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## A gymnastics coaches' professional development program: exploring a needs-focused social learning space

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### ABSTRACT

**Background:** Learning is a social, situational process. Effective coaches consistently apply situationally appropriate coaching knowledge to improve athletes' developmental outcomes. Learning experiences should be cognizant of coaches' learning needs and capacity to apply knowledge to facilitate athletes' holistic development. This involves meaningful learning experiences tailored to coaches' contextual learning needs. The use of social learning theory in supporting coach learning and development has been recommended in providing meaningful learning environments closer to coaches' realities.

**Purpose:** This study explored the impact of a professional development program designed to create a social learning space (SLS) for competitive youth artistic gymnastics coaches and evaluate the value created therein. Specifically, the purpose of this study was to explore the extent to which coaches generated a SLS and the value the coaches created through their participation in the program.

**Methods:** Six coaches joined a weekly gathering over five weeks. Data comprised transcribed video records of the gatherings, a focus group with the coaches, a semi-structured interview with the facilitator of the gatherings, and the researcher's notes. Thematic analysis was employed to inductively analyze the creation of the SLS and deductively analyze the value created using the value creation framework (the VCF).

**Findings:** The findings revealed that facilitating a learning opportunity based on SLS elements can result in coaches creating a SLS. Through building productive relationships to learn to make a difference in their practices, the coaches created value. Specifically, the coaches broadened their perspectives on athlete development, deepened their understanding of gymnasts' developmental needs, and began to transform some of their current coaching practices.

**Conclusion:** This study demonstrates the promotion of a professional development program focusing on coaches' learning needs using the elements of SLS and the tenets of the constructivist view of learning. The SLS structure of this study has implications for the development and implementation of professional development programs for coaches. Future studies on designing professional development opportunities for coaches should expand on the different uses of the SLS approach as a more pervasive structure of social learning, drawing on complementary principles with theories and adopting a longitudinal perspective.

### ARTICLE HISTORY

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### KEYWORDS

Coach education; youth sport; athlete outcomes; value creation; communities of practice

## Introduction

Coaching is a complex and rapidly evolving endeavor (Cushion and Lyle 2010) which involves coaches going beyond being solely knowledgeable or knowing the ‘tricks of the trade’ (Cushion, Armour, and Jones 2003; Gilbert, Gallimore, and Trudel 2009). In the coaching literature, coaching effectiveness is linked to coaches’ capacity to consistently solve complex problems in specific sport contexts (Gilbert, Gallimore, and Trudel 2009). While this requires coaches to stay abreast of knowledge produced in coaching science and adopt a lifelong learning approach (Duarte and Culver 2014; Trudel, Gilbert, and Werthner 2010), they often reproduce their previous coaching experiences in practice and struggle to obtain and apply knowledge that could resonate with their contextual learning needs (e.g. Nash and Sproule 2012). Research suggests that the traditional view of learning (e.g. one-way dissemination of generic content) the current formal coach development programs have generally adopted do not represent coaches’ ‘messy reality’ (Jones, Bowes, and Kingston 2010) and therefore falls short of responding to their individual learning needs (Trudel, Gilbert, and Werthner 2010). This has created an ongoing challenge for providing learning opportunities for coaches’ continuing development while considering their situated knowledge needs (Gilbert, Gallimore, and Trudel 2009).

Research in athlete development and coaching suggest that effective coaching practices should lead to developmental experiences that nurture context-specific sport outcomes of competence, confidence, connection, and character in youth athletes (Côté and Gilbert 2009; Fraser-Thomas, Côté, and Deakin 2005). However, recent research indicates that coaches’ practices may have been misaligned with youth athletes’ contextual needs (Yapar and Ince 2014), leaving coaches lacking the competencies to facilitate athletes’ sport outcomes (Kilic and Ince 2021). Coaches’ ability to align their practices to their athletes’ abovementioned outcomes is contingent upon an increased awareness of their professional needs and capability of applying informed practices accordingly (Côté and Gilbert 2009; Trudel, Gilbert, and Werthner 2010). In order to help coaches to improve their knowledge and practices specific to their situations, researchers have developed continuing learning opportunities using collaborative learning approaches (e.g. Gilbert, Gallimore, and Trudel 2009) grounded in Social Learning Theory (Wenger 1998).

The concept of communities of practice (CoP; Wenger 1998) in which learning is described as occurring with interactions in situated practices and including identity development in different contexts has contributed to coaching research. Studies using a CoP approach have indicated its potential to improve coaches’ learning and coaching practices that can positively impact athlete development (e.g. Bertram, Culver, and Gilbert 2016; Cassidy, Potrac, and McKenzie 2006). However, researchers have also noted an inconsistency in the use and operationalization of social learning strategies such as CoPs in coaching research (Culver and Trudel 2008). This study intended to understand the impact of creating a social learning space (SLS; Wenger-Trayner and Wenger-Trayner 2020) on coaches’ capacity to make a difference in their coaching practices by using this theoretical framework.

### *A social learning space*

Wenger-Trayner and Wenger-Trayner (2020) provide a theoretical framework that restates the social learning theory in terms of ‘learning to make a difference.’ The authors argue learning does not have to be confined to learners’ identification with a shared domain, nor the commitment to a specific regime of competence, as in communities of practices (CoP; Wenger 1998). A SLS is ‘a particular experience of engagement that takes place among people in pursuit of learning to make a difference’ (13). The authors provided an operational framework whereby learning happens in interaction with others. Rather than being a result of being taught, participants in a SLS learn together to make a difference. Accordingly, the SLS is a social space created through the relationships and interactions of the participants rather than the physical or online space they inhabit.

The structural participation characteristics necessary for enabling a SLS are (a) caring to make a difference, (b) engaging uncertainty, and (c) paying attention. Caring to make a difference is the belief that participating in a space will allow the participants to get better at making the difference they care to make. Learners drive themselves according to their aspirations concerning what they care about. Engaging uncertainty is a 'state of being in tension between caring to make a difference and having a clear path' (Wenger-Trayner and Wenger-Trayner 2020, 21) to make that difference. Paying attention is about the whole experience of participation, which includes direct responses from others such as questions, critiques, suggestions of what is working in practice or not, and what is shown by data.

Wenger-Trayner and Wenger-Trayner (2020) suggest that SLSs can be encouraged through a designed series of gatherings with agendas and facilitation. A facilitator is suggested when a group is less self-driven and the distribution of power among participants is uneven. A facilitator can help ensure the contribution of all participants to learning. A classroom setting may become a SLS with the engagement of uncertainty through a facilitator bringing a pertinent challenge to the space and inviting the learners to engage in an open inquiry instead of purely transmitting certainty to learners.

The value creation framework (the VCF) explains the ways social learning can make a difference in practice and is a thorough method for assessing learning in a community. Learning is viewed as creating value through the negotiation of meaning (Wenger-Trayner and Wenger-Trayner 2020). Therefore, learners' experiences of caring to make a difference and their developing identity are the emphasis rather than becoming knowledgeable, skillful, or conforming to a strict curriculum (Wenger-Trayner and Wenger-Trayner 2020). In the coach development literature, the concept of CoP SLSs has been introduced within existing (e.g. Bertram, Culver, and Gilbert 2017) and nurtured contexts (e.g. Culver and Trudel 2006; Garner and Hill 2017; Stoszkowski and Collins 2017). These studies proved its impact on coaches' professional development, some of which used the VCF when assessing the impact (e.g. Bertram, Culver, and Gilbert 2016). The impact of situated learning has also been evidenced in athletes' CoPs (e.g. Christensen, Laursen, and Sørensen 2011).

Recent work in professional learning has begun to explore SLSs and other nurtured professional development initiatives by assessing their effectiveness using the VCF. For example, Vinson and colleagues (2019) examined the value created in an 18-month coach development program. In another study, Duarte, Culver, and Paquette (2021) described the framing as: 'both an emergent and dialogic process which can provide the contours of a social learning space but not the specifics of what the learning will look like' (198). These authors used a SLS to increase the learning capability of the wheelchair-curling landscape, assessing certain values. Duarte, Culver, and Paquette (2021) also applied a SLS to provide wheelchair curling coaches with accessible, relevant, trusty, and supportive learning opportunities within the community across Canada. Valério, Farias, and Mesquita (2023) aimed to understand the learning interactions in a Physical Education Teacher Education (PETE) program by drawing on the VCF to assess pre-service teachers' challenges in their PETE SLS. Meanwhile, Guldberg and colleagues (2021) applied the VCF to reveal the gains of the participants in a transnational CoP for development in autism education. They focused on exploring the change process in their practices.

Other researchers have suggested that community-based learning environments can provide meaningful continuing learning opportunities for coaches (e.g. Camiré, Trudel, and Forneris 2014; Gilbert, Gallimore, and Trudel 2009). The findings of the studies on coaches' CoPs (e.g. Bertram, Culver, and Gilbert 2016; Callary 2013; Cassidy, Potrac, and McKenzie 2006; Culver, Trudel, and Werthner 2009) have reported an increase in participant coaches' abilities to impact their athletes' sport outcomes. However, more research is needed on nurturing a SLS as a 'more pervasive structure' of social learning (Wenger-Trayner and Wenger-Trayner 2020) in competitive youth sport. The current study aimed to help coaches generate the structural characteristics of a SLS and make a difference in their practices to facilitate holistic athlete outcomes (i.e. beyond technical and tactical development); a need demonstrated in a previous study (Kilic and Ince 2021). With this

purpose in mind, the research questions were to explore (a) to what extent does a designed 5-week professional development program for artistic gymnastics coaches help generate a SLS? and (b) what value do the coaches create, according to the VCF, through their participation?

## Method

The authors see SLSs as communities of inquiry, falling within the participatory paradigm (Lincoln, Lynham, and Guba 2011). Participatory approaches regard human experience as a valuable pursuit (Heron and Reason 1997). Thus, such examinations are ‘often incomplete without action on the part of the participants’ (Guba and Lincoln 2005, 198). Epistemologically, as interpretation is necessary to reach the truth (Heshusius 1994), the interpretation of experience is regarded as the data, and explaining and interpreting data were required to reveal the results (Guba and Lincoln 2005). Therefore, collaborative inquiry with its cycles of action and reflection embodied in the ongoing interactions between the participants throughout the program, was the primary focus for interpreting the findings.

## Participants

### Coaches

Artistic gymnastics coaches in one of the central gymnasiums in the Ankara region of Türkiye participated in this study. The selection criteria were: at least a second level of certification (corresponds to competition development) and two years of field experience in the competitive context. All coaches matching the criteria were invited to take part in the study ( $n = 18$ ); six agreed to participate (Table 1).

### Facilitator

The facilitator (the third author) was a 47-year-old male working at a local university as a lecturer at the time of the study. He has an elite background in athletics and is a coach, coach developer, and consultant. He routinely facilitates learning practices and builds professional development opportunities in sport. His role in the study was to help coaches create an environment that could give rise to a SLS. Specifically, he guided a series of gatherings to improve the coaches’ interaction and deep learning, which involved encouraging the participants’ sense of agency, negotiating key topics to discuss, sharing relevant data and scientific information, and keeping discussions focused on learning and the 4Cs throughout the gatherings.

## Invitation to participate in a SLS

Wenger-Trayner and Wenger-Trayner (2020) suggested triggering participation in a SLS with an intervention, such as by encouraging the recognition of structural or contextual constraints as

**Table 1.** The coaches’ biographies.

Name	Gender	Age	Roles	Coaching experience in years	Education	Coaching Level (out of 5)
Figen	Female	23	Coach	2	Bachelor’s in PE & Sports	2
Cem	Male	24	Coach	5	Bachelor’s in PE & Sports	2
Mehmet	Male	24	Coach, gymnast	4	Bachelor’s in PE & Sports	2
Kubat	Male	22	Coach	3	Undergraduate in Sports Coaching	2
Emrah	Male	35	Head coach, gymnast	15	Bachelor’s in Sports Coaching	5
Yasin	Male	49	Head coach, gymnast	25	Bachelor’s in Sports Coaching	5

appropriate (21). Following the ethical approval of the researchers' institution, the lead researcher invited the coaches to participate in five weekly gatherings.

During the first gathering, the participants negotiated the intervention's goals, their roles, and the nature of the gatherings. The facilitator discussed the overview of the following four-week SLS with the coaches, specifically, gathering together to make a difference in their gymnasts' developmental sport outcomes (the 4Cs – competence, confidence, connection, and character; Côté and Gilbert 2009). A SLS involves content and activities to co-create knowledge with no strict curriculum. While the 4Cs provided a framework and common language for the coaches to conceptualize athlete development beyond technique and tactics, the work of the SLS was to co-create ways of integrating the concepts into their practices. When new demands arose, new content was added, and new resources were accessed to support the learning (e.g. see the addition of a 5th C – creativity below and regarding a specialist).

To encourage a SLS, gathering and analyzing relevant data with the participants may be required (Wenger-Trayner and Wenger-Trayner 2020). The facilitator began sharing information on youth athletes' developmental outcomes (Côté and Gilbert 2009) and asked coaches whether this framework might represent the main goals to make a difference in gymnasts' sport development. The coaches agreed that the framework reflected the aspects they aspired to develop in gymnasts, with an addition of a 'creativity' aspect. Then the facilitator shared data from a previous study in the same artistic gymnastics context (Kilic and Ince 2021), which showed youth gymnasts' current developmental needs regarding the 4Cs. The coaches subscribed to the findings of the data. When the facilitator asked whether the coaches would like to learn to make a difference in these developmental aspects together, they agreed to participate in the gatherings. Individuals engaging in a SLS are called 'participants,' implying a personal commitment to participate in the learning process of the space (Wenger-Trayner and Wenger-Trayner 2020).

The 4Cs and 'creativity' were used as guiding topics of the subsequent four weekly gatherings (see Table 2). For each topic of discussion, scientific content was suggested by reviewing relevant athlete development literature (e.g. Côté and Gilbert 2009).

### The delivery strategy

The facilitator followed a five-step delivery strategy during the gatherings to encourage the participants' interaction, creation of relationships, and engagement (see Figure 1). This 5-step strategy was devised drawing on the suggestions of the literature on coaches' learning and our experiences in infusing a constructivist view of learning in physical education and coach education contexts. In delivering professional development programs, researchers have emphasized adopting a social constructivist-informed approach to enhance coaches' capacity to learn and apply knowledge (Armour 2010; Trudel, Culver, and Werthner 2013). This strategy helped promote a stepwise enhancement of the participants' meaningful learning through practical experiences and scientific information, to develop their capacity to act and make a difference in their current practices.

**Table 2.** The content and flow of the SLS.

1. Week	Invitation	- Negotiate goals and content adequacy - Communicate roles, program expectations, and responsibilities
2. Week	Discussing Character	
3. Week	Discussing Connection	
4. Week	Discussing Confidence and Creativity*	- Applying a 5-step strategy
5. Week	Discussing Competence and Meeting with a Sport Psychologist*	- Information organized for each outcome

\*Requested by the coaches

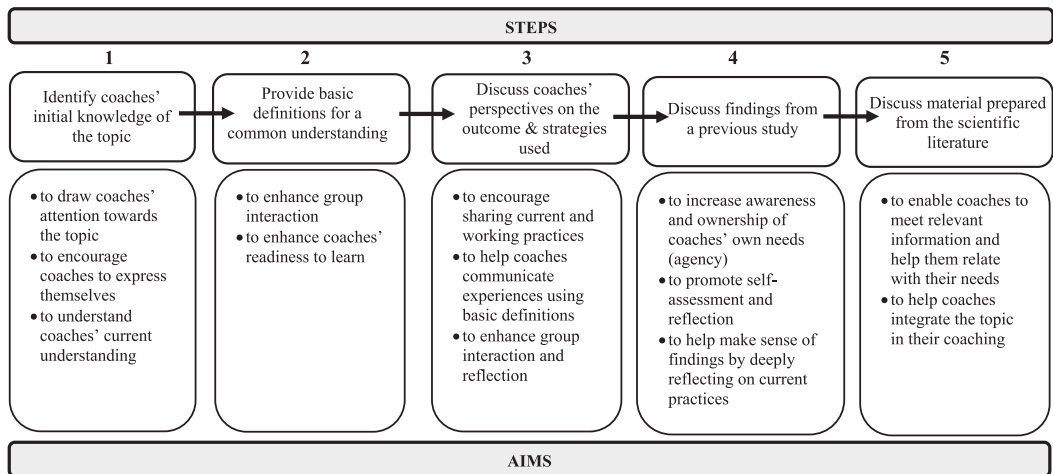


Figure 1. The 5-step learning strategy.

### Data collection and analysis

With the coaches' permission, the five SLS gatherings were video-recorded in a classroom equipped with audio-visual tools at a university. The lead researcher attended all the SLS gatherings as an observer, taking notes on the coaches' participation process. The SLS gatherings took between 2 and 2.5 h, once a week for five weeks.

During the week following the fifth SLS gathering, a focus group was conducted with the coaches on their experiences of the program. Also, a semi-structured interview was conducted with the facilitator at the completion of the program to understand his experience with the SLS generation process. The lead researcher audio-recorded the focus group and the interview, and all recorded material was transcribed verbatim for the analysis. This resulted in 183 pages of single-spaced data, which was analyzed using NVivo (released in March 2020). A six-phase model of thematic analysis (Braun, Clarke, and Weate 2016) was used to analyse the data: (a) Familiarization with the data, (b) generating initial codes, (c) searching for themes, (d) reviewing themes, (e) defining and naming themes, and (f) producing the report. The first author familiarized himself with the data and generated initial codes and themes from the transcripts. Accordingly, the data were broken down into discrete parts, carefully examined, and compared for similarities and differences, and codes were created (e.g. sharing ideas). Then, the most frequent and significant codes were collated, and the most critical categories in the data regarding the research questions were developed (e.g. developing awareness). The data were categorized based on their conceptual similarity. Finally, the themes comprising the assembled related categories were created (e.g. relevant content).

The themes were created both by the data (inductively) and using the VCF (Wenger-Trayner and Wenger-Trayner 2020). The inductive analysis provided an inclusive understanding of the participants' SLS experience, while the deductive analysis was driven by the second research question, which categorized the coaches' value creation in the value cycles. Eight unfolding learning cycles assessed the participants' learning and readiness to make a difference to their current practices (see Table 3). The value creation takes place within and across the cycles, and various indicators and data sources are suggested to analyze the cycles (Wenger-Trayner and Wenger-Trayner 2020). The second author reviewed the themes created and gave feedback on the analysis, following which the first author refined the themes. Lastly, the authors defined and named the themes, generating clear definitions and names for each.

**Table 3.** Learning Value Cycles (Wenger-Trayner and Wenger-Trayner 2020).

Value Cycle	Description	Example Indicators
Immediate	Participant experience of the social learning space	Level of participation, participants bringing challenges they face for discussion; discussion of serious difficulties, mistakes, or failures; amount and quality of old-timer – newcomer interactions
Potential	The takeaways that potentially make a difference	Richness, diversity, and relevance of advice; sharing of stories of practice and experience; new skills acquired
Applied	What you do with the potential value	Stories from participants' contexts reporting innovations or newly discovered solutions or approaches; errors not repeated
Realized	The result of that application	Success at solving a problem or overcoming an obstacle, satisfied athlete
Enabling	What makes this all possible	Reflection on what works well to support learning in the space
Strategic	Conversations with stakeholders	Regular conversations with stakeholders, recognition of contributions by participants
Orienting	Interactions with the broader landscape	Links to larger movements related to the difference participants care to make
Transformative	Broader or deeper effects	Changes in identity beyond the space

### Quality

A relativist approach was adopted to judge the quality of the study (Burke 2016). Considering the list of criteria Smith and Caddick (2012, 70) offer, this included the substantive contribution of the topic of the study, the comprehensiveness of the evidence based on participants having experiences appropriate for the purpose of the study, and the quality of the data collected and interpreted, and credibility. First, the study represents a deeply grounded social scientific perspective (social theory of learning). Second, the study provides quality evidence, including various data sources (i.e. observations, interviews, and researcher notes) and a rich number of quotations for the judgment of the evidence and its interpretation. Third, the first author spent significant time with the participants before and during the study being a coach sharing the same workplace. Also, the coaches' review of the transcripts and their reflections on the researchers' interpretations of the data were considered.

### Results

The findings are presented in two main sections: (1) The generation of the SLS and (2) the cycles of value the participants created through their participation (Wenger-Trayner and Wenger-Trayner 2020). Regarding the assessment of the values created, the coaches' statements were shared by at least three other coaches most of the time. Therefore, the quotes selected were reported as the reflection of the main findings of the participants' perceptions of the values they created after their participation in the SLS.

#### *The generation of the SLS*

A SLS is what participants create among themselves (Wenger-Trayner and Wenger-Trayner 2020, 19). Thematic analysis of the researcher's notes of the video records of the gatherings and the semi-structured interview with the facilitator indicated that the participants created a SLS during the gatherings. However, at the beginning of the first gathering, most of the participants were concerned about the nature of their participation in the program. Partially because of the facilitator's introduction, the coaches were generally silent during the first quarter of the first gathering. The facilitator stated:

The coaches were worried at the beginning, and they had many question marks in their minds on what they were going to do. Less experienced coaches among the participants seemed more uneasy (Interview).

A SLS fundamentally belongs to the participants (Wenger-Trayner and Wenger-Trayner 2020, 19). After the facilitator shared the aim of the program and the nature of the learning environment

with the coaches, they started to feel comfortable sharing their ideas and experiences and asking questions.

... It is not a lecture. We examined the youth gymnastics environment with a lens and found some problem areas to discuss as a group. I would like to evaluate them from your view and discuss how you find solutions to those problems in the following sessions. While you may learn from each other, I will also learn a lot from you. My role will be to make you think about practices and help solve problems together. We may also consult with international literature when needed. We are curious about to what extent these aspects [the 4Cs] are present in your field and what differences we need to make in them to better support gymnasts' development. (Facilitator, first gathering)

In enabling a SLS, the readiness to care to make a difference, the ability to verbalize it, and the struggles with ambivalence, tensions, and contradictions need to be acknowledged, which calls for sensitive dialog, openness, and reflection (Wenger-Trayner and Wenger-Trayner 2020, 21). Throughout the gatherings, the facilitator helped ensure a trusting environment in which all participants had the same voice and freedom of choice in sharing thoughts, what to prioritize, and what to focus on. To help give rise to a SLS, the facilitator also emphasized the importance of the coaches' adoption of the guiding framework of content. The facilitator stated:

The coaches found the concepts I introduced as significant for gymnasts' development and it was important for meaningful learning. Using a discussion framework the coaches found relevant made my facilitation possible. The coaches prioritized the 'character' outcome and wanted to discuss it first. They also wanted to discuss a fifth aspect [creativity] for effective coaching. When I let them decide the topics and their priorities amongst themselves and listened to their other learning interests, the coaches began to truly engage in the discussions (Interview).

All of the coaches participated in each gathering. As the gatherings continued, the coaches began asking more questions, sharing experiences and reflecting on current practices that may have been normally difficult to share, and engaging in long discussions on how to improve them. The increasing frequency of laughter and friendly talk among the participants was observed throughout the gatherings. The facilitator said:

From the second meeting, the coaches began asking more questions and contributing to each others' learning by sharing their experiences and expertise. As the group was heterogeneous, it was not hard to facilitate group interaction. They started answering each others' questions on the topics while revealing their learning expectations to the group. As the weeks passed, the coaches began discussing and confidently shared practices with each other (Interview).

An example of such interactions among the participants can be seen in the following conversation from a weekly gathering:

Emrah: I talk to children to develop their confidence. I encourage them by saying, 'you are physically ready for this.' But most effective is, I think, the child growing confidence after doing that skill, which he had overestimated before.

Mehmet: Then it depends on whether he can do the movement.

Emrah: It is something that grows in direct proportion to development.

Yasin: The coach-athlete relationship comes into play here again. The gymnast must trust his/her coach. I never make them do skills before they are ready. When injury is prevented, the child's self-confidence stays intact and grows more. If he fails badly during the first trial, he may find it very difficult the next time he performs that move. It is necessary to make the child feel ready and do new movements. Then the child's confidence in the coach and himself/herself increases.

Kubat: Sometimes my gymnasts come and want to practice a new movement. What should I do then?

Mehmet: Its progression is like interconnected steps. If we go out by skipping a step, both the self-confidence will be broken, and the risk of injury will increase. Gradually increasing the difficulty, according to the gymnasts, is important.

Facilitator: Is it to divide the movements into parts and adapt them according to the movements the child can do?

Yasin: I had tough times as a gymnast. On the high-bar days, I would not go to the training because I was hitting my knees so hard every time I finished. My coach was making me repeat when I failed. This decreased my self-confidence as I was repeatedly failing. I still have scars on my knees. He could have given some feedback or help. I became so afraid of the high bar, and neither my self-confidence nor my trust in my coach remained.

Emrah: There are still many gymnasts who quit before they can complete the finishing move in the high bars.

Mehmet: I think that's why they cannot focus, with this fear and anxiety, when they actually can do it. (During the fourth gathering, discussing Confidence)

The facilitator followed the 5-step strategy throughout the gatherings to nurture group interaction and learning. The findings indicated use of this strategy was beneficial for accelerating the coaches' interactions and reflections. The facilitator stated:

Each coach's biography is different; therefore, it was vital to clarify a topic's basic concepts for everyone. When we realized this in the group for each topic, the coaches' ability to discuss them relating their coaching and athletic experiences greatly improved. Getting them together with a heightened shared interest and providing a common conceptual understanding enabled them to make sense of the general areas of need underlined in the data, enrich the discussion with their experiences, and help each other solve them (Interview).

Toward the end of the program, the coaches asked to discuss improving gymnasts' confidence with a specialist. During the second part of the last gathering, the coaches led the discussion by asking specific questions to the invited sport psychologist. The interaction lasted approximately one hour. The facilitator commented:

When the topic came to confidence, the coaches began discussing how a psychologist could support their learning, for example, about imagery. When we invited a sport psychologist to the group, I think the coaches learned what they needed by being able to ask very good questions (Interview).

The facilitator largely attributed the high interaction between the coaches and the sport psychologist to using the five-step learning strategy.

It is easy to say 'work with specialists' to coaches. However, first, coaches need to recognize why they need to work with them and what will be the expectations and boundaries of this work from both sides. I believe this process equipped coaches with such understanding and the ability to communicate what they needed and to what extent they needed assistance (Interview).

### **Coaches' value creation**

As noted earlier, value creation can take place in each defined value creation cycle and across cycles. The value generated in each cycle of the VCF is a complex process. While value creation occurs progressively within each cycle, the value cycles can also lead to one another and result in making a difference (Wenger-Trayner and Wenger-Trayner 2020). Therefore, understanding value creation in each cycle and across cycles might provide a more detailed assessment of the coaches' value creation experience in the SLS. Accordingly, this section reports the value created as a result of the coaches' participation in the SLS under the following five headings. They are (a) immediate value, (b) potential value, (c) applied value, (d) transformative value, and (e) flows across different cycles.

#### **Immediate value**

The coaches engaged in group discussions with the members of the SLS throughout the scheduled weekly gatherings. Although the coaches had initial hesitations during the first gathering, they expressed their motivation and enjoyment of their participation. Figen stated, 'I hesitated to participate since I was not as experienced and knowledgeable. I originally thought I might not be able to be

engaged in the discussions, but I am happy participating in this welcoming environment in the end.’ The coaches found the interactions fun and natural, which motivated them to participate and helped them interact and exchange experiences and information. Emrah stated, ‘Without realizing it, we found ourselves discussing.’

The coaches valued being able to discuss issues with their more experienced peers. Cem thought his participation provided him with a learning space in which he could engage with others and learn from the group of participants.

I am at the bottom of the ladder and knew this learning environment would contribute to my coaching. There were very experienced coaches in the group, and I had never had this opportunity to talk about these issues with them before, although we have been working in the same gymnasium for years. I have learned from the discussions a lot. Now I can make sense of the reasons for many of the practices. Levent [facilitator] helped me realize many aspects that I could not discover about athlete development.

The coaches enjoyed the guiding and problem-based nature of the interactions in which they could contextualize and deeply understand their professional needs. The coaches found the discussion topics valuable, and to represent their real problems and needs. Emrah stated:

The topics we discussed got to the heart of things. They defined our problems and put them in front of us. That was what I liked most. I saw that the issues the facilitator put on the table were our problems we had been confronting in the gymnasium, and we found the answers together. I saw our deficiencies in detail.

The coaches also felt they became a part of a learning group that inspired each other, where trust led to discussing right or wrong ideas. Awareness of professional needs appeared to help coaches develop ownership of them and facilitate interaction. Kubat stated:

When there was a problem to discuss, nobody hid what they knew about it. I could say, ‘I was doing this wrong,’ express my thoughts on a right or wrong problem and learn my mistaken practices. I did not escape. Things got better as we spoke about what we needed to speak about. After all, they were our needs, and we were in the same boat.

Feeling some of their current practices were in line with the theory also helped the coaches confidently interact. Mehmet said, ‘I realized we were also unknowingly doing things scientifically right as written in theory.’

### *Potential value:*

This cycle comprises three subsections: personal assets, relationships and connections, and resources.

*Personal assets.* Participating in the SLS enabled coaches to share new ideas, working strategies, and relevant information and discuss potential solutions for their needs on facilitating athletes’ developmental outcomes. Kubat spoke about listening to group experiences in reexamining his current knowledge and practices:

I noticed that some things I knew and did were wrong. I am at the beginning of my career and was alien to most of the topics we discussed. I realized the potential results of my practices, and I feel more prepared now.

The coaches also highly valued interacting with the psychologist and found their connection with her highly influential for their professional development. Kubat felt that interacting with the psychologist was critical for his learning: ‘She underlined many critical points where we lacked knowledge and the things we were doing wrong, especially in building gymnasts’ confidence. She made us notice these things, and now I could better see what children feel.’ For Yasin, this experience served to recall and reinforce prior learning and knowledge.

It was also remembering what I had forgotten to do. The meetings evoked these and reinforced my knowledge. Although I knew most of them, the training we follow becomes automatized and static in time. It was more of waking up and shaking off. By participating in the program, I remembered things again.

*Relationships and connections.* The coaches emphasized the importance of their relationships with other coaches, the facilitator, and the sport psychologist in the SLS. Emrah stated: ‘there was a climate of friendly conversations. Because of that, we were all open to sharing.’ The coaches’ interactions among themselves and with the specialists appeared to increase their awareness of and ability to access sources of knowledge. This helped them realize the need to collaborate with one another and other specialists when needed. Kubat stated:

I realized it is interconnected and is teamwork. I cannot be a coach and a sport psychologist at the same time, and I saw it when I met her the previous week. I cannot answer every gymnast’s need alone, and you only fool yourself if you try. We need to get help from other professionals.

Yasin commented:

What she (the sport psychologist) said and recommended were very interesting. I took many lessons from them, and I hope we can work with her in the future. We learned a lot during the meetings, and coaching should not be confined to the gymnasium.

*Resources.* Participating in the SLS enabled the coaches to access relevant scientific sources of information on facilitating youth athletes’ developmental outcomes, learning from group experiences, and interactions with the psychologist. Other resource sharing, such as books on athlete development written in Turkish, also took place. The coaches complained about the lack of quality resources for their individual needs and argued that they could not access such rich and relevant information elsewhere. Emrah said: ‘If we had searched for the things we learned, probably we would have only reached the general, unrelated knowledge again’ while Cem commented: ‘We need to keep these documents for our future practices.’

In accessing and understanding relevant information, coaches emphasized the positive influence of the applied learning strategy on their learning. Emrah and Yasin indicated that the group developed a shared understanding of the topics that helped them better understand and facilitate further understanding and interaction among group members:

The facilitator explained those very well, for example, competence, and then we could make connections between this information and our experiences later. This helped create a knowledge special to our sport.

Yasin commented:

Although we may feel the meaning of the concepts like competence or connection, we cannot put them into words and talk properly. The facilitator made them clear to everyone. During the meetings, we became relieved knowing that the facilitator would lead the discussions by giving essential information and providing examples concerning the topic discussed. We could easily understand the concepts discussed and relate the information with our sport.

### ***Applied value: change in coaches’ practice***

The coaches stated that they began focusing on making changes in their current practices even if these were only minor. Some coaches said they began applying the strategies and approaches they learned to improve gymnasts’ development after each week’s gathering. Emrah stated: ‘I certainly saw my weak points here, and then, I began changing some practices in my training.’ He made some changes in his practices to improve his gymnasts’ autonomy and meaningful learning by adapting strategies whilst still taking into account the contextual realities of gymnastics:

Developing the children’s sense of responsibility and freedom became critical to me. I used never to let them be alone during training. Now, I am giving them the right to choose and work on some skills and watching them. I cannot do it for all skills because it can be too risky. Our gymnasts began coming and asking, ‘I want to do this and that,’ and it became very important to me, especially in goal setting. Previously, only I had goals for them in my mind, but now we started to set goals together.

Kubat also focused on increasing his gymnasts' sense of responsibility and autonomy by realizing their importance in gymnasts' development. However, he believed that the impact of this change in his practice would take effect in the longer run.

I used to be a controlling coach, and I wanted to try the things I learned week by week. For example, I discussed the program with my gymnasts in a strength training session. Now, I try to make them feel relaxed and active in the gymnasium. It has showed some positive effects, but we cannot see tremendous changes in two weeks; we need time to see it.

### *Transformative value*

The coaches gained new perspectives on athlete development, became aware of the deficiencies in their current practices, changed their practices, and accessed relevant information throughout their participation in the SLS. Further, the experience seemed to have broader effects on coaches' learning, including triggering changes in their current coaching practices. Emrah stated:

I saw how hard coaching is. You shape gymnasts' character, and gymnasts spend most of their time with you. We bear tremendous responsibility for this issue. I realized not only the talent of gymnasts and training load but also connection, character, and self-confidence are critical for success. We rather want to increase the training hours to five hours if it is three, but everything is connected, and if there is a link missing in the chain, troubles appear in front of us. We have such bad examples in front of us in the field. I saw my weak points here. Then, I began changing them in my training.

Yasin's statement also indicates that his SLS experience helped him create a transformative value:

Psychologically, maybe I do things wrong. I used to tell children, 'Your parents bring you here, and you are responsible for them.' After talking with the psychologist, I realized I made them feel bad and act less responsibly. Her point on teaching children to take responsibility for their own development completely changed my mindset.

### *Flow across different cycles*

The coaches appeared to create a variety of values during their participation in the SLS. Cem's comment on becoming a more caring coach exemplifies a flow of the values the coaches created across applied, realized, and transformative values.

I began encouraging two-way communication with my gymnasts. At the beginning of each training, I started to ask them personally whether anything bothered them or if they had any discomfort. During the training, when something went wrong, I began asking, 'in your opinion, why could you not perform it?'. I started to make them think about their skill performances. I was losing the most delicate parts. Now, gymnasts can approach me easier. At least they do not feel that I do not care about them. Now they don't hide when they hurt themselves.

## **Discussion**

Wenger-Trayner and Wenger-Trayner (2020) suggested that the difference that learning enables participants to make is a gradual process, and it can come about in small, local, and incremental steps. Encouraging participants to create a SLS to make a difference does not require the construction of a shared regime of competence defining membership as in CoPs as SLSs are simpler structures than CoPs. While CoPs have been impactful in coach learning and development (e.g. Bertram, Culver, and Gilbert 2016; Cassidy, Potrac, and McKenzie 2006), it is important to understand the potential of the more pervasive application of social learning theory, the SLS, for coaches' continuing professional development. This study explored the impact of a designed professional development program on creating a SLS and assessed the value the coaches created according to the VCF through their participation in this space. The findings have indicated that the coaches created a SLS through participating in the program.

In line with the three characteristics of participation to generate a SLS, the findings indicate the main factors contributing to coaches' creation of a SLS were: The coaches' emerging group engagement over time (caring to make a difference); their search for answers to their complex issues and situations (what is not yet known), mutually engaging with each other, which resulted in the formation of solid group support (engaging uncertainty); and their attentiveness to the perspectives brought, the questions asked, and the experiences shared such as the coaches' shared working strategies and the scientific suggestions the facilitator shared (paying attention).

The coaches' full participation in the gatherings enabled a space where their dialogs, openness, and reflection flourished. Throughout their participation, the coaches experienced realizations and 'aha' moments. The differences they aspired to make became more concrete in the learning process, and furthermore, their desire to make a difference in their current practices grew over time as they found value in engaging in the conversations (i.e. caring to make a difference).

Also, the coaches' willingness to address their uncertainties over making differences in their current practices improved (i.e. engaging uncertainties), which, as suggested in theory, 'gave rise to' a SLS. The participants were open to being unsettled and uneasy by sharing their current experiences and discussing them and the uncertainties in depth. Lastly, the coaches experienced a shift in their approach to athlete development and gained new perspectives and values, all of which were observed as outcomes of 'paying attention' (28). Wenger-Trayner and Wenger-Trayner (2020) argue that paying attention involves awareness, reflection, and unlearning, which prepare learners to be open to understanding the value of the not-yet-known.

The findings further indicated that participating in the SLS enabled the coaches to create value in the assessed value cycles of the VCF, suggesting SLSs can effectively support coaches' continuing professional development when designed and facilitated according to coaches' learning needs. The learning environment, the topics discussed, and the delivery strategy used throughout the gatherings were perceived to be contributing factors supporting the coaches' value-creating learning experiences.

First, the coaches valued their active participation and collaboration in the current study. Coaches need to feel comfortable sharing ideas and communicating with other members to create a SLS and contribute to each others' learning (Culver and Trudel 2006). The coaches attributed their high trust and openness to the learning environment created throughout the SLS gatherings. Although potential power imbalances were pointed out that could lead to the reproduction of existing knowledge (e.g. Cushion and Denstone 2011), in line with Wenger-Trayner and Wenger-Trayner's (2020) suggestion and the coaching literature (Gilbert, Gallimore, and Trudel 2009) on group engagement, the coaches said they were able to negotiate topics of interest to them and freely participate in discussions throughout the gatherings; that is, issues of power appeared to be minimized.

Similar to previous work (Bertram, Culver, and Gilbert 2017; Culver, Trudel, and Werthner 2009), the present study found that the facilitator had a critical role in nurturing and maintaining group engagement during the gatherings. The coaches mentioned that the facilitator encouraged a positive, non-judgmental, and interactive environment that helped increase their confidence in participating and engaging as a group, and provided them with guidance for focused and meaningful learning.

Second, participating in the gatherings allowed the coaches to build awareness of a holistic approach to athlete development. The coaches reported the topics covered during the gatherings to be targeted to their everyday practice, while also flexible, with new topics discussed when needed. They appeared to construct knowledge pertaining to their individual needs and reportedly began applying some of this knowledge to their own practices.

Third, the adopted delivery format may be an effective strategy for systematically encouraging coaches to create a SLS in a classroom setting. The coaches valued the guiding and problem-focused nature of the discussions. For the coaches, this enabled them to recognize their problems, exchange

experiences and expertise with a shared conceptual understanding, and make meaningful links between the scientific information shared and their individual learning needs. Simply exposing coaches to information does not lead to the intended learning outcomes for coaching effectiveness; instead, it risks leading to transient knowledgeability (Gilbert, Gallimore, and Trudel 2009; Trudel, Gilbert, and Werthner 2010).

A recent study has revealed the importance of a purposeful design of SLSs for successfully guiding professional development programs (Valério, Farias, and Mesquita 2023). The findings of the current study indicate that a designed professional development program based on SLS constructs with facilitation can help participants create a SLS, whereby they build productive relationships to learn to make a difference in their current practices, thereby creating value.

Using the VCF in the data analysis provided a practical way to assess the SLS participants' learning experiences. In the present study, values based on the four VCF cycles were identified. These value-creating learning experiences were instructive in broadening the coaches' perspectives on athlete development and deepening their understanding of their learning needs, which appeared to help them transform some of their current coaching practices. Consulting with the gymnasts over the decisions in a vertically structured strict coaching system exemplifies this transformation.

Despite these promising findings, it is acknowledged that, through the methods used, examples of confirmed realized value could not be found, at least not in terms of changes to coaches' practices. This is not unusual; researchers have found that realized value tends to be found over a longer period of time (e.g. Bertram, Culver, and Gilbert 2016, 2017; Vinson et al. 2019). Thus, the confirmation of some of the coaches' self-reported learning was not possible. This said, a view of learning that includes not only changes to action (i.e. practical), but also to knowledge (i.e. cognitive), and to feelings (i.e. emotional) as espoused by Jarvis (2006), would see some of the coaches' self-reported learning such as in the form of affirmation, as realized value (see above for Mehmet's statement about the coaches realizing that they were unwittingly doing certain things in line with the science discussed). Another aspect that some might consider to be a limitation is the coaches' reporting of their experiences in a focus group. While allowing for dynamic social interactions among participants in exploratory studies, in some focus groups, certain participants may dominate the discussion at the expense of others (Sparkes and Smith 2014). Although rare in this instance, the first author who conducted the focus group diffused such domination by asking for the quieter participants' views in a supportive manner. Indeed, this is not seen as a potential limitation here since the participatory paradigm is epistemologically based on 'critical subjectivity in participatory transaction ...' (Lincoln, Lynham, and Guba 2011, 100). Rather, of importance, and as was the case in this study, is for the facilitator to be well-versed in social learning theory in SLSs (Wenger-Trayner and Wenger-Trayner 2021).

## Conclusion

This study provides an example of nurturing a learner-centred learning environment based on coaches' professional needs in a competitive youth sport context using the social learning theory and inspired by the tenets of the constructivist view of learning. The structure of this study's SLS could inform the design and delivery of future coaches' professional development programs in an effort to systematically enhance coaches' capacity to co-create knowledge with significant others in the sports domain and make a difference to their practice.

Recent research has exemplified the use of social learning theory in various ways to develop coaches (e.g. Garner and Hill 2017; Jones, Morgan, and Harris 2012) and other significant others (e.g. coach developers; Vinson, Simpson, and Cale 2023) while drawing on different complementary principles and theories. Future studies should continue to expand on the various uses of the SLS approach in the 'plug and play' manner proposed by Wenger-Trayner (2013). A longitudinal

perspective is also recommended to better understand the impact on learning and practice in different sport contexts and across different boundaries. Furthermore, the VCF (Wenger-Trayner and Wenger-Trayner 2020) deserves further exploration for framing and evaluating the quality of coaches' learning experiences in such designed educational initiatives.

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