doi:10.1177/1012690210374525

Svensson, P. G. (2017). Organizational hybridity: A conceptualization of how sport for development and peace organizations respond to divergent institutional demands. *Sport Management Review*, *20*(5), 443–454. doi:10.1016/j.smr.2017.03.004

Svensson, P. G., Andersson, F. O., & Faulk, L. (2018). A Quantitative Assessment of organizational capacity and organizational Life stages in sport for development and peace. *Journal of Sport Management*, *32*(3), 295–313. doi:10.1123/jsm.2017-0244

Svensson, P. G., & Hambrick, M. E. (2016). "Pick and choose our battles" – understanding organizational capacity in a sport for development and peace organization. *Sport Management Review*, *19*, 120–132. doi:10.1016/j.smr.2015.02.003

Svensson, P. G., & Hambrick, M. E. (2018). Exploring how external stakeholders shape social innovation in sport for development and peace. *Sport Management Review*. Advance online publication. doi:10.1016/j.smr.2018.07.002.

Svensson, P. G., & Seifried, C. S. (2017). Navigating plurality in hybrid organizing: The case of sport for development and peace entrepreneurs. *Journal of Sport Management*, *31*, 176–190. doi:10.1123/jsm.2016-0129

Svensson, P. G., & Woods, H. (2017). A systematic overview of sport for development and peace organisations. *Journal of Sport for Development*, *5*(9), 36–48. Retrieved from https://jsfd.org/

Thorpe, H., & Chawansky, M. (2017). The gendered experiences of women staff and volunteers in sport for development organizations: The case of

transmigrant workers of Skateistan. *Journal of Sport Management*, *31*(6), 546–561. doi:10.1123/jsm.2017-0147

Wagnsson, S., Augustsson, C., & Patriksson, G. (2013). Associations between sport involvement and youth psychosocial development in Sweden: A longitudinal study. *Journal of Sport for Development*, *1*(1), 37–47. Retrieved from https://jsfd.org/

Walters, S., Spencer, K., Farnham, A., Williams, V., & Lucas, P. (2018). Humanistic sports coaching and the Marist organization: A multi-case study in the Philippines. *Journal of Sport for Development*, *6*(11), 1–11. Retrieved from https://jsfd.org/

Warner, S., Sparvero, E., Shapiro, S., & Anderson, A. (2017). Yielding healthy community with sport? *Journal of Sport for Development*, *5*(8), 41–52. Retrieved from https://jsfd.org/

Wells, J. E., & Welty Peachey, J. (2016). Called to serve: Exploring servant leadership in the context of sport-for-development. *Journal of Sport for Development*, *4*(7), 12–24. Retrieved from https://jsfd.org/

Welty Peachey, J., Borland, J., Lobpries, J., & Cohen, A. (2015). Managing impact: Leveraging sacred spaces and community celebration to maximize social capital at a sport-for-development event. *Sport Management Review*, *18*(1), 86–98. doi:10.1016/j.smr.2014.05.003

Welty Peachey, J., Bruening, J., Lyras, A., Cohen, A., & Cunningham, G. B. (2015). Examining social capital development Among volunteers of a Multinational sport-for-development Event. *Journal of Sport Management*, *29*(1), 27–41. doi:10.1123/jsm.2013-0325

Welty Peachey, J., & Burton, L. (2017). Servant leadership in sport for development and peace: A way forward. *Quest (Grand Rapids, Mich)*, *69*, 125–139. doi:10.1080/00336297.2016.1165123

Welty Peachey, J., Burton, L., Wells, J., & Chung, M. R. (2018). Exploring servant leadership and needs satisfaction in the sport for development and peace context. *Journal of Sport Management*, *32*, 96–108. doi:10.1123/jsm.2017-0153

Welty Peachey, J., & Cohen, A. (2015). Reflections from scholars on barriers and strategies in sport-for-development research. *Journal of Sport for Development*, *3*(4), 16–27. Retrieved from https://jsfd.org/

Welty Peachey, J., & Cohen, A. (2016). Research partnerships in sport for development and peace: Challenges, barriers, and strategies. *Journal of Sport Management*, *30*(3), 282–297. doi:10.1123/jsm.2014-0288

Welty Peachey, J., Cohen, A., & Musser, A. (2016). 'A phone call changed my life': Exploring the motivations of sport for development and peace scholars. *Journal of Sport for Development*, *4*(7), 58–70. Retrieved from https://jsfd.org/

Welty Peachey, J., Cohen, A., Shin, N., & Fusaro, B. (2018). Challenges and strategies of building and sustaining inter-organizational partnerships in sport for development and peace. *Sport Management Review*, *21*(2), 160–175. doi:10.1016/j.smr.2017.06.002

Welty Peachey, J., Cunningham, G. B., Lyras, A., Cohen, A., & Bruening, J. (2015). The influence of a sport-for-peace event on prejudice and change agent self-efficacy. *Journal of Sport Management*, *29*, 229–244. doi:10.1123/jsm.2013-0251

Whitley, M. A., Massey, W. V., & Farrel, K. (2017). A programme evaluation of 'exploring our strengths and our future': Making sport relevant to the educational, social, and emotional needs of youth. *Journal of Sport for Development*, *5*(9), 21–35. Retrieved from https://jsfd.org/

Whitley, M. A., Wright, E. M., & Gould, D. (2013). Coaches' perspectives on sport-plus programmes for underserved youth: An exploratory study in South Africa. *Journal of Sport for Development*, *1*(2), 53–66. Retrieved from https://jsfd.org/

Wright, P. M., Jacobs, J. M., Howell, S., & Ressler, J. D. (2018). Immediate outcomes and implementation of a sport for development coach education programme in Belize. *Journal of Sport for Development*, *6*(10), 51–65. Retrieved from https://jsfd.org/

Zipp, S., & Nauright, J. (2018). Levelling the playing field: Human capability approach and lived realities for sport and gender in the West Indies. *Journal of Sport for Development*, *6*(10), 38–50. Retrieved from https://jsfd.org/

Appendix

Journal	Citation	User focus	Problem framing	Visualisation	Experimentation	Diversity
JSFD	(Mataruna, Range, Guimaraes, & Melo, 2015)			Making sense of data		
JSFD	(Siefken, Schofield, & Malcata, 2014)			Making sense of data		
JSFD	(Hills, Gómez Velásquez, & Walker, 2018)		Problem focus	Making sense of data Making tangible		
JSFD	(Gadais, Webb, & Garcia, 2017)			Making sense of data Thinking through doing		Considering ideas from other fields Systemic perspective
JSFD	(Gardam et al., 2017)			Making tangible Making sense of data		Background research
JSM	(Schulenkorf, 2016)		Problem exploration	Making sense of data Making tangible		
SMR	(Reis, Vieira, & Sousa-Mast, 2016)		Questioning the problem Problem exploration	Making sense of data Making tangible		
JSFD	(Svensson & Woods, 2017)		Unconstrained view of the problem Problem exploration	Making sense of data		Systemic perspective Background research
JSFD	(Welty Peachey, Cohen, & Musser, 2016)	Deep user understanding Active user involvement	Unconstrained view of the problem	Making sense of data		
JSFD	(Hamilton, Foster, & Richards, 2016)		Question the problem Identifying pain points	Making sense of data		Systemic perspective
JSFD	(Obadiora, 2016)	User orientation Human-centredness		Making sense of data		Systemic perspective
JSFD	(Cottingham, Blais, Gearity, Bogle, & Zapalac, 2015)		Problem exploration Identifying pain points	Making sense of data		Diversity of perspectives Systemic perspective
JSFD	(Smith, Wegwood, Llewellyn, & Shuttleworth, 2015)	User orientation Deep user understanding	Problem exploration Widen the problem Identify larger problem space	Making sense of data		

(*Continued*)

Continued.

Journal	Citation	User focus	Problem framing	Visualisation	Experimentation	Diversity
JSFD	(Bean, Forneris, & Fortier, 2015)	User orientation	Problem exploration	Making sense of data		
JSFD	(Hanrahan & Ramm, 2015)	User orientation	Problem exploration Open to unexpected	Making sense of data		
JSFD	(Mayrand, 2013)		Problem exploration	Making sense of data		Background research Considering ideas from other fields
JSFD	(Ekholt, 2013)		Futuristic thinking	Making sense of data Making tangible		Background research
JSFD	(Coleby & Giles, 2013)		Problem exploration	Making sense of data		Media Diversity of perspectives
JSFD	(Wagnsson, Augustsson, & Patriksson, 2013)	User orientation Deep user understanding	Widen the problem Identify larger problem space	Making sense of data		
JSM	(Svensson & Seifried, 2017)		Widen the problem Identify larger problem space	Making sense of data Making tangible		Considering ideas from other fields Systemic perspective
JSM	(Misener & Schulenkorf, 2016)		Problem exploration	Making sense of data Bias towards action	Action orientation Optimistic & energetic	
JSM	(Schulenkorf et al., 2016)		Widen the problem Identify larger problem space	Making sense of data Making tangible		Systemic perspective Diversity of perspectives
JSM	(Marshall & Barry, 2015)		Problem exploration	Making sense of data	Iteration and testing	
JSM	(Inoue, Funk, & Jordan, 2013)	User orientation	Problem exploration	Making sense of data		
ESMQ	(MacIntosh, Arellano, & Forneris, 2016)		Problem exploration Identifying pain points	Making sense of data Making tangible		Diversity of perspectives
SMR	(Edwards, 2015)		Problem exploration Widen the problem Identify larger problem space	Making sense of data Making tangible		Considering ideas from other fields Systemic perspective
SMR	(Gallant, Sherry, & Nicholson, 2015)	User orientation	Problem exploration	Making sense of data		
SMR	(Welty Peachey, Borland, Lobpries, & Cohen, 2015)	User orientation	Problem exploration	Making sense of data		
JSFD	(Wright, Jacobs, Howell, & Ressler, 2018)	Deep user understanding	Problem exploration	Making sense of data	Iteration and testing Test to obtain user feedback	
JSFD	(Zipp & Nauright, 2018)	Deep user understanding Empathetic	Identify larger problem space Widen the problem	Making sense of data		Diversity of perspectives

JSFD	(Whitley, Massey, & Farrel, 2017)	User orientation	Problem focus Question the problem	Making sense of data		Integrative thinking
JSFD	(Mwaanga & Adeosun, 2017)		Problem focus Question the problem	Making sense of data Making tangible	Iteration and testing Test to obtain user feedback	Systemic perspective
JSFD	(Stewart-Withers, Sewabu, & Richardson, 2017a)	User orientation	Problem exploration	Making sense of data		Diversity of perspectives
JSFD	(Meyer & Roche, 2017)	User orientation	Problem exploration	Making sense of data		Systemic perspective Diversity of perspectives
JSFD	(Devine et al., 2017)	User orientation Deep user understanding	Identifying pain points Problem exploration Identify larger problem space	Making sense of data		Diversity of perspectives Democratic spirit
JSFD	(Warner, Sparvero, Shapiro, & Anderson, 2017)	User orientation	Problem exploration	Making sense of data		Integrate diverse outside perspectives
JSFD	(Halsall & Forneris, 2016)	User orientation Deep user understanding	Widen the problem Identify larger problem space	Making sense of data Making tangible	Test to obtain user feedback	
JSFD	(Lopes, 2015)	User orientation	Problem exploration	Making sense of data		Systemic perspective Diversity of perspectives
JSFD	(Forber-Pratt, 2015)	User orientation Deep user understanding	Problem exploration Widen the problem Identify larger problem space	Making sense of data		Diversity of perspectives Systemic perspective
JSFD	(Inoue & Forneris, 2015)	User orientation	Problem exploration Widen the problem Identify larger problem space	Making sense of data		Diversity of perspectives Systemic perspective
JSFD	(Bruening et al., 2015)	User orientation Deep user understanding	Unconstrained view of the problem Problem exploration Identifying pain points Futuristic thinking	Making sense of data		Open to differences in personality
JSFD	(Blom et al., 2015)	User orientation		Making sense of data	Test to obtain user feedback	Systemic perspective
JSFD	(Simard, Laberge, & Dusseault, 2014)	User orientation	Problem exploration Widen the problem Identify larger problem space	Making sense of data		Open to differences in personality
JSFD	(Romeo-Velilla et al., 2013)	User orientation	Problem exploration	Making sense of data		Diversity of perspectives
JSFD	(Lecrom & Dwyer, 2013)	User orientation	Problem exploration	Making sense of data		Open to differences in personality
JSFD	(Sherry & O'May, 2013)	User orientation Deep user understanding	Problem exploration	Making sense of data		Diversity of perspectives
JSFD	(Rock, Valle, & Grabman, 2013)	User orientation	Problem exploration	Making sense of data		Systemic perspective

(*Continued*)

Continued.

Journal	Citation	User focus	Problem framing	Visualisation	Experimentation	Diversity
JSFD	(Hancock, Lyras, & Ha, 2013)	User orientation	Problem exploration	Making sense of data Making tangible		Background research
JSM	(Svensson, Andersson, & Faulk, 2018)	User orientation	Problem exploration Question the problem	Making sense of data Making tangible		Systemic perspective Diversity of perspectives
JSM	(Welty Peachey, Burton, et al., 2018)	User orientation	Problem exploration	Making sense of data Making tangible		Diversity of perspectives
JSM	(Jones, Wegner, Bunds, Edwards, & Bocarro, 2018)	User orientation	Widen the problem Identify larger problem space	Making sense of data		Diversity of perspectives
JSM	(Thorpe & Chawansky, 2017)	User orientation Deep user understanding	Problem exploration	Making sense of data Making tangible		Considering ideas from other fields Systemic perspective
JSM	(Welty Peachey & Cohen, 2016)	User orientation Deep user understanding	Problem exploration Identifying pain points	Making sense of data Making tangible		Diversity of perspectives
JSM	(Spaaij & Schulenkorf, 2014)	User orientation	Problem exploration Widen the problem Identify larger problem space	Making sense of data Making tangible		Systemic perspective Diversity of perspectives
SMR	(Bruening et al., 2015)	User orientation Deep user understanding	Problem exploration Widen the problem Identify larger problem space	Making sense of data		Considering ideas from other fields Systemic perspective
SMR	(Cohen & Welty Peachey, 2015)	User orientation Human-centredness Deep user understanding	Unconstrained view of the problem Comfortable with complexity & ambiguity	Making sense of data		Considering ideas from other fields Systemic perspective
SMR	(Harris & Adams, 2016)	User orientation	Question the problem Problem exploration	Making sense of data		Considering ideas from other fields Systemic perspective
SMR	(Svensson & Hambrick, 2016)	User orientation	Problem exploration	Making sense of data		Considering ideas from other fields Diversity of perspectives
SMR	(Schulenkorf, 2017)	User orientation	Question the problem Problem exploration Futuristic thinking	Making sense of data Making tangible		Diversity of perspectives
SMR	(Sherry, Schulenkorf, Seal, Nicholson, & Hoye, 2017)	User orientation	Question the problem Problem exploration	Making sense of data Making tangible		Diversity of perspectives
SMR	(Stewart-Withers, Sewabu, & Richardson, 2017b)	User orientation Deep user understanding	Question the problem Problem exploration	Making sense of data Making tangible		Collaboration Combinations of different skills and personalities

						Open to differences in personalities
						Diversity of perspectives
SMR	(Svensson, 2017)	User orientation	Futuristic thinking Widen the problem Identify larger problem space	Making sense of data Making tangible		Considering ideas from other fields
SMR	(Inoue, Heffernan, Yamaguchi, & Filo, 2018)	User orientation	Problem exploration	Making sense of data Making tangible		Diversity of perspectives
SMR	(Jones et al., 2017)	User orientation	Questioning the problem Problem exploration	Making sense of data Making tangible		Considering ideas from other fields
SMR	(Spaaij, Schulenkorf, Jeanes, & Oxford, 2018)	User orientation	Question the problem Problem exploration	Making sense of data Making tangible		Considering ideas from other fields Systemic perspective
SMR	(Welty Peachey, Cohen, Shin, & Fusaro, 2018)	User orientation Deep user understanding	Problem exploration Identifying pain points	Making sense of data Making tangible		Collaboration Systemic perspective Diversity of perspectives
JSFD	(Walters et al., 2018)	Human-centredness User orientation	Problem exploration Futuristic thinking	Making sense of data	Test to obtain user feedback Optimistic & energetic	Diversity of perspectives
JSFD	(Meir, 2017)	User orientation	Unconstrained view of the problem Problem exploration Identifying pain points Futuristic thinking	Bias toward action Making sense of data	Optimistic & energetic Learning-oriented	Diversity of perspectives
JSFD	(Wells & Welty Peachey, 2016)	User orientation Deep user understanding	Problem exploration	Making sense of data	Test to obtain user feedback Optimistic & energetic	Diversity of perspectives Open to differences in personality
JSFD	(Mandigo et al., 2016)	User orientation Deep user understanding	Widen the problem Identify larger problem space	Making sense of data Bias towards action	Test to obtain user feedback	Diversity of perspectives Considering ideas from other fields
JSFD	(Bean & Forneris, 2016)	User orientation Deep user understanding	Problem exploration Futuristic thinking	Making sense of data	Test to obtain user feedback Action orientation	Diversity of perspectives
JSFD	(Cooper et al., 2016)	User orientation Deep user understanding	Problem exploration	Making sense of data	Test to obtain user feedback Learning-oriented	Collaboration
JSFD	(Beacom & Golder, 2015)	User orientation Deep user understanding	Problem exploration Futuristic thinking	Bias toward action Making sense of data	Action orientation Learning-oriented	Systemic perspective Considering ideas from other fields
JSFD	(Gannett et al., 2014)	User orientation	Problem exploration Open to unexpected	Making sense of data	Test to obtain user feedback	Sytemic perspective Open to differences in personality

(*Continued*)

Continued.

Journal	Citation	User focus	Problem framing	Visualisation	Experimentation	Diversity
JSFD	(Whitley et al., 2013)	User orientation Deep user understanding	Problem exploration Identifying pain points	Making tangible Making sense of data	Test to obtain user feedback	Systemic perspective Diversity of perspectives
JSFD	(Burnett, 2013)	User orientation	Problem exploration	Making sense of data	Test to obtain user feedback	Diversity of perspectives Collaboration
JSFD	(Schulenkorf, 2013)	User orientation	Identify larger problem space Widen the problem	Making sense of data Making tangible	Test to obtain user feedback	Diversity of perspectives
JSM	(Welty Peachey, Cunningham, et al., 2015)	User orientation Deep user understanding	Problem exploration	Making sense of data	Test to obtain user feedback	Diversity of perspectives Open to differences in personality
JSM	(Welty Peachey, Bruening, et al., 2015)	User orientation	Problem exploration Widen the problem Identify larger problem space	Making sense of data	Learning oriented	Diversity of perspectives
SMR	(Olushola et al., 2013)	User orientation Deep user understanding	Problem exploration Widen the problem Identify larger problem space	Making sense of data Making tangible	Test to obtain user feedback	Diversity of perspectives

Note: ESMQ = European Sport Management Quarterly; JSFD = Journal of Sport for Development; JSM = Journal of Sport Management; SMR = Sport Management Review.