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# Same coach, different approach? How masters and youth athletes perceive learning opportunities in training

Justin MacLellan<sup>1</sup>, Bettina Callary<sup>1</sup> and Bradley W Young<sup>2</sup>

## Abstract

While traditional, coach-directed pedagogies have dominated youth sport coaching practice, little is known about how coaches orient their approaches to facilitate adult athletes' learning. This study explored a group of Masters athletes' and a group of youth athletes' perspectives of their common canoe/kayak coach's approaches, with an aim to understand if and how the coach's approaches differed based on the age cohort she was coaching. Four focus group interviews (two with each age cohort lasting 60–90 min) were conducted with nine youth (five male, four female; 14–15 years old) and 12 Masters athletes (six male, six female; 27–70 years old). Data were inductively analysed resulting in three higher order themes: (1) communication, exchanges, and interactions; (2) coaching on the basis of the athletes' self-concept; (3) norms, goals, and expectations for learning within the climate. Results indicated that Masters athletes felt their coach responded well to their need for information, gave them room to make decisions, and engaged them in collaborative conversations. Youth athletes described their coach's approaches as more directive: she made decisions for when and how they trained, provided information linearly, and maintained a climate of highly competitive expectations. Whereas coaching approaches with Masters athletes closely paralleled andragogical principles, those for youth aligned with more directed instructional methods. Findings illustrate how one coach's approaches varied on a continuum from coach-directed (i.e. traditional pedagogical) to athlete-directed (i.e. andragogical) styles, both evident to some degree with each cohort.

## Keywords

Andragogy, coaching, Masters athletes, pedagogy, sport learning, youth athletes

The study of sport coaches' approaches is important when considering how to strategically improve athletes' learning.<sup>1</sup> As there are parallels in the intricacies of coaching athletes and teaching students,<sup>1–3</sup> educational theories may be viable frameworks to help better understand aspects of coaching practice.<sup>1</sup> This study aimed to use an education-based framework to understand how adult and youth athletes viewed a coach's approaches to facilitating learning situations related to their sport training.

Traditional, directed coaching pedagogies view learning in sport as the linear transmission of pre-determined, objectified knowledge from coach to athlete.<sup>4,5</sup> Coaches exercising directed instructional styles deliver technical information to lead their athletes towards fixed solutions,<sup>6</sup> taking the onus to decide and deliver the content,<sup>7</sup> which can be considerably limiting to student autonomy.<sup>8</sup> These approaches<sup>9</sup>

have dominated coaching practice particularly with youth. The recurrent use of directed instruction and feedback without gauging athletes' understanding can create a top-down, information-laden approach whereby athlete engagement and problem solving receive little emphasis.<sup>10</sup> Coaches using directed methods tend to provide a wealth of instruction, control how the information is delivered, and address the collective group as opposed to each athlete individually.<sup>9</sup>

Coaching researchers<sup>11,12</sup> have contended that traditional, directed pedagogical approaches can be

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ineffective and overused, arguing for more athlete-centred approaches that allow athletes to meaningfully engage in learning situations.<sup>13</sup> There has been a move to consider 'contemporary', non-linear sport pedagogies that are constructivist, where coaches work to facilitate situations that encourage athletes to 'build' their own content and learning progressions.<sup>14</sup> Advocates for contemporary approaches argue they stimulate learning through guided discovery and foster greater coach-athlete interactions, yet also note they are seldom practiced in sport.<sup>11</sup> Although allowing athletes to work independently without rigid coach direction may be crucial for athlete development, coaches are often reluctant to hand over authentic decision-making opportunities for fear of losing control.<sup>11</sup> The nuanced aspects of adopting such approaches remain predominantly unknown.

Coaching research with adult sportspersons (i.e. Masters athletes (MAs)) reinforces the call for the study of contemporary coaching approaches. Several studies suggest that MAs require approaches that differ from those used with younger groups.<sup>15-17</sup> Callary et al.<sup>15</sup> indicated that MAs' mature self-concept warrants coaching that fosters self-directedness, promotes problem solving in learning activities, and encourages critical appraisal of learning content. This work also revealed that MAs wanted to be coached differently than youth, which suggests that coaches of MAs may be challenged to move away from 'traditional' pedagogical approaches to involve MAs more meaningfully in their sport training experience. Moreover, these findings suggest that MAs prefer approaches that coincide with a set of fundamental principles from education, collectively termed andragogy.

Andragogy represents the art and science of helping adults learn. While andragogy was initially conceived as an antithesis to traditional, teacher-directed pedagogical approaches and tailored to various assumptions for adult learners, its principles have recently been argued to benefit learners of all ages,<sup>18</sup> and appear to reflect contemporary teaching approaches advocated for both youth and adult students alike. Adult learning theorists<sup>18,19</sup> contend that there exists a continuum of approaches, ranging from teacher directed to learner directed. For example, learners with little to no experience in a specific content area, regardless of their age, would likely need to be taught in a very teacher-directed manner until they garnered enough experience and expertise to carry through with procedures more autonomously.<sup>18</sup>

The Andragogy in Practice Model (APM) is a three-ringed conceptual framework.<sup>18</sup> In the core ring are six fundamental principles: learners have a *need to know* the purpose of the content before undertaking to learn it; learners have a *self-concept* that should be

considered in understanding their capability to self-direct their learning; learners possess both a wealth and quality of *prior experiences* that richly influence current learning situations; learners maintain a *readiness to learn* to respond to a need/desire for current learning; learners *orient* their learning with a life- or problem-centred focus; and learners are *motivated to learn* as a result of internal needs or desires.<sup>18</sup> A peripheral middle ring includes individual and situational difference variables, which are grouped into three categories: *individual learner differences*, *situational differences*, and *subject-matter differences*. These variables impact the ways in which learning situations are facilitated.<sup>18</sup> A further peripheral outermost ring holds the goals and purposes for learning, including *individual*, *institutional*, or *societal* growth goals, that moderate how principles are applied to the learning process. It is expected that adults will perceive their learning experiences more meaningfully and positively when they believe that educators have made efforts to satisfy some or all of the six fundamental principles, taking into account the individual, situational, and subject-matter differences, and the goals and purposes for learning in a given situation.<sup>18</sup>

No published empirical work has compared if and how coaching approaches are differentially applied between adult and youth athletic cohorts, involving an explicit comparison of coaching approaches with MAs compared to youth. Thus, this study aimed to understand how MAs and youth athletes perceived their one coach's approaches to facilitating learning situations in relation to their sport training. Using the APM as a conceptual guide, we sought to examine whether the two age cohorts saw coaching approaches differently, with specific attention to how the coach's approaches were interpreted by the individual athletes, the situations within which they trained, and the goals and expectations in their training climate. With notions of contemporary coaching approaches and the APM in mind, we investigated whether the coach's approaches were differentiated based on athletes' age and other associated variables.

## Method

This work focuses on athletes' perspectives as part of a larger study using an instrumental case study methodology<sup>20</sup> to gather an in-depth understanding of experiences within a coached sport context, involving adult and youth athletes in the same canoe/kayak club, having a common coach. Ethical approval was attained from the host institution's Research Ethics Board prior to recruitment. We obtained consent from the participating club's commodore, coach, athletes, and from parents of the youth before data collection.

## Participants

Athletes were recruited through purposive sampling.<sup>21</sup> All had the same coach and all trained and competed at an Eastern Canadian canoe/kayak club that offered competitive participation for both MAs and youth athletes. Nine youth athletes (five male, four female) aged 14–15 and 12 MAs (six male, six female) aged 27–70 agreed to participate in group interviews. Based on the club's age divisions, athletes joined the Masters group if they were 25 years of age or older. The youth and MA groups trained with the coach separately at different times. All participating youth athletes were part of the 'competitive group' who trained year-round, between eight and 10 sessions per week, for a total of 10 h per week on average. All participating MAs considered themselves 'competitive' and trained with the coach year-round, up to three times weekly for up to 6 h, but were given opportunities to train on their own outside of scheduled club hours. Because the age range for MAs was considerably larger than for youth, there was greater heterogeneity regarding their familial/occupational responsibilities compared to the youth. The heterogeneity of the MA group is the norm<sup>22</sup>; finding a competitive MA group that closely mirrored a competitive youth group was not viable, yet we had confidence in our efforts to otherwise ensure similar groups. Finally, all MAs and youth athletes agreed that they liked their coach and considered her approaches to be effective.

The coach was a female, 30-year-old, full-time coach who coached both cohorts of athletes described above. We selected the coach for the study based on her satisfaction of pre-determined selection criteria, which included the following experience: she had been coaching Masters and youth canoe/kayakers for 14 and nine years, respectively; she was currently coaching 15 MAs (27–70 years old) and 15 youth (14–15 years old); she had 10 years of experience competing in the sport in her youth and was entering her fifth competitive year as a MA. She held a master's degree in sport psychology and coach education and was certified through the Canadian National Coaching Certification Program as a Competition-Development coach.

## Data collection

Data collection occurred in-season and included four, in-person group interviews<sup>23</sup>; two with each of the youth and MA cohorts, each lasting between 60 and 90 min. The first and second interviews, for each group, were conducted 12 days apart, and included eight and nine participants, respectively. Therefore, eight of the nine youth athletes participated in both interviews, while one athlete participated in only the second. Of the eight MAs who participated in the first

interview, five also participated the second time, and were joined by four others who were part of the second interview only. The inclusion of two group interview sessions allowed for specific situations emerging from two different training sessions to be discussed that provided greater depth to the overall findings. Scheduling two interviews 12 days apart ensured that both groups were within the competitive season and was necessary to fit the availability of all participants.

Each interview was conducted on the practice site directly following an observed 1 h training session. During that session, the principal investigator (PI) observed<sup>24</sup> and documented field notes of observations that he interpreted as being related to coach-facilitated learning situations. After observing the training session, the PI took time to transpose the field notes into a grid, organizing the notes about the various training situations that had been observed into columns pertaining to each of the APM principles (see Table 1 for the grid). In the interim between the end of the observed training session and the beginning of the group interview, the notes in the grid were used to formulate interview questions. Questions were open ended and semi-structured in relation to the six APM principles, which allowed the PI to direct the group discussion while granting room for all participants to speak openly without restrictions.<sup>25</sup> The process of performing participant observation, translating field notes to probing questions, and conducting group interviews was piloted with both MAs and youth athletic cohorts prior to the study.

## Data analysis

Each group interview was audio-recorded and data were transcribed verbatim using InqScribe,<sup>26</sup> resulting in 90 pages of single-spaced text. After completing minor edits to remove identifying information and to correct grammar, the transcripts were uploaded within QSR NVivo8.<sup>27</sup> All three authors read and reread the transcripts, and the PI used the six deductive principles of the APM as a guiding lens to code the data. However, when doing so, the PI acknowledged overlap of these data across the principles (i.e. a particular coaching action could be explained by more than one principle). The three investigators discussed the rigidity and awkwardness associated with deductive coding and agreed to reformulate the coding inductively. The PI developed inductive themes by grouping similar quotes together and interpreting what they explained, and the two co-investigators provided feedback regarding their organization and suggested the progression from micro (i.e. individual-level interactions) to macro (i.e. broader context) themes within the results. The PI used this feedback to select and organize quotes accordingly. Finally, the three investigators eventually reached

**Table 1.** Grid used for the organization of field note observations according to specific learning situations and andragogical principles.

Andragogical principle						
	Learners' need to know	Self-concept of the learner	Prior experiences	Readiness to learn	Orientation to learning	Motivation to learn
Learning Situation 1						
<i>Description:</i>						
Learning Situation 2						
<i>Description:</i>						
Learning Situation 3						
<i>Description:</i>						
Learning Situation 4						
<i>Description:</i>						

consensus regarding the placement of quotes into each of the inductive categories. This collaboration throughout the entire analysis process was crucial towards presenting the results in a way that fully respected the key findings and also clearly explained particular nuances between cohorts. Additionally, there was an explicit attempt in this process to code data related to the athletes' perspectives of their coach's approaches, meaning that the retained data necessarily specified how athletes described a coaching strategy, action, interaction, exchange, or how they were addressed, by the coach. The findings are presented within three higher order themes, each outlining their respective sub-themes (see Table 2 for representation of themes). For each sub-theme within the table, the MAs' perspectives are presented alongside the youths' to clearly show between-cohort distinctions related to each sub-theme.

The data differentiate how the athletes in each cohort viewed coaching approaches with respect to facilitating situations within which learning may occur. The coach's data, unpacked in MacLellan et al.,<sup>28</sup> described her perspective regarding age-related differences in coaching the two cohorts. However, the results in this manuscript are from the perspectives of the athletes. The PI's observations are woven into the results to lend context to the athletes' perspectives. We note the importance of understanding the athletes' perspectives of their coach's approaches with respect to facilitating situations within which learning may occur. This research is grounded in a relativist ontology,<sup>29</sup> in which a person's reality is based on his/her perceptions of experiences. Thus, the coach and athletes, engaged in the same situation, may have perceived it differently and had a different reality of the same experience. It is noted that what the coach believed she taught is not necessarily what the athletes learned, and conversely what the athletes believed they received from

the coach is not necessarily what the coach intended. It was however our intention to squarely situate notions of a coach's approaches with youth and with Masters from the perspectives of the athletes themselves, without clouding the findings with what the coach perceived she does.

## Results

Results are organized into three themes: (1) *communication, exchanges, and interactions*; (2) *how athletes perceive the influence of age and maturity*; and (3) *norms, goals, and expectations for learning within the climate*. These themes are sequentially presented to follow a progression from micro (i.e. individual) to macro (i.e. contextual climate) intricacies. To protect anonymity, participants have been assigned coded identities with MA and Y designations reflecting MAs and youth, respectively.

### Communication, exchanges, and interactions

This category describes how each of the MA and youth groups perceived different aspects of the coach's communication strategies. Findings highlight the athletes' perceptions of the coach's approaches to deliver information and feedback based on the individual athlete and are organized into several subthemes that are presented sequentially.

Athletes in both cohorts discussed receiving *technical and knowledgeable feedback* from the coach. As observed, the sport of canoe/kayak naturally constrains the intimacy of on-water, detailed conversation between coach and athlete, thus the coach could often only afford broader (i.e. less detailed information shouted across space) constructive technical corrections to athletes in both cohorts. Both groups discussed being

**Table 2.** Description of higher-order themes and sub-themes.

Higher order theme	Sub-theme	Youth athletes' perceptions	Masters athletes' perceptions
Communication, Exchanges, and Interactions	Provision of technical and knowledgeable feedback	Both groups enjoyed receiving general feedback on the water and detailed information off the water	
	Learner-centred questioning	Accomplished through video analysis and coach's direct questioning	Was not as intentionally initiated with MAs
	Directional component of coach's questioning	Athletes were reluctant to ask for clarification	Coach established bidirectional-ity in conversations with MAs
	Information delivery styles	Information was typically provided up front and at once	Coach provided information in a step-wise, concise manner
	Collaboration in planning or conversation	Lack of collaboration; highly coach directed	Coach managed MAs' wants and desires by listening and responding to them
How athletes perceive the influence of age and maturity	Provision of self-directed opportunities	Self-directed opportunities were still closely monitored by coach	MAs had the ability to choose when and how to train
	Methods of readying the athletes for training	Schedule provided so that youth could mentally prepare and organize time to attend all training sessions	Schedule provided so that MAs could choose when to attend training sessions
	Reciprocal commitment	Not applicable	MAs sought to demonstrate a mutual respect for their coach, understanding coach's role
Norms, goals, and expectations for learning within the climate	Deferral to coach direction	Youth trusted the coach's direction and were taught behaviour strategies	Not applicable
	Methods for competitive preparedness	Coach used model (elite) athletes and intra-team competition as motivators for competition preparation	Coach did not emphasize the value of competition
	Lifelong learning, social affiliation	Not applicable	MAs described an encouraging environment composed of fun, fitness, and comradery benefits

MA: Masters athletes.

open to receiving general feedback they could use to improve technique. MA2 explained:

I have no issue with her saying my name and then telling me what to fix [in front of the group]. Because even when she says, '(Name of another athlete), sit up', or, 'tighten your core', it makes me tighten my core.

Both age groups spoke of off-water, post-practice, one-on-one conversations with the coach to affirm that they were on the right path to improvement. However, only the youth acknowledged that the coach worked with them in separate off-water group sessions, where she led them through video analysis that broke down the

specific mechanics of their stroke. For example, the youth explained:

Y5: [During] the video session, she'll slow-motion it and pause it and then pinpoint what you need to do. Y4: I like the visual. She tells us how to fix it, but when I see it myself, I understand how I should do it. Y2: And she'll position your hands and the paddle, and she'll show you exactly how to go with the stroke.

The youth also noted that the coach directed questions to them about specific pieces of the video, which represented an example of *learner-centred questioning*. The youth felt that these questions enabled them to

contribute and allowed the coach to gauge their understanding. The youth also spoke about how the coach would question them about training to direct their focus:

Y5: She stops us after training and asks, 'How did it feel today? Why did it feel that way?' Y3: 'What were you working on?' Y2: Or she'll tell you to pick a drill and then she'll ask you why you picked that drill, what it helps in your paddling.

Between the two cohorts, there appeared to be a *directional difference* related to how questioning happened. The MAs explained how they often took initiative to readily facilitate conversation with the coach, to seek information about what they needed to work on. They explained how this established a certain bidirectionality to conversations and questions with their coach. MA4 commented, 'I asked, "What is the worst thing that I'm doing right now?"' MA2: 'How's my lean?' MA3: I just ask her, 'What's the first thing I should be working on?' The MAs were eager to ask questions to the coach without her prompt, especially before engaging in specific drills. This resulted in a collaborative instructional style between coach and MAs in various practice situations. MA5 explained, 'I think as adults, we want to know why. A kid might just say, "Oh, I'm supposed to do that". I think we're more like, "We'll do that, but why?"' I think we need to know it's logical'. The youth, contrarily, explained their reluctance to seek clarification:

Interviewer: Why wouldn't you guys just stop and ask her [for clarification]? Y4: Because she was hammering out the direction, she was going. When she goes, you don't stop [her]. Y1: She's got the aura of, 'Don't ask me questions, you should know what you're doing'. Y6: 'Listen to me when I say it the first time'.

The interviewer continued, 'But you don't often ask why?' They responded:

Y3: Not often. Y5: Sometimes it's like, 'Why do we have to do drills?' But you kinda keep that to yourself (nervous laugh). Collective: (laughter).

Interviewer: Why would you keep it to yourself? Why wouldn't you ask her?

Y5: You're gonna do it anyways (laugh).

In observing the training, the youth appeared hesitant to approach the coach with questions, which, when probed in the group interview, they attributed to being accustomed to her authoritative instructional style. This ultimately led to their thinking that if they asked questions, it would reflect badly on them or would suggest they had failed to pay attention when the content was initially explained. Hence, in situations

where the athletes perceived that the coach neglected to provide additional information, the athletes were required to look to friends or 'figure it out' (Y3) for themselves. Overall, this constrained any possibility of an interactive dialogue that was comparatively evident amongst the MAs.

The MAs uniquely described how they often liked the *style in which the coach would deliver information*; specifically, how she explained practice directions in a step-wise, structured manner that allowed them to organize their focus in training. MA3 commented:

[I like when she] says, 'Ok, you've got step one and two together, now start working on this'; [it's like] building the pieces of the puzzle. If you give me more than two things to work on, I'm not going to remember anything more than the first two.

Alternatively, the youth perceived that the coach often provided all information up front and at once. **[AQ1]** Y5 said, 'Sometimes after practice there are so many things thrown at you, and you're like, 'Whoa! There's so much to process'. Y2 added, 'We usually ask her to repeat it a couple times'. In observations, the youth appeared anxious about receiving and processing an overwhelming amount of information.

The nature of almost all interactions described in this theme revolved around the notion of *collaboration in planning or conversation*. The youth athletes acknowledged a lack of collaboration, accepting the coach's directives as they were, predicated on a notion that 'the coach knows best' (Y1). They felt the coach could be inflexible and rather unresponsive to some of their comments. They explained, 'Y4: She doesn't really change the practice [if we ask]. Collective: No. Y2: [She'll say], "Maybe next week". Y4: It's super strict. Y1: She strictly says, "There are no [changes]."'. Comparatively, the MAs spoke of the coach's attempt to be flexible and responsive in their communications. MA3 commented:

I think as a Masters coach you have to manage the wants and desires of the adults along with running a coaching program. We've had some coaches, [like my current one], that have been very good at dancing that very fine line between coaching while managing the adult personalities, whereas others struggle with managing all of their personality types.

The MAs described their coach's effort to engage them in conversation and the care she took to understand their perspectives and desires.

In sum, the athletes described how they saw their coach's conversational strategies. Although athletes in both groups recognized the coach's communication of

technical and informative feedback, MAs noted greater emphasis on collaborative interactions in which they established a voice and asked questions for clarification. The youth described how the coach employed more directive instructional styles. In many instances, it was observed that the youth shied away from asking questions, and they described doing so because they worried about how it might make them look to the coach. As a result, the youth appeared to accept things as they were and trusted what the coach prescribed. The youth did, in fact, describe many occasions where the coach satisfied their need to know information and receive feedback, both on and off the water; however, it was observed that these interactions (including the use of questioning) were almost always initiated and directed by the coach. This ultimately resulted in conversations lacking the collaboration and mutual engagement apparent in those involving MAs.

### *How athletes perceive the influence of age and maturity*

This section describes how the athletes in each cohort perceived their coach's strategies for encouraging aspects of self-direction and readying them for training situations, which we interpreted as relating to the athletes' maturity levels and age.

Both the MAs and youth spoke of being self-directed at times in training. However, the MAs described being explicitly afforded more *self-directed opportunities*. For example, MA4 explained how they could schedule their own training beyond club hours without coach direction:

We'll practice outside of practice [time], because we can. Kids can't come down and just take a boat and decide to paddle. My training partner can e-mail me on a Wednesday afternoon and say, 'Hey, you got some time at 3:30? Let's do a K2 [paddle].'

Further, MA3 explained how their coach gave them the opportunity to decide during the practice session to either engage in the practice as written or to paddle 'recreationally' on their own, exempt from the coach's eye. Comparatively, the youth described how they were consistently monitored. The sometimes *laissez-faire* approval MAs received from the coach to choose when and how they wished to train was a stark comparison to the strict, seemingly non-negotiable demands the coach held towards youth's training. We attributed these perceived differences in the coach's approaches to the coach's need to keep watch on the youth due to safety reasons on the water and because of the presumed risk that youth may be more inclined to engage in off-task activities. On the other hand, the MAs' experiences suggested that the coach afforded adults

greater latitude, believing they could take heed of safety concerns and granting them control of their own activities, because of their age and maturity.

The athletes noted that the coach provided both groups with their respective training schedules in advance to *ready them* for upcoming training, typically by e-mail before the start of each training week. Although the coach gave the schedule to both cohorts in advance and both found it useful, the purpose for giving the schedule was received differently by each. The MAs spoke of their coach's recognition that not all adults were able (based on interest or other obligations) to commit to training completely, and the MAs explained how they perceived the coach's readying emails in different ways. We attributed such variability in perceptions to the MAs' age and presumed expectations that they are individuals who can take responsibility for their own decisions. To illustrate, MA3 explained how some of the less-committed MAs checked the schedule to purposely avoid strenuous practices, saying, 'I think the mentality of Masters paddlers is [that] people are here for different reasons. So, it is typical that if practice is going to be really tough, there are less people showing up than if it was easy'. Alternatively, some MAs described how more serious-minded MAs used the advance schedule to train independently:

MA3: Due to my work schedule, if I can't make practice, I try to do the practice when I can get here and the club's open. MA6 (following up on the comment): Which is a nice thing because that way we don't feel like we're letting anybody down by not being here for a practice.

These more serious-minded MAs used the schedule to exercise an aspect of self-directedness in choosing when to train. Due to the less rigid expectations that they perceived the coach held for their attendance at all coach-supervised practices, MAs often noted they had latitude to work their training in on their own time without the coach monitoring them.

For the youth athletes, they perceived that the coach disseminated the schedule in advance to help them prepare:

Interviewer: So what do you like the most about having a schedule in advance? Y1: Mentally preparing. Y4: When it comes to school, I know [if] it will be a long practice, to get our homework done, or anything like that.

The youth saw their attendance at coach-supervised training sessions as mandatory and thus looked to the schedule to better organize their time for other tasks, such as school and additional extracurricular activities,

to ensure attendance at coach-supervised practices. Due to the fact that youth never acknowledge the opportunity to train on their own, they interpreted the coach's emails as serving a preparatory purpose, but in relation to an inflexible schedule, to which they were expected, as adolescents responding to an adult's request, to conform.

The two groups perceived differences in the ways the coach adopted approaches for readying them to train. MAs described how, when they saw their coach as committed to their programme and to the delivery of structured workouts, they were eager to *reciprocate with the same commitment* to their practice. This reciprocity was tied to notions of maturity – as mature individuals who had experienced similar roles of authority in other professional life domains, they recognized the importance of responding in ways that demonstrated mutual respect towards their coach. For example, MA3 explained:

My mentality if I don't feel like getting out of bed [is that] we're all adults who've been in a workforce where we've been let down and we understand that, 'Hey, the coach is committing to be there for us and we need to show up and show her that we respect the fact that there's a program running'.

Comparatively, the youths' comments did not acknowledge an appreciation for the coach's investment in them and notions of reciprocity were not at all apparent. The youth's orientation instead reflected deference. They saw the coach exhibiting an authoritative demeanour that she knew best; in response, the athletes uncritically *deferred to the coach* and believed that following coach-directed training prescriptions would benefit them in the long term. Y1: 'She knows what's best. Y2: We don't normally ask; we usually just trust the coach'. Although some youth admitted in the interviews that they had doubts/questions for the coach during training, they were observed deferring. We attributed this to adolescents' concerns that they may be perceived by the adult coach as not having the maturity to overtly engage her and that such actions (even if well intentioned) could be perceived insolently by her. In other scenarios, the youth commented on the coach adopting strategies to shape aspects of their practice behaviour; strategies that were not acknowledged by MAs, likely as a result of the youth's age and tendency to lose focus during training. For example, the youth described the coach's frequent efforts to prompt them to focus prior to on-water pieces and to discourage inattentiveness. It was observed that, while encouraging the young athletes to be attentive at training, the coach also tried to teach them broader life skills

that could be practiced beyond the sport. This was corroborated by the youth:

Y2: She teaches us respect and time management and how to act [professionally]. Y1: Respect is a big thing she tries to teach us, and posture. Y2: She teaches a lot more than just paddling. It's a lot about how you present yourself.

Whereas the youth described the coach's focus on training them to carry themselves respectfully, similar efforts were not described by the MAs; the roles she assumed with each of the two cohorts in this regard were very different.

In sum, maturity and age appeared to contribute to the way that the athletes perceived the coach's approaches, whether those approaches were the same or different with each group. The MAs' maturity enabled them to reciprocally value their coach's commitment to their training and was associated with the coach granting them liberty to self-direct training. The presumed less-mature nature of the youth impelled them to trust the coach's decisions both regarding their training and the regulation of their behaviour and was associated with less latitude and discretion to self-direct.

### ***Norms, goals, and expectations for learning within the climate***

The following section describes the athletes' perspectives regarding the coach's approaches for establishing elements of the broader climate. Athletes spoke about their reasons and motives for learning, which partly resulted from the coach's approaches, but also reciprocally appeared to have bearing on those coaching approaches. Moreover, the athletes described how the coach conveyed goals and expectations related to learning for their age cohort.

The youth explained how the coach often helped them identify ways to enhance their *preparedness for competition*. Thus, the youth understood the repertoire of skills needed to attain success in competition. Y7 explained how the coach used models to motivate the youth to use similar preparation strategies: 'Sometimes she'll pull up a video of someone (elite athlete) from Worlds or the Olympics and show you what she means'. The youth also described how the coach used their competitive results as a platform from which to develop their focus for subsequent practice sessions. Observations confirmed this coaching focus on competition, as the coach was seen orchestrating learning situations in ways that emphasized competitive norms and social comparison, by encouraging intra-team competition and evaluation as a method for motivating the

young athletes to perform well. The youth acknowledged the coach's encouragement was often paired with highly competitive expectations, ones they sometimes deemed unrealistic. Y3 said:

Sometimes she encourages you too much. She's like, 'Okay, a good time for this event is 2 minutes for a 15-year-old girl'. I'm like, 'Okay, no one at this club will be able to achieve that.' Then it just takes the good away from everything.

Thus, the coach was observed espousing highly competitive expectations and, as a result, some young athletes felt greater demands regarding their training. However, some youth used those expectations to give purpose to the taxing workouts. Consequently, the youth perceived the competitive climate and expectations for prospective successes often as motivating, though sometimes daunting.

In the Masters' group interviews, they did not discuss how the coach addressed issues for competitive preparedness. They instead framed their *learning as a lifelong pursuit* from which they derived meaning and value for training. MA3 commented:

I think one of the greatest life lessons is we still have the ability to learn. When we attain those things that the coach is asking us to work on, it's a testament to the fact that we're not done learning yet. So if there's a lesson out of it, [it] is we all still have lots left to learn.

The MAs perceived that the coach used social affiliation discourses. In describing the training climate created by the coach, the MAs often emphasized developing friendships but also notions of fitness and recreation. Although some MAs considered themselves competitive individuals, they noted that the coach did not fixate current learning with projections for future competitive performance; instead, they noted that she made efforts to promote peer support in an encouraging environment. The MAs explained how fun, fitness, and comradery were highly valued elements of their training climate. **[AQ2]**

In sum, there existed a clear relationship between the athletes' motives for learning, their perceptions of the coach's expectations and norms held for each of the age cohorts, and the subsequent learning situations in which the athletes trained. The MAs felt the coach focused on instilling notions of social affiliation and peer support, and helping them realize the value in their learning process. Comparatively, the youth accentuated a climate of social comparison and intra-team competition as a means for the coach to prepare the athletes for future events.

## Discussion

We discuss key results to illustrate the coach's approaches to facilitating learning situations between the MA and youth cohorts within each of the three themes. We discuss these findings in relation to 'traditional' pedagogical, 'contemporary', and more andragogical methods, as well as in relation to emerging sport coaching research.

Linking our results with the APM, we note that the coach considered situational and individual learner differences. With respect to coaching individuals, the coach used collaborative, two-way conversations to engage the MAs and disseminated information in ways that each individual could easily interpret. With youth, she exercised a more authoritative, one-way communication style, which hindered the athletes' ability to seek clarification. Questioning approaches also differed between the two age cohorts. Whereas the coach actively approached the youth with questions, the MAs more frequently initiated conversations with her. Consequently, her exchanges of feedback with MAs appeared less directed and appear to encapsulate a key andragogical feature where the educator provides room for the learner to secure control and ownership of their learning and address it as they choose.<sup>18</sup> With youth, the coach's approaches were neither squarely andragogical nor pedagogical. Her attempt to engage the athletes more meaningfully by directing questions to them in learning situations reflected an athlete-centred focus<sup>13,30</sup> and an andragogical orientation.<sup>18</sup> However, her tendency to be the one to initiate and direct the content of conversations limited the bidirectionality of communication, making exchanges more predominantly teacher directed, more characteristic of linear transmission styles in sport coaching,<sup>1,9,11</sup> as well as the traditional pedagogical orientations prevalent in physical education teaching.<sup>7</sup> Moreover, the coach often delivered instruction to the youth by presenting a lot of information up front. Such a delivery style, whereby an instructor presents a wealth of initial information to forestall learners' questions, is antithetical to an andragogical approach,<sup>31</sup> can foster learner anxiousness, and can lead to poor retention and skill transfer in comparison to situations where instruction and feedback are provided somewhat less frequently.<sup>11</sup>

Our results suggest that the coach may have incorporated the benefit of using learner-centred techniques with youth but still exercised a more coach-directed approach to conspicuously maintain control over their training. Fox<sup>32</sup> discussed the recurrence of control in youth sport, describing it as coaches' ability to influence and direct the behaviour and performance of their athletes. Our findings also showed, however, that such measures to establish coaching control were almost

non-existent based on MAs' comments about their experiences with the same coach. In the current study, the coach's restraint in establishing bidirectional conversations with youth might have maintained a certain power structure within training situations,<sup>10</sup> which she did not establish with MAs. Whereas young athletes may lack the experience and emotional regulation to make decisions and direct their own training,<sup>32</sup> MAs may already be well primed to perform better in situations where coaches engage them collaboratively in learner-oriented interactions (i.e. in more andragogical ways).

The current study also elicited themes on how the coach facilitated training scenarios while considering the maturity of the learners. Both cohorts' comments suggested they considered elements of age and maturity when interpreting their coach's approaches. Knowles et al.<sup>18</sup> used the term 'self-concept' to identify the andragogical principle that stipulates that adult learners have a need to be recognized as having the wherewithal to take ownership for their own decisions in a learning environment. In the instances observed in the current study, MAs perceived that the coach afforded them various ways to employ self-direction, predicated on their age and presumed maturity, in accordance with the self-concept principle that adult learners are capable and deserving of autonomy.<sup>18</sup> When extended to broader discourse on MAs, these findings suggest that adult athletes, far more so than adolescents, have the maturity to integrate requests/demands from others (e.g. a coach) into their self-structure, deciding to act (or not to act) depending on whether the request is consistent with their values (e.g. I will choose to not practice because it invades my valued family time), their identity (e.g. I will choose to reciprocate in response to the coach's demands because I identify as a serious MA and the coach's request recognizes how devoted I am), and their preferences (e.g. I am an adult and I have earned the privilege of choosing not to follow a request that I do not like). Furthermore, these findings align with suggestions for how sport programmers and coaches can optimize MAs' limited time for sport, including strategies such as planning practices in anticipation of adults' other personal obligations, coaching them to strategically decide when and how to train on their own time, and exploring various social media tools to enhance coach–athlete exchanges.<sup>33,34</sup> The coach's approach, as the youth perceived it, was more structured with less self-directed opportunities. Thus, youth conformed to the norm in traditional pedagogy where the learner is dependent on the instructor.<sup>18</sup> Coach control can be justified because younger athletes lack judgement and experience to make appropriate decisions regarding their training.<sup>32</sup> The youth in the study recognized that the coach made

decisions for them without their input, but appeared to become accustomed to this approach by remarking that the coach knew what was best for them and their development, deferring opportunities for genuine self-directedness.

The coach's demonstration of commitment appeared to be a form of social support<sup>17</sup> that the MAs often mentioned. Seeing and recognizing a coach who is wholly invested in their sport programme helps to legitimize their own commitment to devote their leisure time to the sport. In a sense, the coach's overall demonstration of commitment may provide a unique type of validation support<sup>35</sup> for adult sportspersons, whereby athletes feel that their own commitment is understood by the coach because the coach matches it with his/her own. Due to their maturity, MAs in the study felt that they should reciprocate the same respect and commitment. Likewise, in a study of Masters competitive swimmers' preferences, Rathwell et al.<sup>17</sup> discussed how the swimmers sought to please their coach by reciprocating the same effort they acknowledged receiving from the coach.

Our group interviews uncovered themes for how the coach facilitated the training climate, particularly with respect to norms, goals, and expectations for learning. The youth spoke of the ways that the coach emphasized a climate of social comparison and competitive situations. Youth appeared to predominantly value extrinsic rewards associated with their sport participation and sought to consistently project their training efforts towards prospective competitive events. This is likened to traditional pedagogical approaches, where the utility of learning is judged by advances in standing or fulfilment of standardized requirements.<sup>18</sup> In video analysis sessions, the coach appeared to assume that all youth athletes' learning would benefit should she critique each athlete in front of the group. However, Treasure and Roberts<sup>36</sup> note that such an approach invites norms around social comparison and intra-team competition, cautioning against using such an approach because it can be risky, particularly for individuals who may be less competent or who may be experiencing challenges/misuses in a learning environment. In these situations, social comparison is not motivating but instead can lead to learner anxiety. Accordingly, there was some evidence in the current results that overt social comparison was intimidating at times to some youth.

Although many MAs self-identify as competitively minded,<sup>22</sup> our study revealed that their coached training climate was focused largely around participative discourses such as social affiliation and fitness. In this regard, the coach made sure to praise the MAs' efforts and facilitated an encouraging environment, which the adult athletes enjoyed. These results resonate with previous research highlighting the social orientation of

Masters sport<sup>37</sup> where peer connections help to foster feelings of belongingness and relatedness<sup>17</sup> and self-determined motivation, particularly when the training atmosphere is less competitive.<sup>38</sup> Further, MAs spoke of learning for the sake of learning. Their perspectives regarding their motives for learning reflected Knowles et al.'s<sup>18</sup> andragogical principle that adults' motivation is often largely derived from intrinsic means and that they seek inherent value and enjoyment in the learning process.

One possible interpretation of the current findings is that through working with the coach and being exposed to her encouraging, supportive, and athlete-centred climate over time, the MAs became more intrinsically motivated and came to better appreciate the inherent value of their learning above extrinsic reward. The training climate offered by the coach may have invited MAs to value learning scenarios where they had the ability and capacity to learn novel things, linking to the ownership of their decision to participate<sup>17</sup> and being driven by their inherent enjoyment or interest in the activity.<sup>39</sup> In the current study, our focus has been to present interpretations that stem from the coach's actions; however, we recognize the bidirectionality between coach and athlete in the creation of a training climate.

## Limitations

We note several limitations within the current study. The one coach was chosen based on certain criteria that would demonstrate that she was an effective coach. However, based on athletes' data, we could only analyse and interpret the athletes' perceptions of the coach's approaches and not necessarily whether such approaches positively influenced specific developmental outcomes. Second, despite the merits of group interviews, we recognize that there exist obvious limits in being able to generalize these findings beyond how athletes at one club feel about their one coach, in the sport of canoe/kayak. [AQ3] We acknowledge it would be useful to assess whether our findings replicate with other coaches in different sports. Finally, we note that our results are limited to the perceptions of the athletes alone and not the articulated intentions/rationale for the use of the approaches by the coach.

## Conclusion

We find the APM particularly valuable for understanding how athletes see the types of exchanges, interactions, and climate of coaching they receive. Our analyses and results also impressed upon us that multiple principles within the model should be considered simultaneously in making sense of athletes' perceptions

of the coached context. Shifting from a deductive to inductive coding method, we sought not to interpret the APM as a mechanistic, wholly andragogical model of coaching, but instead to flexibly<sup>18</sup> reference its principles to help explain the athletes' perspectives. Thus, we see the APM as a means to an end for understanding the nuanced application of principles in the coach's approaches between cohorts. Our inductive analyses, however, exposed important between-group differences not explicitly addressed by the model (but still inherently linked to certain principles); particularly, in the ways the athletes perceived their communicational exchanges with the coach, how their age and maturity impacted the coaching approaches they received, and how the coach's expectations for their training influenced their perceptions of learning opportunities. Based on these associations, in the current study, we evidenced that the MAs' perspectives of these themes align more frequently with andragogical principles in comparison to youth. Future studies examining andragogical tenets across different sports, with different coaches, and different levels of athletes are necessary to further our understanding of how athletes' age and associated variables may influence learning opportunities received in training.

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