

## **Coach Development: In-situ examples of translating research into practice within Strength and Conditioning**

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**Coach Development: In-situ examples of translating research into practice within Strength and Conditioning**

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Abstract

Researchers highlight the importance of using constructivist, learner-centered approaches to develop effective S&C coaching practice, such as reflective practice and community of practice (COP). Such approaches are relational meaning that the S&C coach developer must build effective relationships with the learner (i.e. S&C coach) to enhance cooperation and engagement, which can take a considerable amount of time. Constructivist learning strategies are essential to develop an athlete-centered coaching approach, which focuses on developing not only performance but also the overall well-being of the athlete. Yet, there has been a considerable lack of evidence of a how to integrate and utilize reflective practice and COP within S&C coach development, as well as documenting their impact. This practical advance article aims to address this knowledge to action gap by examining how a S&C coach developer, who is paid by and in-situ working with an organization, implemented an effective longitudinal, learner-centered coach development program to promote athlete-centered coaching practice. In doing so, we outline the importance of relationship building, creating community, and trust, which underlines the organic process that seamlessly integrates guided critical reflection and COPs as valued learning strategies to develop S&C coaches' psychosocial skills.

Key Words: Constructivist learning, reflective practice, community of practice, athlete-centered coaching, coach development

## Introduction

Sport coaching researchers highlight the importance of using learner-centered approaches to encourage coach learning (e.g., Callary & Gearity, 2020). A learner-centered approach is rooted in constructivist learning theory and places the coach (i.e., the learner in this context) at the center of the learning process for the coach's professional development. For this paper, the coach developer has graduate degrees in both human performance (i.e., strength and conditioning) and sport psychology as well as having certifications in both fields for more than 10 years. The coach developer and coach actively work together to encourage learning by making sense of their experiences (Blumberg, 2009). This collaborative process has been encouraged within strength and conditioning (S&C) and includes interactive and reflective activities such as reflective practice and COP (Gearity et al., 2020). As a result, the S&C coaches' learning becomes more personal (i.e., individual idiosyncrasies) and specific (i.e., context). The ideal result is that the S&C coach develops improved psychosocial skills stemming from psychological, pedagogical, philosophical, and sociocultural competencies (Callary et al., 2022) which are essential to developing effective, athlete-centered coaching practice (Turnnidge & Côté, 2017). To date, published S&C coach development examples describe primarily biophysical-technical skill development (Gearity et al, 2020), with learning being regulated through online certification and skill assessment (e.g., NSCA, 2022). With the lack of formal focus on psychosocial skill development within S&C curricula, the integration of learner-centered approaches within S&C coach development has been sporadic and unregulated, as S&C coach developers, as well as sporting organizations, lack the skills to integrate, facilitate and evaluate activities such as reflective practice and COP (Gearity et al., 2020, Zehntner & McMahan, 2014).

Constructivist, learner-centered approaches are relational and require cooperation and engagement from all parties involved. To this end, a common reason that might limit the impact of constructivist approaches in S&C coach development could be the lack of accountability and relationship between the S&C coach developer, the S&C coaches, and the relevant sporting organizations. In addition, S&C coach developers engaging in reflective practice or COP most of the time do so voluntarily, with participation being sporadic and superficial as such practices are continually marginalized in the salaried workload (Vernau et al., 2021). S&C coaches' salaried time often focuses purely on implementing biophysiological-technological knowledge, which produces an immediate, measurable effect, that is scientifically proven; for example the impact of a periodized program to maximize performance (e.g. Haff & Triplett, 2015). Yet, reflective practice and COP take time to develop and measurable impacts, which suggest positive influences on the well-being of the athletes, are not instantly observable. Changing a coaching philosophy and the resulting coaching practice is more difficult to implement than simply changing the reps and set ranges or loading of a workout. Culture or organizational change requires significant time (Thibault & Babiak, 2005) and, more importantly, trust from the organization in the S&C coach developer who aims to collaborate with the S&C coaches. To date, there have been limited opportunities to explore the process of a longitudinal, learner-centered S&C coach developing program, where the S&C coach developer, as in my case (the first author), is paid by, trusted, and in-situ working with an organization to develop their S&C coaches' psychosocial skills and promote S&C culture change.

#### **The context: University of Arizona**

In 2017, I gave a presentation (first author deidentified) on the importance of using coach evaluations for the purpose of professional development. This presentation was consistent with

prior publications (e.g., Gillham et al, 2009; Mallet & Côté, 2006) on coach evaluations as well as education literature with the focus being on providing formative assessments to continue professional development without any specific regard to summative assessments for position advancement or financial rewards. Jim Krumpos, then and now the head Olympic strength and conditioning coach at University of Arizona (UA) was in attendance. A few weeks later Coach Krumpos and I connected on the phone and we began to explore what a collaboration would consist of and what each of us needed to get started. In just a matter of weeks, the collaboration began with my first visit to UA's campus in Tucson, AZ.

The initial visit was guided by two questions posed from Coach Krumpos: (1) where is my staff at now with respect to coaching quality and (2) how do we get better as individuals and as a staff. For those questions to be answered, even partially, I felt required multiple days on-site, a series of formalized conference-presentation-like lectures, active coach observations with me moving freely throughout the training floor, individualized reflective and mentoring sessions based on my direct observations, and informal group conversations akin to a COP approach. The locations of all of this included conference rooms, individual offices, the training floor, S&C coach's homes, walks around campus, car rides, and restaurants and pubs often accompanied by food and drink. Over the years of these in-situ visits, different topics have taken on more importance while others have fallen off. Initial visits were focused more on individual coaching skills such as intrapersonal knowledge of pedagogy and how to coach. After many of those skills and competencies became ingrained and reinforced by the staff members without me being present, we have shifted my visits to have a greater focus on staff collaborations and interpersonal factors of coaches to athletes. At least one on-site visit became dominated by S&C coach to sport coach professional relationship stresses. However, the consistent theme has

always been one of Coach Krumpos's initial questions: How do we get better as individuals and a staff? That has been my underlying target for each visit and interaction.

### **Relationship, Accountability, and Community**

It has been widely documented that the key to learning, whether this will be between an athlete and a coach or a coach and a coach developer, is dependent on an effective relationship that is built on trust and respect (Szedlak et al., 2015, 2020). Often the building of this relationship is taken for granted and follows a traditional hierarchical approach in which the coach or coach developer is the expert who delivers new knowledge to the athlete/coach (Paquette et al., 2019). Equal status within relationships, two-way communication, openness, and sensitivity, are fundamental to effective learner-centered coach development (Paquette et al., 2019; Szedlak et al., 2020). As a result, such a relationship enables the S&C coach, who is willing to be accountable to a S&C coach developer, to trust the coach developer to prioritize and maintain the coach's best interests. The reality of building a relationship based on trust and respect includes a multitude of complex interactions and potential pitfalls. If the S&C coach developer simply agrees with all that is happening with the S&C coach, his/her staff, or the training facility, trust and accountability will be minimized in favor of pleasantness and cordiality. The concern of biases in a coach developer to coach relationship have been hinted at previously (e.g., Gilbert & Trudel, 2005; Mallett et al, 2016; Nash et al, 2017) and Gillham and VanMullem (2021) detailed four specific types of biases that are critical to this type of collaborative relationship. The summation of these biases is simply that S&C coaches may not even be aware of what they need to strengthen within their own coaching practices, thus highlighting the potential value of a trusted and competent S&C coach developer.

From my first in-situ visit to the University of Arizona through my most recent, there are only two staff members that have remained consistent. I have also seen interns leave and come back as paid staff members years later. Additionally, multiple staff members that left have actively maintained their connection with me and in some cases we have worked together in a different capacity at their new location. This is an example of professional networking (Goolsby & Knestruck, 2017) where the former UA coaches want to introduce me to their current colleagues and that has led to additional collaborations, publications, and presentations. Across the years' worth of collaborations, the communication has also changed. S&C coaches have been more willing to reach out during the months between my visits to campus. Those in-between communications have typically been specific problem-focused conversations where the coach was struggling with a sport coach, managing time and demands, or a particularly troublesome athlete or group.

Beyond the increase of between-visit emails and texts, three significant examples of trust from the S&C coaches to me stand out. First, I have been the fortunate recipient of UA labeled clothing items. This is a nice personal thank-you from them to me by all means. It also signifies a trust that the S&C coaches are wanting me to be associated with their program when I am not on their campus. Secondly, are the interactions and introductions when we are all at a neutral location, such as a professional conference. The neutral location piece specifically stands out as the coaches are under no obligation to interact with me and yet they are far more than merely cordial in our interactions and greetings. Current and former UA S&C coaches are happy to see me and come bearing gifts of smiles and hugs while they actively seek to introduce me to their own networks of former classmates and colleagues. Finally, UA hosts their IronCats coaching clinic in the spring each year and I have been invited as a featured presenter each year since my



collaboration began with UA, and am the only repeat speaker across any of those years. This pattern of accountability and trust is a genuine example of a reinforcement cycle wherein we have developed what Wenger et al. (2002) describe as a cyclical COP all geared toward helping both S&C coaches and S&C developers continue to collaborate, grow, and help more S&C coaches and athletes.

### **Reflection and COP**

Reflective practice is a process that enables the coach to understand how their personal beliefs (i.e., philosophical skills) might inform their coaching approach (i.e., pedagogical and psychological skills) within a specific context (i.e., sociocultural skills), is encouraged within S&C (Kuklick & Gearity 2015). Furthermore, Knowles et al. (2006) suggest that an effective reflective process should be guided by an experienced developer, who has the ability to direct the S&C coach into deeper levels of reflection to critically evaluate and reconceptualize coaching practice leading to behavior change. Szedlak and colleagues (2020) examined how such a guided, four-week reflective process, helped S&C coaches to critically reflect and become more athlete-centered (i.e., learner-centered) as they empowered their athletes to become more independent. Although this research is promising, the remote nature of the developer's feedback, which was done online through a shared diary and in online Zoom meetings, could limit the ability of the facilitator to more fully understand the contextual nuances of the S&C coach's sociocultural contexts (Szedlak et al., 2022).

To address this, a key component to my in-situ coach development was the time spent away from the training facility with the coaches to more fully develop how myself and the coaches perceive their sociocultural context impacts their coaching approach. Moon (2004) suggests that reflection is a skill that needs to be learned. S&C coaches are encouraged to learn

and practice biophysical-technical skills (e.g., Olympic lifting, speed and agility drills). However, as the skill of reflection is not part of current S&C curricula (e.g., UKSCA, 2022). Additionally, when S&C coaches attempt by themselves to apply reflection practice their reflection often is limited to a descriptive evaluation of program design, training methods and assessment (Szedlak et al., 2020). Thus S&C coaches lack the training and experience to more critically examine psychosocial factors, interactions, and relationships (Gearity et al., 2020).

Moreover, the actual job of a S&C coach is filled with tasks and stresses beyond simply training athletes (e.g., Gillham et al, 2019; Laskowski & Ebben, 2016; Massey & Vincent, 2013). That is important to point out because as great as a research study is, such as highlighting the importance of reflection, it has to fit within the actual daily confines of the individual S&C coach putting it into practice. Anyone that has ever been to an academic conference can relate, where we go hear a lecture and get excited about something, take great notes, and even are excited to come home and put it into practice. However, once back at our home shop, we quickly are bogged down by our own daily hassles and those great notes simply sit on the corner of our desk buried under today's fresh fires demanding our attention. Thus, it is of no surprise that academic resources feature the least popular when it comes to developing coaching practice (Reade et al., 2008). All of that combines to justify why I place a high value on getting outside the facility and 'talking shop.' These more free-flowing conversations are guided loosely by what had just happened during the day in the facility; yet they fall into an unstructured type of learning environment (Gillham and VanMullem, 2021).

One additional aspect of these outside-the-facility COP events that has been critical to their success is the general tone of the gatherings. Researchers suggest that when building effective relationships, practitioners find it difficult to navigate the boundaries between

professional and personal relationships (Sharpe & Hodge, 2014). Being there in-situ allowed me to build both, personal as well as professional relationships while establishing clear boundaries. In this way, I was able to become an active and accepted part of their community, which was evident in the way the staff would address me according to the environment we interacted in. To Coach Krumpos' credit, and not at my behest, he and his staff refer to me as "Dr. Gillham" while we are inside the facility. It creates a bit of a more formalized atmosphere as I am introduced to sport coaches, administrators, athletes, and athletic trainers that come into the training facility while I am there. However, once we leave the training facility, I am "Andy" and subject to all the comradery-building jokes and human trials and tribulations that we all experience once part of a community. That dichotomy of formalized teaching paired with true peer-based constructivist learning continues throughout the evenings of these COP events. The line often gets blurred further when S&C coaches' spouses and children join in the event and then it reverts to being formalized as I am again introduced as "Dr. Gillham" to newcomers while simultaneously getting warm familiar greetings from the family members I have met previously. Despite the fluidity of the degree of formality, the professional development continues. Often the family members are quite helpful as they point out prior situations they remember a S&C coach struggling with and solicit my help in a retrospective way. At the end of the event, all have shared and heard stories directly related to their chosen profession which helps to create a stronger bond amongst all that are present.

These COP events are congruent with a guided informal learning setting as described by Gillham and VanMullem (2021). Guided reflective sessions are a way to revisit what happened at the facility earlier and/or what was said in a formal coach development session and build a roadmap of how to put the pieces together in a way that is meaningful to the coach. Most

importantly, the focus is on how to apply it to that coach's reality. For example, the S&C coaches and I were together in the facility actively coaching only a few hours ago and I saw the actual behaviours of the group of athletes struggling with a technical lifting error that the S&C coach across the table from me is lamenting. It is difficult to assess how valuable that shared experience truly is as we can skip over the detailed contextual setup from the coach because I, the coach developer, was in that same environment with the coach only a short while ago. That serves as an opening to reinforce to the S&C coach the proper pedagogy of beginning the training session with technique hints and identifying key cue words for various lifts. Because we were both at the training facility together, we have a shared experience of the problem allowing the discussion to be more focused on solutions as opposed to descriptions of the problem and contexts, or the even lower-level of simply complaining about the work day. That saved time can then be spent on building reminders for the S&C coaches to do that when I am not in the room. Is it a reminder on the training sheet? Is it using a peer to verbally remind the coach? Whatever reminder is ultimately implemented, it stemmed from an in-situ collaboration that led to a COP that in turn led to improved coaching practice and professional development that is sustainable and not dependent upon the coach developer in any way.

### **Learner-Centered Becomes Athlete-Centered**

Avner et al. (2017) noted that coaches as well as coach developers often declare they use an athlete-centered approach but have limited knowledge and/or training of how to practically employ athlete-centered practice. My in-situ work with the coaches enabled me to guide the S&C coaches of how to implement what they have learned through reflection and communities of practice in the training facility to become more athlete-centered. For example, two key observations from my visits to UA are coach positioning and detailing the coach-athlete

relationship in a way that both highlight the importance of an athlete-centered approach. Both examples are ones that are easy to discuss outside the training facility in a COP format and seem congruent with an effective guided critical reflection cycle that enhances athlete-centered coaching practice (Szedlak et al., 2020) as well as foundational coach-athlete relationship literature (e.g., Jowett, 2005).

S&C coach positioning has at least two critical elements to it. First, S&C coaches need to maintain visual lines of sight for as many athletes as is reasonably possible. This is a safety measure, as well as an easy way to help coaches remember the athlete is a person and not a robot which is fundamental to an athlete-centered coaching approach (Turnnidge & Côté, 2017). The second critical element is a balance between generic guidelines and the reality of coaching in a facility with a variety of athletes, and possibly other S&C coaches, in the same space at the same time. Some examples of this balancing act are when S&C coaches may need to prioritize actively working with different athlete groups that are: (a) performing a moderately heavy back squat, (b) injured, or (c) completing their session with a light supplementary bicep curl. In addition to those types of programming variables, there are also the people variables such as: (1) some groups of athletes are highly intrinsically motivated, (2) some are more interested in social hour than training, and (3) those that believe training is ineffective or bad for their sport performance in some way. Given all of these variables, it is not uncommon for S&C coaches to simply gravitate to the athletes they have a better personal connection with, or the lift that the S&C coach enjoys more, or even a certain area of the weight room in which the coach prefers to remain, which may be due to an unconscious affinity bias (Winter, 2013). In the above examples, many S&C coaches are simply unaware they have a ‘camping spot’ in the weight room where they spend an inordinate percentage of their time. As long as no one gets injured, the S&C coach is likely to

remain unaware of such a camping spot. However, a simple reflective question such as “why are you with the seniors right now” or “when was the last time you checked on the injured athlete” can prompt enough of a response from the coach to be a more active coach, more self-aware, and thereby more athlete-centered. To be clear, there may be value in a coach maintaining a specific location and if the coach is actively involved while in a single location with present-minded thoughts, that can be an example of excellent athlete-centered coaching practices. It is those other circumstances wherein the S&C coach is unaware they have been stationary for an extended period of time that are ripe for professional development.

It is important to understand that the S&C coach made an informed decision based on their motivation, personality and interests to choose S&C as a profession, which is often overlooked by S&C coach developers and coaches alike. That typically means the individual has a particular affinity for the training facility that is simply not shared by all. Specifically, most athletes will not make sport, and especially not S&C, their chosen career. As obvious as these facts are, when not explicitly realized it can create a significant sense of frustration for the S&C coach not understanding why the athlete is not ready to train with full intensity and attention to detail. Paired with that can be a trap of self-aggrandizing; in this case meaning ‘of course the athletes are ready to listen and train, I’m the coach and I love this!’ That puts the S&C coach and athlete on diverging paths that only continue to get further apart as the season progresses. One of my favourite interventions is to highlight the interdependent or cyclical relationship between athlete and S&C coach. I first ask the S&C coach what happens when the S&C coach is positively fired up and pours passion into the athlete group. Most all respond that the athletes’ intensity increases. I agree, and point out that because the S&C coach is educated and certified and diligent in program design that increased athlete effort yields improved athlete physiological

training adaptations. And once the athlete experiences those training adaptations the athletes are more likely to further increase the intensity on their own as they have seen the positive impacts of the S&C coach's training plans. Ultimately, that then gets the athletes to where the S&C coach was at in the beginning: a willingness to train hard and improve which puts both coach and athlete back on the same path.

The connection of these two observations, S&C coach positioning and the interrelatedness of the coach-athlete relationship, is really about a need to be more mindful of athletes as individual humans under the care of the S&C coach. Many S&C coaches would not hesitate to train alone in a corner of a facility and have long forgotten the intimidation factor of dumbbells exceeding one's own bodyweight, or why there are 15 different attachments available for a pulley machine, or even just the size of the facility. This disconnect may be a partial explanation for why ratings of perceived exertion can be a struggle for some S&C coaches to utilize effectively (Ryan et al., 2022). Similarly, as Gilham and VanMullem (2021) pointed out, in order to combat psychological biases within professional development, the first step is to be aware of the potential for bias and our own role in them. This then highlights the effectiveness of in-situ S&C coach development wherein the S&C coaches and the S&C coach developer are in the same space seeing, feeling, and experiencing the day in a similar fashion. That level of shared experience lends itself to a COP approach where the individual members all have an affinity both toward each other as well as toward solutions in a professional development sense. Reflective questions can be used throughout that process at any point to encourage a more mindful approach from the coaches increasing their attention to the individual athletes under their care. Most importantly to me, teaching S&C coaches to be mindful of the specifics helps to

keep the S&C coaches engaged throughout the athletes' training sessions and focused on connecting with the athletes.

### Discussion

“I want coaches to coach better and will work hard to help them,” this has and will be my philosophy when I work with coaches to develop athlete-centered coaching practice. The above account highlights how my philosophy guides what I do. Moreover, we hope it showcases how what often is considered an academic, difficult to understand and implement pedagogical learning strategy, can become an integrated, valuable part of S&C coach development. Consequently, we highlight how in-situ, longitudinal S&C coach development has the potential to more organically utilize reflective practice and COP to promote organizational change. Did the S&C coaches know they participated in a COP? Did they know they critically reflected? These questions are not our first area of concern as we are not sure the answers even matter. We focus on the outcome that impacted the S&C coaches' practice, which is underpinned by the process they perceived as valuable, whatever they may call it. It is not new to get outside S&C coach developers to focus on upskilling the S&C coaches of an organization when considering biophysical-technical knowledge (e.g., skill acquisition, velocity-based training, Olympic lifting etc.). Thus, we suggest that S&C coach developers focus on developing coaching practice including psychosocial competencies, learner-centered behaviours, and constructivist approaches that can be integrated in the S&C coach development in addition to but as well as the biophysical-technical pieces. However, to date, there is still a considerable knowledge to action gap of how organizations, including certification bodies, value the longitudinal relational contribution of in-situ S&C coach developers aiming to implement constructivist learning strategies



It is difficult to guess as to how many similar examples of in-situ S&C coach development work are on-going across any specific region or context; however we do believe the number is unfortunately low. Initial guesses at why the number is so low are likely to revolve around funding and available time. Those are certainly factors, though we believe those are second-level factors. The three primary factors that occur to us are: (1) a lacking awareness that these services exist and that they can be based on literature, (2) provision to develop more S&C coach developers that focus on implementing learner-centered approaches, and (3) a S&C coach being willing to invite a S&C coach developer into their inner circle and pierce the sanctity of the training facility.

The lack of awareness by the coach is well documented in the coaching science literature. A multitude of authors (e.g., Pope et al., 2015) have called for greater collaboration and outreach from coaching science academics to the actual coaches that can benefit from the wealth of academic literature. However, those calls are documented in the same academic forums that we know from research are not well utilized by coaches (Reade et al., 2008). Thus, we continue to publish in journals and write in textbooks the need to collaborate more on the applied side but we keep saying that to ourselves essentially. Moreover, for those of us outside of academia, there is little incentive to pursue publication of our experiences and the process is often cumbersome and met with an unyielding formality of academic writing style and format. That then means the awareness must come from alternative avenues such as conference presentations, which comes with its own set of funding and timing challenges to attend. However, and leading to the second point, S&C coach education is based on the curricula of certification bodies, which currently exclude psychosocial skill development as well as implementing formal reflective practice and COPs. So, to bridge the gap outlined above, our account strengthens Gearity et al.'s (2020) call

for certification bodies like the National Strength and Conditioning Association (NSCA) and the United Kingdom Strength and Conditioning Association (UKSCA) to more explicitly include these competencies in their curricula. Furthermore, the lack of focus on formal constructivist learning approaches within S&C can also explain why we currently have a limited number of S&C coach developers who might be able to effectively work with an organization.

Our third fundamental barrier is the S&C coach or administrator seeking guidance has to be willing to invite, what initially at least, is a stranger into their facility to see and hear all the things that happen. Essentially, the first step toward building mutual trust is that a S&C coach must open the door to the possibility of having an outsider poke around a bit and explore the inner-workings of the facility and environment. I (first author) have personally had a head coach want to bring me in and be told by her athletic director no, specifically due to not wanting anyone “outside the school” to be in their environment. We can bemoan that all we wish, yet it is their job on the line, their names attached to won-loss records, their time and efforts poured into their career, and most importantly, their reality.

The initial guesses of barriers being financial and time based are real. However, they are not insurmountable. Considering budget, the uniqueness of the collaboration can be the biggest challenge as there is unlikely to be a ‘S&C coach developer’ line in the budget already. How the budget is set is often outside the S&C coach developer’s control and all they can do is be reasonable about the fee charged. The time involved is also often more of an excuse of convenience than a true barrier. Sport coaches often monopolize time with the athletes, meaning that if a sport or S&C training session needs to be cut it seems to be most likely the S&C session is reduced or outright cut more often than the sport coach’s training session. Such a thought process is mirrored when it comes to prioritizing in-situ S&C coach development. Impact of

constructivist learning strategies is not initially evident as psychosocial skills develop over time (Gearity et al., 2020), yet biophysical-technical skills training is easily evaluated, as the S&C coach might have learned a new technique (e.g., Olympic lifting derivatives to enhance peak power). Thus, budget holders that commit to a longer S&C development process have to commit to a larger amount of initial outlay, with the ‘hope’ this actually will be beneficial, all while such practices are not formally endorsed by certifying organizations and hence their effectiveness is not fully understood (e.g., UKSCA, 2022). From a S&C coach developer perspective, time could also be barrier, as in-situ work could become all consuming. As described above, my group COP events after a day inside the training facility typically result in a series of 15 hour work days. Those are long days for all involved, but it is not uncommon for professionals in sport, especially S&C, to have some days that are extremely long. Just like we all have to balance our priorities between professional and personal responsibilities and our own self-care (Carson et al., 2017), we get done what we view as a priority that day.

A final reminder for trained S&C coach developers endeavoring to do this type of in-situ work, and to do it well, there must be a component of fun included. Much like the literature (e.g., Szedlak et al., 2015) supports making practices fun to promote autonomy, which is congruent with a learner-centered approach overall, any sort of in-situ professional development must also be fun. Much like we would advise S&C coaches that fun is not the antithesis of hard work, the same must be true for our own work on providing coach development services. In the case of my work at UA, that means we go out to restaurants and spend that time together, and we invite families to join for part of it, and we attend sporting events on campus when possible. The conversations and reflections can continue well beyond the training facility walls and the fun component can be, should be, present throughout.

### Immediate Future Project

We mentioned that the ultimate goal is for organizations to change their culture and implement formal pathways that allow their S&C coaches to develop athlete-centered coaching practice through reflective practice and COP. As such, we could showcase a strong example of how we might navigate the knowledge to action gap currently existing in S&C. After working with UA for five years it has only just come to the point where we are instituting a formalized in-house peer review process for S&C coaches. Coach Krumpos and I see this project as the combination of one of my initial challenges at UA, regarding formative coach assessment and the realization that it takes a complete cooperating staff for a training facility to function successfully. Due to the iterative and consistent interactions across years we also have been able to better describe the culture and philosophy that Coach Krumpos believes to be paramount to athlete and team success at UA. Thus, the current challenge is to combine all of those, somewhat disparate pieces, into a unifying, self-reinforcing set of principles and action plans geared toward helping the UA S&C coaches develop into athlete-centered S&C coaches to maximize student-athlete potential. This project marks the cultural change we aimed to promote from the beginning. What this means for S&C coach developers, certification bodies and organizations, is that building a foundation which includes relationship building, creating trust, and shared commitment, is essential to complete the cycle of implementing and evaluating how constructivist learning strategies positively impact S&C coach development to become more athlete-centered. While we are aware that the experiences outlined are context specific, which means that exact replication might not work as effective as within the UA, we hope that we stimulated S&C coach developers, S&C certification bodies to further utilize, promote and research longitudinal constructivist learning approaches including reflective practice and COP.



## References

- Avner, Z., Markula, P., & Denison, J. (2017). Understanding effective coaching: A Foucauldian reading of current coach education frameworks. *International Sport Coaching Journal*, 4(1), 101–109. <https://doi.org/10.1123/iscj.2016-0108>
- Blumberg P. (2009). *Developing learner-centered teaching: A practical guide for faculty*. Jossey-Bass.
- Callary, B., & Gearity, B. (2020). *Coach education and development in sport: Instructional strategies*. Routledge.
- Callary, B. Gearity, B. T., Eagles, K., & Szedlak, C (2022). Defining psychosocial strength and conditioning coaching competencies: A qualitative participatory action research approach. *International Journal of Sports Science and Coaching*. (ahead of print).
- Carson, F., Walsh, J., Main, L. C., & Kremer, P. (2017). High performance coaches' mental health and wellbeing: Applying the areas of a work life model. *International Sport Coaching Journal*, 5(3), 293-300. <https://doi.org/10.1123/iscj.2017-0078>
- Gearity, B. T., Szedlak, C., Kuklick, C., Mills, J., Feit, M. K., Callary, B., Feit, A., & Bergan, M. (2020). Enriching selves in S&C society: A multilevel proposal to enhance S&C psychosocial practice as part of the Council on Accreditation of Strength and Conditioning Education. *Strength and Conditioning Journal*, 43(2), 92-103. <https://doi.org/10.1519/SSC.0000000000000592>
- Gilbert, W. D., & Trudel, P. (2005). Learning to coach through experience: Conditions that influence reflection. *Physical Educator*, 62(1). 32-43.

- Gillham, A., Burton, D., & Gillham, E. (2013). Going beyond won-loss record to identify successful coaches: Development of the Coaching Success Questionnaire-2. *International Journal of Sport Science and Coaching*, 8(1), 115-138.
- Gillham, A., Doscher, M., Fitzgerald, C., Bennett, S., Davis, A., & Banwarth, A. (2017). Strength and conditioning roundtable: Strength and conditioning coach evaluation. *International Journal of Sports Science and Coaching*, 12(5), 635–646. <https://doi.org/10.1177/1747954117707484>
- Gillham, A., Doscher, M., Krumpos, J., Martin Diltz, M., Moe, N., Allen, S., & Bridgeman, R. (2019). A roundtable with college strength and conditioning coaches: Working with sport coaches. *International Sport Coaching Journal*, 6(3), 98-108. <https://doi.org/10.1123/iscj.2018-0047>
- Gillham, A. & Van Mullem, P. (2021). Coaching the coach: Helping Improve their performance. In R. Resende & R. Gomes (Eds), *Coaching for human development and performance in sport* (pp 411-440). Springer. [https://doi.org/10.1007/978-3-030-63912-9\\_20](https://doi.org/10.1007/978-3-030-63912-9_20)
- Goolsby, M. J., & Knestrick, J. M. (2017). Effective professional networking. *Journal of the American Association of Nurse Practitioners*, 29(8), 441-445. <https://doi.org/10.1002/2327-6924.12484>
- Haff, G. G., & Triplett, N. T. (2015). *Essentials of strength training and conditioning*. Human Kinetics.
- Jowett, S. (2005). The coach-athlete partnership. *The Psychologist*, 18(7), 412-415.

Knowles, Z., G. Tyler, D. Gilbourne, and M. Eubank. 2006. Reflecting on reflection: Exploring the practice of sports coaching graduates. *Reflective Practice* 7(2), 163–179.

<https://doi.org/10.1080/14623940600688423>.

Kuklick C. R., & Gearity B. (2015) A review of reflective practice and its application for the football strength and conditioning coaches. *Strength and Conditional Journal*, 37(6), 43–51. <https://doi.org/10.1519/SSC.0000000000000159>

Laskowski, K. D., Ebben, W. P. (2016). Profile of women collegiate strength and conditioning coaches. *Journal of Strength and Conditioning Research*, 30(12), 3481-3493.

<https://doi.org/10.1519/JSC.0000000000001471>

Mallett, C.J., & Côté, J. (2006). Beyond winning and losing: Guidelines for evaluating high performance coaches. *The Sport Psychologist*, 20, 213-221.

Mallett, C. J., Rynne, B. S., & Billett, S. (2016). Valued learning experiences of early career and experienced high-performance coaches. *Physical Education and Sport Pedagogy*, 21(1), 89-104. <https://doi.org/10.1080/17408989.2014.892062>

Massey, C. D., & Vincent, J. (2013). A job analysis of major college female strength and conditioning coaches. *Journal of Strength and Conditioning Research*, 27(7), 2000-2012.

<https://doi.org/10.1519/JSC.0b013e31827361a9>

Moon, J. (2004). *A handbook of reflective and experiential learning: Theory and practice*. Routledge.

National Strength and Conditioning Association (2022, November 8). *Certification overview*.

<https://www.nasca.com/certification-overview/>



- Nash, C., Sproule, J., & Horton, P. (2017). Feedback for coaches: Who coaches the coach? *International Journal of Sports Science and Coaching*, 12(1), 92–102. <https://doi.org/10.1177/1747954116684390>
- Paquette, K., Trudel, P., Duarte, T., Cundari, T. (2019). Participating in a learner-centered coach education program: Composite vignettes of coaches' and coach educators' experiences. *International Sport Coaching Journal*, 6(3), 274-284. <https://doi.org/10.1123/iscj.2018-0085>
- Pope, J.P., Stewart, N.W., Law, B., Hall, C.R., Gregg, M.J., & Robertson, R. (2015). Knowledge translation of sport psychology to coaches: Coaches' use of online resources. *International Journal of Sports Science and Coaching*, 10(6), 1055–1070. <https://doi.org/10.1260/1747-9541.10.6.1055>
- Reade, I., Rodgers, W., & Spriggs, K. (2008). New ideas for high performance coaches: A case study of knowledge transfer in sport science. *International Journal of Sports Science and Coaching*, 3(3), 335–354. <https://doi.org/10.1260/174795408786238533>
- Ryan, G. A., Bunn, J. A., & Eisenman, M., L. (2022). How accurate are coaches in predicting perceived exertion of their athletes?. *Journal of Strength and Conditioning Research*, (ahead of print). <https://doi.org/10.1519/JSC.0000000000004290>
- Sharp, L. A., & Hodge, K. (2014). Sports psychology consulting effectiveness: The athletes' perspective. *International Journal of Sport and Exercise Psychology*, 12(2), 91–105. <https://doi.org/10.1080/1612197X.2013.804285>
- Szedlak, C; Smith, M., & Callary, M. (2022). “Nothing was lost sailing-wise and lots is gained on a personal level”: Practitioners' behaviors and athletes' perception of working in

online environments. *Psychology of Sport and Exercise*, 63, 1-8.

<https://doi.org/10.1016/j.psychsport.2022.102285>

Szedlak, C., Smith, M., Callary, & Day, M. (2020). Examining how elite S&C coaches develop coaching practice using reflection stimulated by video vignettes.

*International Sport Coaching Journal*, 7(3), 295-305.

<https://doi.org/10.1123/iscj.2019-0059>

Szedlak, C., Smith, M. J., Day, M. C., & Greenlees, I. A. (2015). Examining athletes' perceptions of effective behaviours in strength and conditioning coaching.

*International Journal of Sports Science and Coaching*, 10(5), 967-984.

<https://doi.org/10.1260/1747-9541.10.5.967>

Thibault, L., & Babiak, K. (2005). Organizational changes in Canada's sport system: Toward an athlete-centred approach. *European Sport Management Quarterly*, (5)2, 105-132.

<http://dx.doi.org/10.1080/16184740500188623>

Turnnidge, J., & Côté, J. (2017). Transformational coaching workshop: Applying a person-centred approach to coach education. *International Sport Coaching Journal*, (4)3, 314–

325. <https://doi.org/10.1123/iscj.2017-0046>

United Kingdom Strength and Conditioning Association. (2022, November 8). *UKSCA competency document*.

<https://www.uk sca.org.uk/assets/pdfs/ASCCdocs/ASCCcompetencyDocument.pdf>

Vernau, J., Bishop, C., Chavda, S., Weldon, A., Maloney, S., Pacey, R., & Turner, A. (2021). An analysis of job description and person specifications to define the requirements for obtaining employment within strength & conditioning. *Professional Strength and Conditioning*, 07-17.

Winters, M. (2013). From diversity to inclusion: An inclusion equation. In B.M. Ferdman & B.R. Deane (Eds.), *Diversity at work: The practice of inclusion* (pp. 205–228). Wiley.

doi:10.1002/9781118764282.ch7

Wenger, E., McDermott, R., & Snyder W. M. (2002). *Cultivating community of practice*. Cambridge University Press.

Zehntner, C & McMahon, J.A. (2014). Mentoring in coaching the means of correct training? An autoethnographic exploration of one Australian swimming coach's experiences, *Qualitative Research in Sport, Exercise and Health*, (6)4, 596-616.

<http://dx.doi.org/10.1080/2159676X.2013.809376>