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How Parkour Coaches Learn to Coach:
An Exploration of Parkour Coach Learning and Development

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Abstract

Parkour is a sport with a focus on overcoming obstacles. Parkour practitioners utilise specialised techniques relating to movements such as running, jumping, vaulting, climbing, swinging, rolling, and occasionally acrobatic manoeuvres in order to traverse a path through urban and rural environments. Parkour is a new sport, and as it continues to grow in popularity, there is an accompanying demand for parkour instructors. As a result, programmes to train parkour coaches have been created in various parts of the world. There has been minimal scholarly research conducted regarding parkour, and much of the current parkour research focuses either on parkour athletes, or the perceptions of parkour by non-parkour athletes. No research was discovered regarding parkour coaches. This exploratory study aimed to: (a) explore how parkour coaches learn to coach; and (b) explore the perceptions held by parkour coaches regarding parkour coach education programmes.

In the first article, titled ‘How Parkour Coaches Learn to Coach: Coaches’ Sources of Learning in an Unregulated Sport’, participants’ responses related to the themes of: parkour coaching experience, previous leadership experience, experience as an athlete in parkour and other sports, other parkour coaches, non-parkour coaches, parkour coach education programmes, school, reflection, and the Internet. The second article, titled ‘What Does It Mean to be a Certified Parkour Coach? Parkour Coach Perceptions of Formal Coach Education Programmes’, shared participants’ perceptions of formal parkour coach education programmes, including: potential benefits and risks to participation in such programmes, modifications that could be made to the programmes, and parkour coach perceptions of coach education programmes for other sports.

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Introduction

Parkour is a new sport that allows its practitioners to overcome a variety of physical obstacles, in both urban and rural settings, by using only their bodies (Atkinson, 2009; Ford, 2016). Parkour practitioners, commonly known as traceurs, often utilise various techniques relating to movements such as: running, jumping, vaulting, climbing, swinging, rolling, and occasionally flipping and other acrobatic manoeuvres (Ortuzar, 2009). The introduction of risk and complexity to skills, for example the performance of skills high above ground level or at great speeds, may cause moments of apprehension in parkour athletes, therefore parkour practitioners must develop the ability to overcome both physical and mental obstacles (Belle, 2009).

There has been little formal research published in the field of parkour, and existing research focusses mostly on parkour athletes and/or their relation to the general public. We were unable to find any publications on the topics of parkour coaching or parkour coach development. Parkour coaching literature has the potential to be unique, because although parkour is a high-risk sport, there are specific techniques and strategies that parkour athletes can use to minimise risks. Parkour coaches are therefore in a position to transmit those techniques to the athletes whom they coach. Additionally, there are a number of values that were integrated into parkour philosophy when parkour was first founded, and again, parkour coaches are in positions to transmit those values to their athletes, if they choose to do so.

We were also unable to find any research on coach development in unregulated sports, sports without governing bodies. There are a number of models that describe coach learning (e.g., Trudel et al., 2016), but these models include coach participation in formal coach education

programmes. There is currently no framework for understanding how coaches in unregulated sports, like parkour, learn to coach.

Because parkour is so new, and many parkour athletes are not trained by coaches, many traceurs learn how to execute various parkour techniques through online tutorials or by training with friends (Kidder, 2012). However, there are a number of parkour organisations in various parts of the world that have developed coach education programmes in order to teach their participants how to coach parkour in a safe and effective manner (e.g., APEX Movement, 2006; Parkour Generations, 2014). Most of these parkour coach education, development, certification, and apprenticeship programmes, hereafter referred to as parkour coach education programmes, or simply ‘PCEPs’, are independently regulated, and each organisation is likely to train its coaches differently. At the time this project was completed, parkour coaching was regulated only in the United Kingdom through the governing body of Parkour UK (Parkour UK, 2012). Parkour athletes have been training newcomers since the sport was first developed (Atkinson, 2009), and it is only with the onset of coach education programmes that parkour coaches are becoming formally trained.

The design of this research project was constructed using the framework provided by Maxwell (2012). It was an exploratory study from a constructivist perspective. The research was conducted with the aim of answering the following questions: (a) How do parkour coaches learn to coach? (b) What are parkour coaches’ perceptions of parkour coach education programmes?

Conceptual Framework

The primary researcher’s personal experience with parkour started in 2009, at the age of 17. He had been participating in recreational trampoline lessons and upon expressing interest in parkour to one of his coaches, he was advised to attend drop-in classes at a local gymnastics

gym. At the gym, the researcher learned basic parkour techniques such as vaults and rolls from a former member of the Jackie Chan stunt team. A little over a year later, the researcher entered university and joined his school's parkour club, and that is when his love for the sport of parkour truly developed. The researcher trained parkour with the school club three times a week and supplemented his parkour training with weight training, rock climbing, gymnastics, and diving. He eventually went on to become the president of the parkour club at his school. During his final year as an undergraduate student, the researcher obtained a parkour coaching certification through American Parkour, and completed the necessary courses to receive Level One certificates in artistic gymnastics and Level Two in trampoline through Canada's National Coaching Certification Programme (NCCP) and Gymnastics Ontario. In addition to club training sessions at school, the researcher began regularly coaching gymnastics and parkour classes at a local gymnastics gym, and he continued to coach parkour and trampoline classes in tandem with the pursuit of his master's degree.

During the time that research was conducted for this project, we found no literature on parkour coaching or coach development in unregulated sports (sports without a national governing body). The research referenced in the literature review that refers to coach learning and development took place in the context of regulated sports, unless otherwise specified. Additionally, before any data was collected for research purposes, a pilot interview was conducted with a local parkour coach to assess the quality of the interview guide.

Literature Review

Parkour is a movement discipline that was first developed in the mid-1980's in France by David Belle (Belle, 2009; Ford, 2016). Belle described how he was inspired by his father, Raymond Belle, who was a member of the fire fighters' squad of Paris and part of the French

69 military. Members of the French military often utilised obstacle courses, *parcours du combattant*,
70 as part of their training. These courses provided the source of the word parkour, although the
71 spelling was modified in order to differentiate the discipline from the obstacle courses (Belle,
72 2009). The obstacle courses were influenced by the teachings of George Hébert and his training
73 style called the *Méthode Naturelle*, or ‘Natural Method’ (Atkinson, 2009). This training method
74 promotes adaptability and requires that its practitioners be able to walk, run, jump, climb, move
75 on all fours, balance, throw, lift, defend themselves, and swim, regardless of the environments in
76 which they might find themselves (Atkinson, 2009). Elements of Hébert’s Natural Method and
77 its mottos, *être fort pour être utile* (be strong to be useful), and *être et durer* (to be and to last)
78 were passed down from Raymond Belle to David Belle, and helped to inspire the birth of the
79 parkour discipline (Belle, 2009; Brown, 2007).

80 In 1997, David Belle was instrumental in the development of a group of young parkour
81 practitioners in France who called themselves *Yamakasi* (Archer, 2010). Sébastien Foucan,
82 another founding member of the Yamakasi and one of Belle’s childhood friends (Geyh, 2006),
83 eventually departed from the group to found his own variation of the parkour discipline, which
84 he called freerunning (Archer, 2010; Fuggle, 2008). In contrast to the focuses on efficiency,
85 usefulness, fluidity, and adaptation found in parkour (Fuggle, 2008; Waern, Balan, &
86 Nevelsteen, 2012), freerunning encourages movements with greater aesthetic components, such
87 as those that might be found in stunts and acrobatics (Fuggle, 2008; Kidder, 2012). Freerunning
88 techniques have fewer functional purposes than those of parkour, and freerunning practitioners
89 are likely to spend longer periods of time in a given area, exploring creative possibilities and
90 discovering new ways of interacting with urban and rural obstacles (Ford, 2016; Waern et al.,
91 2012).

It is not difficult to imagine how the subtle differences between parkour and freerunning may influence the philosophies of coaches as well as their athletes. For example, a coach may situate an athlete in front of an obstacle and tell the athlete to either (a) travel over, under, or through the obstacle as quickly as possible, or with as few points of contact as possible, or (b) traverse the obstacle in a novel manner that the athlete has never previously tried. The first method, which focuses on speed and efficiency, would be inspired from a training philosophy that adheres more closely with that of David Belle and the Yamakasi. Traceurs who primarily identify with this training philosophy may be called parkour purists (O'Loughlin, 2012). In contrast, the second example has a focus on creativity in movement, and would be more aligned with Foucan's freerunning philosophy (Waern et al., 2012). Despite the terminology that differentiates parkour, freerunning, and parkour's original French name, *l'art du déplacement* (the art of displacement, or ADD) (Ortuzar, 2009), for the entirety of this paper the term parkour is used in reference to parkour, freerunning, and ADD, except where otherwise specified.

There is no consensus within the global parkour communities regarding whether the term 'parkour' should indeed encompass the similar activities of freerunning and ADD. There are a number of different mindsets that are typically held regarding the popular *parkour versus freerunning* debate. For example, some people believe that parkour and freerunning are distinct from each other and not interchangeable; others believe that parkour and freerunning are two different styles of the same activity; and many others believe that there is in fact no difference between the two, and parkour practitioners are better off spending their time training than debating on how to label their movement styles (American Parkour 2009; Bell, 2014).

In addition to the potential multiple names given to parkour, it is difficult to even categorise parkour. Parkour might be considered a sport, an art form, philosophy, discipline

(Parkour Generations, 2014), or merely just a physical activity. It is the lead researcher's opinion that the categorisation of parkour varies according to the mindset and training style of each individual practitioner. For example, some traceurs may enjoy practicing parkour for purposes of fitness and self-expression, while others may train in order to compete at parkour competitions. This variety in athlete training will also cause variation to the contexts of parkour coaching, and so parkour coaches will be forced to either specialise in recreational or competitive parkour coaching, or be adaptable enough to be able to coach in either context, depending on their athletes.

Competition is also a contested topic among traceurs. While many traceurs compete at and support parkour competitions, there are others who feel as though competition has no place in parkour. One popular example is that of Naïm l'Inconsolable, who is known for creating videos such as his "Parkour, literally" series (l'Inconsolable, 2010) in which he displays parkour manoeuvres that focus on efficiency and includes no extraneous or acrobatic techniques. L'Inconsolable has provided five reasons why he thinks competition should not be included in parkour: 1) Competition is not compatible with parkour principles, 2) Mixing competition and parkour is dangerous, 3) Those who create parkour competitions do not practice parkour, but instead care only about making money, 4) Parkour competitions have been created contrary to the general opinions of parkour communities, and 5) Sponsorships link parkour to capitalism (We Trace, 2012). Some of l'Inconsolable's objections to parkour, specifically his third point about competitions being created by non-traceurs, are no longer relevant as there are now competitions created by parkour athletes for parkour athletes, such as the North American Parkour Championships (Thompson, 2013). However, many of these opinions are still valid, and competition remains to be a heavily debated topic among parkour practitioners. Additionally,

because the inclusion of competition into parkour is so new, it is not likely that many parkour coaches currently train their athletes to compete.

Two less-discussed areas of parkour, each without a consensus among parkour practitioners, are parkour regulation and parkour coaching. These areas are addressed in the two articles contained within this thesis. A potential contributor to the lack of discussion about parkour coaching and regulation is the fact that current parkour training is usually community-based and there are rarely incidents of formal instruction (Kidder, 2012; O'Loughlin, 2012; Waern et al., 2012). Most traceurs learn from each other, and from personal trial and error. When a number of traceurs train together, they do not typically seek out the presence of a coach or an instructor. In the place of instructors, the Internet has become a useful resource for traceurs to learn new techniques and to see how others train (Geyh, 2006; Gilchrist & Wheaton, 2011). However, learning by watching videos is impersonal, rendering inaccessible the possibilities of receiving immediate coach encouragement and feedback on their skills to parkour athletes who rely on these videos as their primary sources of learning. It is only very recently that traceurs have had access to parkour coaches, and from the lead researcher's experience, it is only newcomers to parkour who are seeking coaches, and not yet practiced parkour practitioners.

The aim of this literature review is to provide the context and foundation for research into the domain of parkour coach learning and education. Contained within this section is information regarding coach learning, coaching new and upcoming sports, adventure sports coaching, and parkour as a lifestyle sport.

Coach learning. Skilled athletes in parkour communities are often approached and requested to give instruction to novice or more inexperienced athletes (O'Grady, 2012). It is possible that, over time, athletes who have been put into a coaching position will refine their

instructional skills and learn how to better teach other parkour athletes. It would be interesting to discover how a parkour coach in such a position might have benefitted from attending a formal coach education programme.

It is important to distinguish between the different types of learning situations that apply to coaches. Coaches can learn to coach from formal and nonformal learning situations such as coaching courses and seminars, and informal learning situations such as interactions with other coaches, use of the Internet, and personal coaching experience (Werthner, Culver, & Trudel, 2012; Winchester, Culver, & Camiré, 2011). Formal learning situations, like parkour coach education programmes (PCEPs) are those in which learning is mediated or guided by a knowledgeable other, following a set curriculum, and participants usually obtain a diploma or certificate upon completion (Mallett, Trudel, Lyle, & Rynne, 2009). Alternatively, nonformal coach learning situations take place outside of an institutional context, can be seminar or workshop-based, and are usually short-term and voluntary (Mallett et al., 2009). Finally, informal coach learning situations, which include incidental learning situations, are not highly structured, often self-directed, and include instances of learning on the job. Informal learning can be encouraged by an organisation, whereas incidental learning may occur without any conscious awareness (Mallett et al., 2009).

Coaches spend much more time actually coaching than they do at formal and nonformal coaching courses or clinics (Gilbert, Lichtenwaldt, Gilbert, Zelezny, & Côté, 2009), thus highlighting the importance of learning from experience. Coaches can also spend up to thousands of hours accumulating pre-coaching experience as athletes in their respective sports (Gilbert, et al., 2009; Lemyre, Trudel, & Durand-Bush, 2007; Winchester et al., 2013). Youth-sport coaches, as an example, typically apply for formal education programme within the first year of becoming

a head coach, and so the primary source of learning for these coaches is their previous experiences as athletes (Lemyre et al., 2007). The time spent as athletes, in addition to any time spent as assistant coaches, allows coaches to partake in informal apprenticeships and experience the unusual opportunity to learn about their future coaching occupations before beginning to coach (Sage, 1989). Coaches also spend hundreds of hours per year engaging in coaching-related tasks, and in comparison spend minimal time involved with formal coach education (Gilbert et al., 2009).

Formal coach education. Leduc, Culver, and Werthner (2012) conducted research on formal coach education programmes by studying coaches' perceptions of Canada's National Coach Certification Programme (NCCP). Framed by the works of Moon (2001, 2004) and Jarvis (2006, 2007, 2009), the authors considered two types of learning that were induced by these programmes: surface, nonreflective learning and deep, reflective learning. Surface learning, where learners try to memorise only as much information is necessary (Werthner et al., 2012), is beneficial when learners are already familiar with the material being taught, or if they are under time constraints (Trudel, Culver, & Werthner, 2013). In contrast to the superficiality of surface learning, deep learning results from an intention to understand both the content and meaning of the material being learned (Werthner et al., 2012), leads to a more developed understanding of meaning, and creates modifications to a learner's cognitive structure (Trudel et al., 2013). A cognitive structure (Trudel et al., 2013), which can also be referred to as a biography (Leduc et al., 2012), in this context is defined as the sum of an individual's previous cognitive, emotive, and physical learning experiences (Leduc et al., 2012; Trudel et al., 2013).

Leduc et al. (2012) found that the effectiveness of NCCP programmes differed depending on each individual coach's biography (Leduc et al., 2012); that is, the sum of the coach's

experiences. Some coaches perceived that the courses reinforced what they had already been doing, and so they felt validated that they were doing at least some things correctly. These coaches made no changes to their training programmes. Other coaches, upon engaging in self-reflection after the NCCP modules, found the courses to be useful and did make changes to their programmes. The final category of coaches did not feel validated and also did not make changes to their behaviour because they either lacked confidence in their abilities to implement the newly learned material, or they felt that the information presented in the NCCP module was irrelevant to their current coaching context (Leduc et al., 2012). Coaches tend to perceive the introductory NCCP courses as being targeted towards those coaches with little playing and coaching experience (Winchester et al., 2013). NCCP courses are typically competency-based, taking as a starting point for each context what a coach needs to be able to do to coach the athletes in that context (e.g., community or competitive sport). Such courses could likely be improved by taking into account the biography of the coaches who take the courses, and also by offering continued opportunities for learning, reflection, and professional development after the conclusion of the NCCP modules (Leduc et al., 2012; Trudel et al., 2013).

Canada is of course not the only country to offer formal and regulated coach certification programmes. For example, the United Kingdom Coaching Certificate, National Coach Accreditation Scheme in Australia, and the guidelines provided within the National Standards for Sport Coaches developed by the National Association for Sport & Physical Education in the USA are just some examples of formal coach education initiatives offered in other countries (Mallett et al., 2009). There is a common misconception that the material taught in formal coach education programmes is the same material that is learned by the programmes' participants, but such a direct transfer of information is rarely the case (Callary, Culver, Werthner, & Bales,

230 2014). Formal coach education programmes also face the challenge of meeting the motivations
231 of the participating coaches, meeting the coaches' learning needs, and designing the content of
232 the courses appropriately (Werthner et al., 2012). Therefore, formal coach education
233 programmes may not be optimal as primary sources of coach education.

234 Guided, institution-based (formal) coach education programmes are useful in that they
235 may increase coaches' confidence and coaching efficacy (Gilbert et al., 2009; Lemyre et al.,
236 2007), but some researchers have said these programmes have limited contributions to coach
237 learning (Mallett et al., 2009; Piggott, 2012). During structured education programmes, the
238 learner typically has little control over what material is taught. A pre-set instructional course can
239 be beneficial for new coaches, as such programmes typically provide a foundation for developing
240 coaching skills; but the programmes are limited in scope and would therefore provide incomplete
241 benefits to experienced coaches (Mallett et al., 2009). Coaches typically view formal learning
242 programmes as being either too basic or too abstract and so they struggle to see the relevance of
243 course material (Piggott, 2012). Coaches have even been noted to externally appear as if they
244 accept the material being taught, despite harbouring internal doubts and disagreements with their
245 instructors (Piggott, 2012). Experienced coaches are likely to benefit more from workshops or
246 seminars, as these environments are typically less formal and more discursive than institution-
247 based programmes (Mallett et al., 2009; Piggott, 2012).

248 Fortunately for parkour athletes, it is common to have annual large gatherings of athletes
249 who assemble to train parkour together. Occasionally at these gatherings, or 'jams' (Kidder,
250 2012), select highly skilled athletes who attend are requested to lead seminars (American
251 Parkour, 2015). Although these seminars, which would be considered examples of nonformal
252 coach learning situations (Mallett et al., 2009), are usually aimed at refining athletic skills rather

than developing coaching techniques, the information provided, if sufficiently applied, could be invaluable to parkour coaches as a supplement to formal coaching programmes.

Communities of practice. Nonformal seminars, as an element of social learning systems may be considered to contain elements of a community of practice (Wenger, 2000).

Communities of practice, or CoPs, are ‘groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis’ (Wenger, McDermott, & Snyder, 2002, p. 4). Members of a CoP share and construct knowledge through frequent interactions, and allow for the participation of newcomers (Lemyre et al., 2007). CoPs emphasise that learners are social participants in a social world, as described by Wenger’s social theory of learning (Wenger, 2000). CoPs have applications in education and professional development, and also in technology, especially relating to social media (Wenger, 2000).

As an example, there are existing groups on Facebook that specifically target both trained and untrained parkour coaches. Depending on the levels of interactions and familiarity between individuals, these Facebook groups may act as informal knowledge networks, that is, a set of relationships between familiar individuals used to collect and pass along information (Allee, 2000; Winchester, Culver, & Camiré, 2011); or networks of practice, which involve a larger amount of participants who are unfamiliar with each other exchanging information over the Internet with relatively little reciprocity (Culver & Trudel, 2008). Depending on how the specific Facebook groups for parkour coaches function, they may display components similar to communities of practice, informal knowledge networks, or networks of practice. Examining the impact of such groups on parkour coach learning is therefore warranted.

Unfortunately, coaches do not always regularly seek out interactions with their peers (Culver & Trudel, 2008). Coaches at the recreational level have reported a willingness to share information with fellow coaches (Lemyre et al., 2007), but as coaches become more competitive they begin to view other coaches as rivals instead of potential sources of information and learning (Lemyre et al., 2007). Parkour is primarily a recreational sport, but as the sport has developed there have been increasing opportunities for competition. For example, the North American Parkour Championship in Vancouver, British Columbia, Canada (Thompson, 2013) and the Red Bull Art of Motion in Santorini Greece (Papantoniou, 2013) are both annual parkour and freerunning competitions where participants compete against each other instead of training to improve their own capabilities. The potential interactions between parkour coaches in these competitions, and the effects of parkour competitions on formal PCEPs are both areas that could benefit from future research. However, as parkour is still a new sport, and PCEPs even newer, most of the athletes who have participated in these competitions were not likely trained by parkour coaches.

New sport coaching. There exists minimal research on the development of formal coach education programmes in new sports. However, Lyons, Rynne, and Mallett (2012) presented elements of coaching associated with the sport of ski cross as it made its debut at the Vancouver 2010 Winter Olympics. Ski cross is a new sport that brings downhill alpine ski racing to a motocross-type racing context. Because of this relationship, the authors stated that most of the competitors and coaches of ski cross had backgrounds in downhill alpine ski racing. However, because ski cross has unique elements that differ from alpine skiing, most ski cross coaches likely developed their skills informally through practical coaching experience (Lyons et al., 2012). Similarly, parkour coaches without formal coach education also likely rely on informal

and nonformal sources of learning as their primary sources of education. In addition to displaying these potential similarities to the new sport of ski cross, parkour may share common elements with other categories of sport, including adventure sports and lifestyle sports.

Adventure sport coaching. Adventure sports are ‘physical activities with a degree of risk, that are non-competitive in origin and guided by their own ethics...these sports are characterised by requiring specific technical skills, possessing an element of physical challenge, and a continually changing dynamic environment’ (Collins & Collins, 2012, p.91). Parkour fits this definition, and therefore may be considered an example of an adventure sport. Adventure sport coaches, and so in this case parkour coaches, must be able to address the motivations of their athletes as well as potential risks that accompany the specific adventure sport being practiced (Collins & Collins, 2012).

Motivation. There are three types of motivation common to adventure sports athletes: (a) elite referenced excellence; (b) personally referenced excellence; and (c) participation for personal wellbeing (Collins & Collins, 2012). Athletes who experience elite referenced motivation may feel that they are the best in a given category. Alternatively, personally referenced athletes may not be concerned with being better than others, but instead they may prioritise personal progress and always improving their capabilities. Finally, athletes who are motivated by personal wellbeing may not care much about progress at all, as these athletes tend to participate in adventure sports simply for the sake of enjoyment of the sport (Collins & Collins, 2012). A competent adventure sports coach must be able to cater to the needs of his or her athletes, which may vary depending the individual athlete’s motivation (Collins & Collins, 2012).

As adventure sport coaches are often active participants in the sports they coach (Lorimer & Holland-Smith, 2012), parkour coaches themselves may identify with the aforementioned types of motivation. It could therefore be beneficial for PCEPs to address the issue of motivation and to describe to the participants' different types of motivation that pertain to both parkour athletes and coaches. Coaches should be reminded that their own personal motivations will not necessarily align with the motivations of the athletes whom they teach, and that the coaches should be aware of these potential differences. The responses of the coaches relating to their coaching philosophy might be analysed for insight regarding motivation and the inherent risks in the sport of parkour.

Risk. In addition to managing athletes' motivations, adventure sports coaches must be able to use the risks inherent to adventure sports as a learning tool, despite the potential harm that risks present (Collins & Collins, 2012, 2013). Risks in adventure sports are unavoidable; practitioners of adventure sports take risks even in learning and developing their skills (Collins & Collins, 2013). Although risks can sometimes be beneficial to adventure sport athletes, adventure sport coaches should reflect on the decisions that they make with regard to permitting or attempting to minimise risks (Collins & Collins, 2013).

These recommendations for coaches on how to account for athletes' motivations and the inclusion of risk into training, in addition to the findings made by Callary et al. (2014) and Leduc et al. (2012), reinforce the importance of reflection in coaching practice. These findings would suggest that it is important for PCEPs to encourage self-reflection as part of regular coaching practice, a beneficial suggestion that might not be provided to parkour coaches and other adventure sport coaches who do not have formal training.

Parkour as a lifestyle sport. In addition to the label of adventure sport, parkour may also be considered a lifestyle sport. Lifestyle sports are those that promote alternative values when compared to traditional sports. Examples of such values could be individuality, anti-competitiveness, anti-regulation, the acceptance of high risks, and the promotion of personal freedom (Wheaton, 2004).

Gilchrist and Wheaton (2011) discussed the incorporation of values from non-traditional lifestyle sports, including parkour, into physical education programmes in English secondary schools. Some of the described values common to traceurs are the promotion of healthy lifestyles (i.e., no smoking or drinking, healthy eating habits) and the encouragement of task and mastery orientations in order to foster intrinsic motivation. Additionally, there exist a number of barriers, such as white male hegemony, that may prevent or discourage participation in other sports, but parkour practitioners are often not faced with these barriers. (Gilchrist & Wheaton, 2011). The authors noted that race does not seem to play a factor in parkour participation, and that the sport encourages movements that might seem feminine, such as those that focus on balance and aesthetics (Gilchrist & Wheaton, 2011).

As a new, non-traditional, high-risk, lifestyle, and adventure sport, parkour coaches may face many challenges that are not presented to traditional sport coaches. Additionally, any traditional sport coaching experience that parkour coaches possess may neglect to address parkour-specific coaching techniques, such as encouraging movements that are perceived as feminine in a male-dominated sport (Gilchrist & Wheaton, 2011), or preventing injuries in a sport where the athletes perform techniques in dynamic, changing environments (Collins & Collins, 2013). These differences highlight the importance of parkour-specific coaching

education and experiences in order to maximise the quality of coaching received by parkour athletes.

Epistemology

As this study was intended to be exploratory and opinion-based, constructivism is a suitable approach to understanding the information that was gathered (Crotty, 1998). All participants in the study provided their own independently constructed perceptions of PCEPs and/or their constructed perceptions relating to how they learned to coach. Through analysing the responses provided by the participants, this project aims to expand the available knowledge relating to the experience of coach learning in unregulated sports, and coach perceptions of formal coach education programmes in unregulated sports.

Methodology

Given the constructivist nature of this research, a basic interpretative qualitative methodology, or BIQM, (Merriam, 2002, 2014) was appropriate to guide the research process. A BIQM is used when a researcher wishes to study the meanings of situations and phenomena held by research participants (Merriam 2002, 2014). Data collection in a BIQM can be achieved using interviews, which are then analysed for the identification of patterns, and later presented as themes and categories (Merriam, 2014). Merriam (2014) stated that researchers who employ a BIQM are interested in (a) how their participants interpret their experiences, (b) how their participants construct their worlds, and (c) what meanings their participants attribute to their experiences. As this research intended to study the experiences of parkour coaches and how they described their coaching journeys, a BIQM approach was appropriate.

Methods

In order to acquire the perceptions of the participants in this research project regarding PCEPs and coach learning, a semi-structured interview was conducted with each participant. Interviews have been noted as “one of the most powerful tools in understanding human beings to gain insight into participants’ perspectives” (Wilson, Bloom, & Harvey, 2010). The interviews conducted for this research, which were framed by an interview guide containing a series of open-ended questions, provided the interviewees with opportunities to share their experiences relating to coach learning and education with minimal interruptions on the part of the interviewer. The interviewees were encouraged to divulge as much information as they felt comfortable. Participants were recruited and their responses categorised based on their particular coaching experiences, as is explained in Articles 1 and 2.

When similar responses from interviewees began to develop, and the most of the data could be categorised into existing themes without having to create new themes, we were justified in assuming that the information gathered reflected the perceptions of the participants (Côté, Salmela, Baria, & Russell, 1993; Sandelowski, 1995) regarding PCEPs and parkour coach learning. We therefore stopped interviewing participants once a point of theoretical saturation had been reached.

Recruitment

Participants for this research were recruited both through the Internet and in person. The primary researcher contacted parkour organisations that host PCEPs via e-mail, and requested that his contact information be made available to coaches affiliated those organisations, should they be interested in participating in this study. Some parkour organisations publicise the contact information of affiliated coaches on the Internet, and in such cases the researcher contacted the

potential participants directly. There are a number of groups on Facebook for parkour coaches, and so the researcher posted in some of those groups asking to be contacted by any interested parties. Finally, the lead researcher also contacted some parkour coaches directly, via e-mail or Facebook, whom he thought might make useful contributions towards his research. For the participants who were recruited in person, the recruitment process and subsequent interviews happened at different parkour events across Canada and the Eastern United States.

Participants

Participants for this study were recruited based on purposive and convenience sampling criteria. Participants were considered parkour coaches, and therefore met the inclusion criteria for this study, if they have had at least one year of parkour coaching experience. All the participants were over the age of 18. We aimed to interview both male and female coaches, despite the fact that most parkour practitioners are male. There may be differences in the methods that male and female coaches use to instruct male and female athletes, and by intentionally excluding either gender from this research, there would be the potential for valuable information to be excluded. Finally, although this study had an international reach, all the interviews were conducted in English, as that is the lead researcher's mother tongue. Participants were interviewed based on availability, until the sampling criteria was fulfilled, or until new responses from participants fit into existing categories and so theoretical saturation was reached (Sandelowski, 1995).

Guest, Bunce, and Johnson (2006) found that a large sample of participants may not be required to obtain theoretical saturation; saturation may occur within six to twelve interviews. Therefore, a minimum of twelve participants were interviewed for the proposed study, with the goal of recruiting twelve to eighteen participants. For two of interviews that were conducted, two

participants were interviewed simultaneously at their request, and so nineteen parkour coaches participated in this study, over the course of seventeen interviews.

Participant demographics. All of the participants provided demographic information (refer to Article 1, Table 1; Article 2, Table 1) before participating in their interview. Fifteen out of the nineteen participants in this study were male, four were female. Most participants were from Canada and the United States, and there were also some from Europe and Australia. The participants ranged in age from 19 to 34 years old, with an average of 25.8 years of age. The parkour coaches had anywhere from 1 to 9 years of coaching experience, with an average of 5.2 years, and their experience as parkour athletes ranged from 5 to 11.5 years, with an average of 7.8 years. Twelve of the participants had some degree of experience as parkour coach developers, and thirteen of the participants had participated in formal parkour coach education programmes – PCEPs. Three of those thirteen coaches had attended more than one such programme. Among the programmes attended were the American Parkour (APK) Instructor Certification Programme, the ParkourEDU Coaching Certification, the Art du Déplacement And Parkour Teaching (ADAPT) Qualification Programme, Parkour City, the World Freerunning and Parkour Federation (WFPF) Teaching Certification, the Australian Academy of Parkour, Exercise & Self-Defence (AAPES) coach training, the Pinnacle Parkour (PPK) Coach's Certification, and the Origins Parkour apprenticeship programme. While fifteen of the parkour coaches had some level of coaching experience in other sports, only two of the parkour coaches who were interviewed had experience as coach developers in other sports.

Data Collection

Consent form. Before participating in an interview, all participants were required to fill out a consent form. The form informed the participants about the nature of this research: to study

455 how parkour coaches learn to coach. Participants were also notified that their participation in this
456 research was entirely voluntary, and they were asked to confirm that they were not in any way
457 compelled to participate by the researchers. The participants were informed that they were free to
458 withdraw from this study at any time, with no penalties. Participants were asked to sign the
459 consent forms with the awareness that the audio from the interviews would be recorded, but the
460 researchers would maintain the participants' anonymity upon synthesis of the interview data
461 unless otherwise specified by the participants.

462 **Interviews.** Prior to participating in an interview, all participants were asked to complete
463 a short written demographic questionnaire (See Appendix A). The data from the questionnaires
464 were therefore data that did not need to be transcribed with the rest of the interviews, and could
465 easily be isolated and analysed independent of the participants' responses to the questions in the
466 interview guide. Thus the demographic questionnaires served to simplify the processes of both
467 data transcription and data analysis. After completion of the questionnaire, each participant was
468 able to take part in an interview. The interviews for this research took place both in-person and
469 online through the use of Skype between July and November of 2015. A pilot interview was
470 conducted with a local parkour coach in May of 2015 in order to increase the lead researcher's
471 familiarity with the interview process and to provide an opportunity to use interview guide. At
472 the time of the pilot interview, three separate interview guides had been created. We had
473 originally planned to use a different interview guide based on whether the participants had
474 experience as a coach developer, had participated in PCEPs, or did not fit into either of the
475 aforementioned categories. The different interview guides were eventually eliminated so as not
476 to categorise the participants before their responses had been collected. A single interview guide
477 was created for all the participants in order to let the data speak for itself. This revised interview

guide was used for all the interviews that were conducted after the pilot interview (see Appendix B).

Most of the in-person interviews took place at various parkour events across Canada and the Eastern United States. Interviews conducted over Skype were all scheduled ahead of time in order to provide the participants ample time to read over the consent form, whereas some of the in-person interviews were conducted impromptu. The consent forms and demographic questionnaires for all in-person interviews were completed immediately prior to the start of the interview, whereas for the interviews over Skype, some participants had filled out the forms in advance. For the remaining Skype interviews, it fell to the interviewer to both read over the consent form and fill out the demographic questionnaire together with the participants.

The interview guide asked about participants' relations with PCEPs, their personal histories with parkour, the impact of PCEPs on their coaching practices, their personal coaching experiences, and the sources of learning that they perceived as being particularly influential to their coaching. The primary researcher also chose to slightly modify interview questions or even stray from the interview guide when necessary to ask specific probing questions.

Data Analysis

The primary researcher conducted 17 semi-structured interviews with 19 participants, because two of the interviews were conducted with two participants simultaneously. The interviewer used an interview guide as a tool to help him progress through the interviews, but he did also employ probing questions during the interviews when relevant. Before participating in an interview, each participant filled out a demographic questionnaire that asked questions about age, gender, and coaching experience in parkour and other sports. After completing the interviews, the primary researcher used the popular approach to conducting thematic analysis

described by Braun and Clarke (2006; Clarke & Braun, 2013) as the framework for data analysis in his project. Braun and Clarke (2006; Clarke & Braun, 2013) separated the data analysis process into six steps: (a) data familiarisation; (b) initial code generation; (c) searching for themes; (d) reviewing themes; (e) defining and naming themes; and (f) producing the report.

Data familiarisation – InqScribe. First, in order to become familiar with the data, the first author personally conducted every interview and transcribed all but one of the interviews using InqScribe software (InqScribe, 2005). InqScribe is transcription software that allows the user to pause, play, insert timestamps, and slow down playback speed, among other functions, to ease the process of the user's transcription.

During the transcription process, the researcher listened to the recordings of the interviews he had conducted as he transcribed. After each interview was transcribed, the researcher read over the transcripts a second time to check for typing and spelling errors. Finally, the researcher went through each transcript a third time, while simultaneously listening to the recordings, to check for transcription errors. The one interview that the primary researcher did not transcribe was instead transcribed by an assistant researcher. Upon completion of this transcript, the primary researcher studied the transcript for both spelling and transcription errors, and so he read through that interview only twice. The interview and transcription processes happened concurrently, so the researcher would start transcribing completed interviews while other interviews had yet to be conducted.

When the primary researcher first began the transcription process, he was faced with a mountain of information; many hours of interview time that needed to be transformed into hundreds of pages of interview transcripts. As a newcomer to qualitative research, he had never before been exposed to such a vast amount of raw data. In what later proved to be a useful

attempt to organise the transcription process, the primary researcher created a spreadsheet in Microsoft Excel (see Figure 1) to keep track of: how many out of the 17 interviews he had transcribed and how many were left to transcribe (Figure 1, a); how many pages of transcripts he had created, which totalled 597 double-spaced (Figure 1, b); the length of each interview, which when combined totalled 21 hours 17 minutes and 13 seconds and ranged from 33 to 114 minutes (Figure 1, c); how much interview time still needed to be transcribed (Figure 1, d); and whether he had sent a copy of the transcripts to their respective participants (Figure 1, e). The researcher found the time-tracking component of his spreadsheet (Figure 1, c and d) to be most beneficial, as those calculations helped him to maintain a schedule. He utilised formulas within Microsoft Excel which took into account the current date, the number of minutes of content remaining to be transcribed, and the number of work days until his personal deadline to complete the transcription process (December 31, 2015). Using these formulas, the researcher was able to create a cell that would display the minimum number of minutes of content that needed to be transcribed every day in order to have all of the transcripts completed by his deadline (Figure 1, f). The last transcript was sent to the final participant on December 28th, 2015.

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first participant had not participated in any parkour coach education programmes (PCEPs), but in a subsequent interview, a different participant was also a gymnastics coach and additionally was a participant in a PCEP. He described that he

got involved in gymnastics a little bit after I started training parkour just because I wanted to learn to flip. I was still 18, or 16 or whatever, like ‘Mom, get me into gymnastics classes.’ So that kind of developed and eventually I was like, ‘Well okay, I definitely think I can coach gymnastics as well to pull in some extra money’. And one of my best friends at the time offered to take me to one of the gyms that he worked at, and I trained under his head coach...

This quote was then coded under the existing node, ‘*Coaching experience in other sports*’.

However, this participant also had experience participating in three different PCEPs, and when asked about why he chose to attend three different programmes, he responded,

Because I want to learn! I feel like everybody, regardless of your business affiliations will have something to give and to learn from. I've heard bad things about all the certs, I've heard good things about all the certs, and you asked- so its kind of one of those things where I feel like, to get the connection, I would need the actual first-hand experience.

A new node titled ‘*Perceptions of PCEPs*’ was then created for this quote. The overall coding process progressed by means of inductive reasoning, as the themes revealed by the data were the primary drivers of data analysis.

Searching for and reviewing themes – NVivo. Throughout the research process, the primary researcher and his supervisor engaged in frequent arranged interactions to discuss his project. After one such meeting, the primary researcher was prompted to explain and justify his

node structure to his supervisor. Thus the researcher was required to reflect upon his node structure and clearly define each node he had created.

At this point in the data analysis process, if there were multiple nodes with common themes, those nodes were grouped under a higher-order parent node. Using a previous example, the '*Perceptions of PCEPs*' node was combined with other nodes that related to PCEPs under the higher-order node simply entitled, '*PCEPs*'. After coding all interviews, the researcher reviewed the existing codes and analysed each transcript a second time in order to accommodate for any nodes created after the initial coding of each interview.

After each interview had been coded in accordance with the existing node structure, the primary researcher further organised the existing nodes into a hierarchy. The creation of this hierarchy resulted in a 3-4-2-1 structure of node development, where 1 represents the highest-order nodes, and 4 the lowest-order nodes, and so the third-highest order of nodes were created first (See Table 1 for an example of how the '*PCEPs*' node was created and organised. All of the items in the 'Step 1' and 'Step 2' columns were contained within the '*PCEPs*' node in the 'Step 3' column, which belonged to the '*Parkour coaching*' node in the 'Step 4' column). First, the researcher searched for nodes with few quotes, and nodes which resembled other nodes with a similar theme. Such duplicate/repetitious nodes were deleted and the quotes within these nodes were merged into other larger nodes. For example, quotes from the nodes '*Self-perception post-PCEP*' and '*PCEP Effects*' were merged to create a new node titled, '*Impact of PCEP*'. After the initial clean-up of duplicates, the highest order of remaining nodes, including the '*Impact of PCEP*' node and 110 others, would later represent the third order of nodes (Level 3) in the hierarchy.

601 *Table 1. Organisation process of 'PCEPs' node from NVivo*

<u>Step 1 – Deleting duplicates + initial organisation (Level 3)</u>	<u>Step 2 – Organisation of sub-nodes (Level 4)</u>	<u>Step 3 – Organisation of higher order nodes (Level 2)</u>	<u>Step 4 – Creation of highest order nodes (Level 1)</u>
About PCEPs	N/A	Coaching benefits	About parkour
DIY PCEP ideas	N/A	Coaching goals	Biography and
Experience with PCEPs	N/A	Coaching philosophy	experiences
Legitimacy	N/A	Coaching resources	Golden Quotes
PCEP contents	Apprenticeship contents Certification contents Coaching hours Level differences Pre- and post- participation	Coaching skills Parkour Organisations PCEPs Professionalism Teaching focus Thoughts on sharing Traits of coaches	Miscellaneous Other domains Parkour coaching Reflection
PCEP Participant resources	Hard copies Social interactions Online		
Perceptions of PCEPs	Academic influences Certification vs. apprenticeship How to improve		
Impact of PCEP	Minimal impact Positive impact Potential impact		
PCEP speculation	N/A		
Perceived PCEP benefits	N/A		
Perceived PCEP necessity	Increase coach experience Increase number of coaches Parkour outreach		
Perceived PCEP risks	N/A		
Second-hand perceptions	N/A		
Reason for participation	Community Learning Legitimacy		

One hundred ninety-four sub-nodes (Level 4) were then created within the existing third-level nodes to promote further organisation. In order to create these fourth-level sub-nodes, the researcher opened each existing third-level node in alphabetical order, to be exposed to the data in yet another different order. He then created lower-order child nodes (Level 4) within each existing third-level node from quotes with common themes. For example, the node '*Impact of PCEP*' (Level 3) was further divided into additional nodes, including nodes titled, '*Minimal impact*', '*Positive impact*', and '*Potential impact*' (Level 4). Some of these nodes were divided again, but the further subdivisions did not contribute benefits to the node structure.

Part of the way through the process of creating these lower-order nodes, the researcher created another Excel spreadsheet to keep track of how many nodes were left to examine (See Figure 2). As the researcher had been progressing through the nodes alphabetically, he grouped the remaining nodes by starting letter. At the time of creation of the spreadsheet, the researcher had already created fourth-order nodes within all of the nodes beginning with the letters 'A' through 'N'. He then tallied the number of third-order nodes that began with each remaining letter of the alphabet ('O' through 'Z', excluding letters not represented in the node structure) in order to calculate how many quotes remained to be sorted (Figure 2, a). Each cell in the letter columns represented a single Level 3 node, and the value in the cell represented how many quotes were contained within that node. Once a Level 3 node had been examined Level 4 nodes created within it, the number in the respective cell on the spreadsheet was replaced by a '/' (At the time displayed in Figure 2, the nodes beginning with letters 'O' through 'S' had been re-coded). Similar to his previous spreadsheet, the researcher calculated how many Level 3 nodes he would have to examine each day to complete this step of data analysis before his personal deadline (Figure 2, b). The researcher also included a table that calculated completion times

643 was tallied and grouped (see Figure 4). The researcher used formulas to check that each group
644 included all the members and that each member was counted only once. The researcher then
645 calculated the values for the range and average age of the participants, the years of parkour
646 coaching experience, and the years of parkour training experience. At this stage he also
647 examined the groups from the previous step (Figure 4) to look for potentially significant patterns
648 or trends in the data (see Figure 5). For example, it was at this stage that the researcher explicitly
649 discovered that 12 of the 19 participants had some sort of parkour coach developer experience,
650 and out of the 15 participants who have participated in coach development programmes
651 unrelated to parkour coaching, 8 of those coaches attended gymnastics-related coach
652 development programmes. Finally, the researcher attempted to cross-examine all of the
653 information from the previous steps to find more trends and correlations in the data (see Figure 6
654 – the red line indicates where a category on the ‘y’ axis meets itself on the ‘x’ axis), however he
655 quickly discovered that this step was too narrowly-focussed and none of the emerging trends
656 would be of a noteworthy size. No significant correlations were found across the table. This step
657 resulted in mostly quantitative data, which is of little use in a purely qualitative research project
658 with such a small sample size. In the end, this final comparison table was not used in the findings
659 of the research project.

Name	Gender	Age	Years of Parkour Coaching Experience	Years of Parkour Training	Parkour Coach Developer	Participation in Parkour Coach Training Programs
Trevor	Male	24	5	7	No	Yes
Vanya	Male	22	3	6	No	Yes
Jordan	Male	20	3	6	No	No
Andrew	Male	23	7.5	8.5	In process	Yes
Max	Male	22	6	8	Yes - Light involvement	Yes
Greg	Male	30	6	7	Yes	No
Scott	Male	34	8	10.5	Yes + in process	No
Carl	Male	20	1	5	Yes	Yes
Ryan	Male	28	9	11.5	Yes	Yes
Courtney	Female	31	3	5	No	Yes
Sabrina	Female	19	2	5	Yes	No
Amos	Male	32	8	9	Yes	Yes
Brandee	Female	29	9	9	Yes	Yes
Mike	Male	28	8	10	No	No
Jereme	Male	26	7	11	Yes	Yes
Tyler	Male	26	2	8.5	No	No
Blake	Male	28	5	6	Yes	Yes
Chad	Male	23	5	8	Yes	Yes
Justine	Female	25	2	6.5	No	Yes

Figure 3. Section of participant demographic information from NVivo exported to Microsoft Excel

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2		Gender			Age			Years of Parkour Coaching Experience			Years of Parkour Training			Parkour Coach Developer	
3		Male	15		19	1		1			5	3		No	7
4		Female	4		20	2		2			6	3		Yes	12
5					22	2		3			6.5	1			
6					23	2		5			7	2			
7					24	1		6			8	2		Cert names	
8					25	1		7			8.5	2		American Parkour	1
9					26	2		7.5			9	2		WFPP	1
10					28	3		8			10	1		ParkourEDU/APEX	2
11					29	1		9			10.5	1		ADAPT	2
12					30	1					11	1		Parkour Visions	1
13					31	1					11.5	1		In progress	2
14					32	1								Other	5
15					34	1									
16														Number of certs developed	
17														0	7
18														0.5	1
19														1	6
20														1.5	1
21														2	4
22															
23	Formula Check:	Gender:	19		Age:	19		Pk Coach Exp:	19		Pk Exp:	19		Pk Coach Developer	19
24	GOOD														
25															
26															

Figure 4. Section of participant demographic information that was broken down and tallied. Formula checks are included to ensure that data from all participants are included.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Groups:	Gender		Parkour Coach Developer		Cert Participant		Other Coach Education		Primary Source of Expertise		Coach Developer for Other Sports
2		15 Male		7 No		6 No		4 No		16 Personal Experience/Trial and Error		17 No
3		4 Female		12 Yes		13 Yes		15 Yes		7 Learning from Others		2 Gymnastics
4				2 APEX		10 Attended one cert		8 Gymnastics				
5				2 ADAPT		1 Attended two certs		2 Martial Arts				
6				2 In progress		2 Attended three certs		2 Personal Training				
7						5 APEX						
8						4 APK						
9						2 ADAPT						
10												
11												
12												
13												
14												
15	Stats	Age		Years of Parkour Coaching Exp		Years of Parkour Training						
16		Average = 25.8		Average = 5.2 years		Average = 7.8						
17		Range = 19-34		Range = 1-9		Range = 5-11.5						
18												
19												

Figure 5. Section of participant demographic information that was grouped to look for patterns. Text in red reflects potentially interesting groups.

	A	B	C	D
1	Trends	Gender	Age	Years of Parkour Coaching Experience
2	Gender		Females - Spread across age range Males - Spread out across age range	Females - 3 out of 4 had 3 or fewer years of coaching exp. (avg = 5.2) years Males - Spread out
3	Age	19-25: 2 Females, 7 Males 26-34: 2 Females 8 Males		19-25: Average = 3.8 26-34: Average = 6.5
4	Years of Parkour Coaching Experience	1-5: 3 Female, 7 Male	1-5: Spread out across age range	

Figure 6. Section of comparison spreadsheet between demographic items in the search for trends

Defining and naming themes –CMapTools. In qualitative research, concept maps can be used as a tool to further develop themes and theories from complex data (Miles & Huberman, 1994). The primary researcher had previous experience creating concept maps for a course on literature analysis he had completed during his master's degree, and also for a presentation he conducted for his fellow researchers regarding personal reflection and the development of his identity as a qualitative researcher. As concept maps were familiar to the researcher, he felt comfortable utilising concept maps in order to assist with the process of defining and naming themes.

After completing the node structure and examining the demographic information, the primary researcher created a concept map based on data that addressed each of his two primary research questions: (a) How do parkour coaches learn to coach? (see Article 1, Figure 1); (b) What are the perceptions of parkour coaches regarding PCEPS? (see Article 2, Figure 1). In order to begin the creation of these concept maps, the researcher used the two nodes from NVivo

(2010) that most closely related to his research questions. Those nodes were respectively ‘*Sources of Expertise*’ (later changed to ‘*Sources of Learning*’), and ‘*Perceptions of PCEPs*’.

Creating concept maps for the data that were analysed for his master’s research allowed for the primary researcher to temporarily become mentally removed from the node structure he had created in NVivo. Thus, when starting to create the concept maps, the first step in which the researcher engaged was to begin from memory, using a whiteboard to list the concepts that he was able to recall first. As an example, for the concept map relating to the node entitled, ‘*Sources of Learning*’ the researcher first listed the concepts ‘*Coaching experience*’, ‘*PCEPs*’, and ‘*Other parkour coaches*’. Then he consulted the node structure in NVivo in order to link to other concepts such as ‘*Previous leadership experience*’, ‘*Academics/School*’, and ‘*Reflection*’. For the concept maps stemming from the node, ‘*Perceptions of PCEPs*’, the researcher first listed the concepts of ‘*Risks*’ and ‘*Benefits*’, and again turned to NVivo to assist him in completing the second concept map with nodes relating to, for example, ‘*Second-hand speculation*’, ‘*Governing body*’, and ‘*How to improve*’.

After completing each concept map on the whiteboard, the primary researcher inputted the concept map data into CMapTools (CMapTools, 2014), and reorganised the concept maps from the whiteboard into a hierarchical structure. The transfer of the concept maps from a handwritten to a digital form, as well as the creation of linking words between the concepts in CMapTools, provided the primary researcher with an opportunity to re-examine and reflect upon the data represented by the concept maps. Finally, the researcher also re-examined the entire node structure on NVivo to look for additional sources of potentially relevant nodes that were not included in each of the two concept maps.

Producing the report. Upon completing the concept maps, the researcher chose appropriate quotes from the data to support the themes that emerged from the data. Initially, the researcher had chosen a minimum of one quote to represent each of the lowest-order nodes from the concept maps in his findings, however, so many quotes resulted in lengthy and incoherent reports. Upon further consultation with his supervisor, the researcher condensed his findings sections, which had stemmed from the concept maps. For example, the ‘*Experience as a parkour coach*’, ‘*Experience as a parkour athlete*’, ‘*Experience as an athlete in other sports*’, and ‘*Previous leadership experience*’ sections from the first concept map, ‘*How Parkour Coaches Learn to Coach*’, were combined under a new heading titled simply ‘*Experiences*’, and no lower-order nodes from the concept maps were included in the final reports.

Upon completing first drafts of two articles, we were initially overwhelmed with the amount of information that came out of the concept maps and the NVivo node structure. We conducted multiple passes through the drafts in order to reduce them to reasonable sizes. Initially the deletions consisted of quotes that did not strongly pertain to the research questions, and sections of quotes that were excessive to the quotes’ main messages. Then the findings section and discussion section of each article were compared, and any quotes from the findings that were not explicitly referenced in the discussion section were also deleted. Finally, the papers were reduced to an appropriate length for publication in article format. While a report containing all of the data collected was neither feasible nor necessary to answer the research questions, the breadth and depth of the data analysis explained here leaves the authors confident that sense was indeed made of the data (Coffey & Atkinson, 1996).

Validity/Trustworthiness

We took actions to minimise validity threats over the course of this study. As previously described, information that could serve to identify participants was altered or eliminated in order to preserve participant anonymity. Additionally, all the interviews were transcribed verbatim, and then sent to the participants to obtain respondent validation (Maxwell, 2012). The lead researcher also offered to send the final version of this study to any participants who requested a copy. Finally, the lead researcher engaged in peer debriefs over the course of his research in order for his research to be analysed and critiqued by his peers.

Bracketing interview. The primary researcher participated as an interviewee in a bracketing interview for a data analysis course during the time in which he was preparing this project. During the bracketing interview, the researcher was asked questions such as: ‘Do you think your training as a gymnastics coach has affected your parkour coaching?’, ‘What assumptions do you think you have about parkour and parkour coach education that could affect your research and your interviews?’, and ‘How will you continue to monitor your assumptions through the research process?’ This process prompted him to reflect upon his potential biases that might pose the risk of influencing the results of his research. The primary researcher became aware that he should not assume that all or most PCEPs are similar to the one in which he participated, and that he should not assume that because someone is a parkour coach he or she also has extensive experience as a parkour athlete. In summary, conducting the bracketing interview was successful in bringing the researcher’s potential biases to light, and it gave him the opportunity to hold those biases and assumptions in abeyance.

Ethics. The proposed research in this study was conducted only upon receiving ethics approval from the University of Ottawa research ethics board.

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Article One

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Abstract

Parkour is a relatively new sport, so there has not yet been much research published relating to parkour, or more specifically, parkour coaching. There is a large body of knowledge relating to how sport coaches learn to coach, but such research has examined regulated sports; that is, sports with national governing bodies. In North America, where this study was conducted, parkour does not have any national governing bodies, rendering it an unregulated activity. When asked how they learned to coach, parkour coaches from this study described the influences of various sources of learning: parkour coaching experience, previous leadership experience, experience as an athlete in parkour and other sports, other parkour coaches, non-parkour coaches, parkour coach education programmes, school, reflection, and the Internet. It will be interesting to see how the specific influences of these sources might change in the future if parkour in North America becomes regulated.

Keywords: Parkour, coach learning, new sport, adventure sport, lifestyle sport

Introduction

Parkour is a sport, movement discipline, or athletic activity in which the practitioners, called traceurs, use only their bodies to engage in specialised techniques relating to movements such as jumping, vaulting, rolling, swinging, climbing, and potentially acrobatic manoeuvres to interact with physical obstacles, in both urban and rural environments (Atkinson, 2009; Ford, 2016; Ortuzar, 2009; Scavington, 2016).

Parkour was first practiced in Lisses, France in the late 1990's by David Belle and a group of his peers who called themselves *Yamakasi* (Archer, 2010). Belle has described being motivated by his father who was a member of the fire fighters' squad of Paris and part of the French military. The military obstacles courses, or *parcours du combattant*, provided the initial source of the name 'parkour' (Belle, 2009). Components of these obstacles courses drew inspiration from the teachings of George Hébert's *Méthode Naturelle*, a training model focussed on using exercises relating to basic movement skills (e.g., pushing, pulling, running, swimming, etc.) and early parkour practitioners also adopted Hébert's philosophies, *être fort pour être utile* and *être et durer* ('be strong to be useful' and 'to be and to last'; Atkinson, 2009; Belle, 2009). Alternatively, Sébastien Foucan, one of Belle's childhood friends and a fellow member of the Yamakasi (Geyh, 2006) has been credited with coining the term freerunning (Archer 2010; Fuggle, 2008), which he described as having a focus on creativity and self-expression rather than utility. To maintain simplicity, the term parkour will be used in this paper to represent the similar terms of parkour, freerunning, and parkour's original French name, l'art du déplacement/ADD, except where otherwise specified.

Since the 1990s, parkour has grown and spread across the world, and with the increased popularity has come a demand for instruction, and therefore parkour coaches. At the time this

article was written, Parkour UK, the national governing body for parkour in the United Kingdom (Parkour UK, 2012), appeared to be the only governing body for parkour across the world. However, a number of private parkour organisations worldwide have also developed parkour coach certification, apprenticeship, development, or education programmes. However, in countries where parkour coaching is not regulated, parkour coaches are under no obligation to participate in certification programmes, and so they would only do so voluntarily. The circumstances surrounding the development of parkour coaching, as well as the first author's own personal interest in parkour have led to the primary research question that guided this paper: How do parkour coaches learn to coach?

Sources of Learning

There are frequent examples in the coaching literature where coaches of regulated sports described what they perceived as the most influential sources for their learning as sport coaches. The most popular sources of learning described are: learning from others (e.g., Rynne & Mallett, 2014), learning from coaching/past experiences (e.g., Irwin, Hanton, Kerwin, 2004), learning from participation in formal coach education programs (e.g., Stoszkowski & Collins, 2016), learning from experience as athletes (e.g., Sherwin, Campbell, MacIntyre, 2016), and learning from reflection (e.g., Stoszkowski & Collins, 2016).

When learning from others, coaches have reported learning from people both within and outside the sport which they coach (Rynne & Mallett, 2014). Coaches commonly reported learning from mentors (Irwin, Hanton, & Kerwin, 2004), but they have also described learning from general interactions with others during informal learning activities, especially when those activities contain the possibility for social interactions (Stoszkowski & Collins, 2016).

821 In addition to learning from others, coaches have also reported learning to coach by
822 practicing the skill of coaching itself (MacDonald, Beck, Erickson, & Côté, 2015). Varying
823 terminology is used to describe learning by coaching, such as when coaches may describe
824 learning from past experience, learning on-the-job, or learning from trial and error (Irwin et al.,
825 2004). Coaches have specifically described how their coaching experiences led to improvements
826 in their coaching. For example, a coach quoted by Rynne and Mallett (2014) described how
827 actually making mistakes while coaching had led to improvements in coaching ability by
828 avoiding similar errors in the future.

829 In addition to learning on-the-job, sport coaches have also discussed the influences of
830 formal coach education programs as a source of learning. When describing the specific impacts
831 of these programs on their coaching, coaches have mixed perceptions. For example, coaches
832 often describe formal programs as having minimal or low impacts on their coaching (Irwin,
833 Hanton, & Kerwin, 2004; Rynne & Mallett, 2014), but some coaches have also been noted to
834 have gained knowledge from recent participation in these programs (Stoszkowski & Collins,
835 2016). When it comes to perceptions of formal training overall, coaches tend to report
836 preferences for situations that offer more informal and self-directed learning opportunities.

837 Coaches have the opportunity to develop their own familiarity with sport-specific
838 material even before beginning to coach; coaches frequently report learning from their
839 experiences as athletes (Carter & Bloom, 2009). Interestingly, it has been suggested that those
840 who were less talented as athletes benefit most in the transition to coaching (Irwin, Hanton, &
841 Kerwin, 2004), whereas highly talented athletes who were ‘fast-tracked’ into coaching may be
842 less successful than practiced coaches (Sherwin, Campbell, & MacIntyre, 2016).

A powerful tool for developing success in coaching is that of reflection (Trudel, Gilbert, & Rodrigue, 2016). Without reflection, any new information that coaches learn and immediately implement might be potentially neutral or even harmful to them or their athletes (Stoszkowski & Collins, 2016). Some coaches have admitted to using new information without stopping to think about and critique the information first (Stoszkowski & Collins, 2016), which may not ultimately benefit their coaching overall, thus highlighting the importance of reflection in developing coaching expertise.

Coach Learning

In addition to examining coaches' reported sources of learning, it is important to understand in general how coaches learn and develop their coaching skills. Trudel, Culver, and Werthner (2013) described a model that categorises coach learning into three types of learning situations: mediated, unmediated, and internal. These learning situations are not to be confused with another categorisation of learning situations by Mallet, Trudel, Lyle, and Rynne (2009) who discussed the categories of formal, nonformal, and informal. This latter set defined learning situations based on the context or environment in which coaches have opportunities to learn, but those categories cannot provide information about the impact or process of learning. The categories of mediated, unmediated, and internal learning situations, while they may relate to coaches' learning environments, they more importantly pertain to the coaches' experiences as learners. Using the categories of mediated, unmediated, and internal learning situations highlights the important distinction that the material being taught cannot be assumed to be the same as the material that is learned (Trudel et al., 2013).

Mediated learning situations are those in which the content of the material being taught is not selected by the learner (Trudel et al., 2013), and other individuals are therefore in control of

the learning context. Both formal and nonformal learning situations from Mallet et al (2009)'s framework (e.g., certification programmes, workshops, seminars) may be considered examples of mediated learning situations, as both are typically run by facilitators.

Unmediated learning situations, however, are those in which learners themselves choose the content of their own learning (Trudel et al., 2013). The process of unmediated learning can be conducted consciously or unconsciously; unconscious unmediated learning for coaches typically involves learning about the sub-culture of their sport and is heavily influenced by the sum of their personal experiences, or biographies, whereas conscious unmediated learning relies on the coaches to seek new information intentionally (Trudel et al., 2013).

Finally, when coaches are involved with internal learning situations, there is no new information being learned, but the coaches make changes to their cognitive structures, or in other words, the coaches reorganise what they already know. As coaches' develop increased competence, they typically engage in more internal learning situations and fewer mediated learning situations (Trudel et al., 2016).

The mix of learning situations that coaches experience typically varies depending on each individual's development of his or her identity as a coach (Trudel et al., 2016). When coaches first begin their coaching careers they may be seen as *newcomers* to coaching, but after becoming certified as coaches or completing a coach education programme coaches may be regarded as having a base level of skill, and can be considered *competent* (Trudel et al., 2016). Competent coaches are usually able to sufficiently deliver the material that they were taught, but when they begin to develop their own individual coaching styles, adapt their knowledge into new coaching techniques, and seek out new learning opportunities, the coaches may then be called *SuperCompetent* (Trudel et al., 2016). Finally, coaches can become *innovators* when they

develop a proficiency at a) associating – connecting problems or questions from seemingly unrelated fields, b) questioning – challenging or asking questions about expected knowledge, c) observing – learning new ways to do things by being aware of their environments, d) experimenting – engaging in novel experiences, and e) networking – making connections in order to develop a more diverse access to knowledge (Trudel et al., 2016). The main driver of the evolution of coaching identity is what Trudel et al. (2016) referred to as *deliberate reflection*. The authors described the use of deliberate reflection by coaches, in that as their identities evolve they will intentionally set aside more time to reflect on their coaching practices.

New sport coach learning. As parkour is a relatively new sport, most countries have not yet mandated a standardised process to develop and educate parkour coaches. That is to say, most parkour coaches do not have to participate in mediated learning situations, such as coach education programmes in order to coach. Whether or not parkour coaches have the opportunity to seek out such programmes, they can still learn through unmediated and internal learning situations. Similarly, when the sport of ski cross, a hybrid of downhill alpine ski racing and terrain park skills, made its debut at the Vancouver 2010 Winter Olympics, most of the coaches had backgrounds only in downhill alpine ski racing (Lyons, Rynne, & Mallett, 2012). These coaches' skillsets from their biographies were missing components specific to ski cross, like group races for example, and so it is likely that ski cross coaches developed the majority of their skills through the unmediated and internal experiences they had as ski cross coaches (Lyons et al., 2012). As parkour is a new sport, like ski cross, parkour coaches may not have had coaching backgrounds relating to many parkour-specific skills, therefore it may also be expected that most parkour coaches also learn primarily from unmediated and internal learning situations.

912 **Adventure Sport Coaching**

913 Besides being a new sport, there are other ways to categorise parkour, for example, as an
914 adventure sport. According to Collins and Collins (2012), adventure sports are defined as
915 ‘physical activities with a degree of risk, that are non-competitive in origin and guided by their
916 own ethics...these sports are characterised by requiring specific technical skills, possessing an
917 element of physical challenge, and a continually changing dynamic environment’ (p.91). Parkour
918 adheres to this definition of an adventure sport.

919 While adventure sports may be immensely enjoyable, they may also be accompanied by
920 inherent risks of danger and injury. Adventure sport coaches must be able to use these risks as
921 learning tools in the development of their athletes, in spite of the potential for harm (Collins &
922 Collins, 2012, 2013). It is up to adventure sport coaches to mediate their athletes’ engagement
923 with risk, as a certain degree of risk can be beneficial in helping adventure sport athletes to learn
924 and develop their skills. However, it is important that adventure sport coaches also reflect upon
925 the degree of risk that they permit for their athletes (Collins & Collins, 2013).

926 **Parkour as a Lifestyle Sport**

927 Besides the possibility of being called an adventure sport, parkour also adheres to the
928 definition of a lifestyle sport. In comparison to more traditional sports, lifestyle sports promote
929 alternative values, such as individuality, promotion of personal freedom, anti-
930 competitiveness/anti-regulation, and the acceptance of high risks (Wheaton, 2004). Examples of
931 some values that are commonly held by parkour athletes are the promotion of a healthy lifestyle,
932 including no drinking, smoking, and healthy eating habits, and fostering intrinsic motivation
933 through task and mastery orientations (Gilchrist & Wheaton, 2011). Other sports have common
934 barriers to participation, such as white male hegemony, which does not seem to play a large role

in the participation of parkour athletes. In fact, parkour actually encourages movements and techniques, such as balance and esthetics, that might be considered as more feminine (Gilchrist & Wheaton, 2011). Therefore, it might not be unexpected to find the promotion of such alternative values in parkour coach education programmes, but not in coach education programmes relating to other sports.

Methods

Data Collection

A semi-structured interview was conducted with each of the nineteen participants. The interviews were framed by an interview guide consisting of eleven questions¹. These questions asked about topics relating to the participants' histories as parkour athletes, parkour coaches, and their perceptions of parkour coach education programmes (PCEPs), such as coach certification or apprenticeship programmes. We also modified each interview by asking specific probing questions based on the participants' responses. Every participant agreed to participate in a follow up interview, but no such interviews were necessary.

Before participating in the interviews, each participant filled out a consent form, allowing their responses to be used in the analysis and publication phases of the research. By signing the consent form, the participants acknowledged that their participation in the study was voluntary, allowing for their withdrawal from the study at any time without penalty, and that they were aware the audio from the interviews was recorded and used for analysis. Additionally, while signing the form the participants were given the opportunity to waive their right to anonymity, and some chose to do so. In addition to the consent form, each participant filled out a

¹ Interview guide available upon request to the first author

demographic questionnaire prior to the interview in order to provide basic information and a foundation for understanding the participants' experiences as parkour coaches. Participants for this study were recruited either in person or by email. Among those contacted through email were the participants who had experience with PCEPS, either as participants or coach developers, parkour coaches who the first author thought would be beneficial based on their experiences, and parkour coaches who were referred through other participants. The remaining participants for this study were contacted in person at various parkour-related events.

Demographics. Nineteen parkour coaches were interviewed for this research project, and their demographic information was recorded (see Table 1). Fifteen of the participants were male and four female. Only 17 interviews were conducted because on two occasions there were two participants who wished to be interviewed together. The participants were between the ages of 19 and 34, and had between one and nine years of parkour coaching experience. The coaches had from 5 to 11.5 years of experience as parkour athletes, 12 of them had experience as parkour coach developers, and 13 had participated in formal parkour coach development programmes. Three of those 13 coaches had participated in more than one such programme. Only two of the parkour coaches had experience as coach developers in other sports, but 15 of them had experience as coaches in other sports.

973 *Table 1. Participant demographic information*²

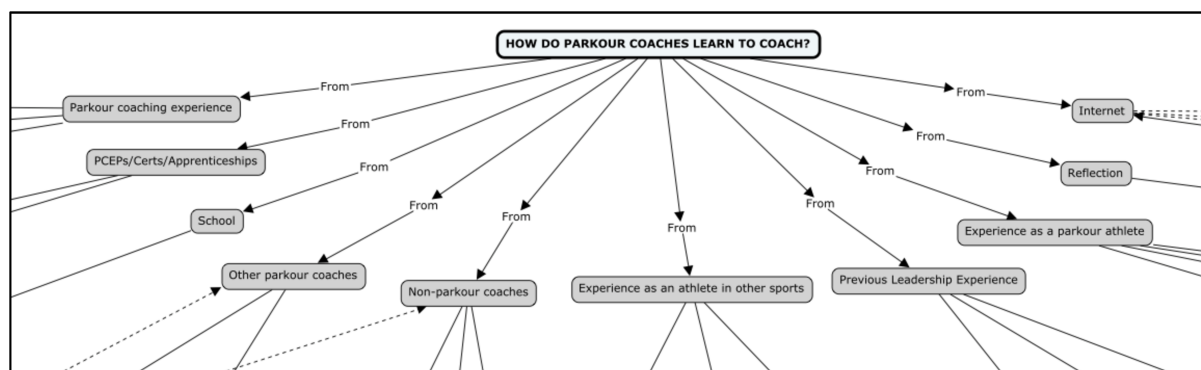
<u>Name</u>	<u>Country</u>	<u>PK Coaching Exp. (Years)</u>	<u>PK Training Exp. (Years)</u>	<u>Primary Source of Learning</u> ³
Trevor	Canada	5	7	Coaching/leadership experience in sport/activities
Vanya	Belarus → U.S.A.	3	6	On-the-job
Jordan	Canada	3	6	Experience
Andrew	U.S.A.	7.5	8.5	YouTube, experience, networking
Max	U.S.A.	6	8	Trial & Error, family, experience
Greg	Canada	6	7	Trial & Error
Scott	Denmark	8	10.5	University, other parkour athletes, experience
Carl	Australia	1	5	Online debates
Ryan	U.S.A.	9	11.5	Self, travel, internet, research
Courtney	U.S.A.	3	5	Observation, other parkour coaches/ athletes
Sabrina	Canada	2	5	Personal experience
Amos	U.S.A.	8	9	...myself
Brandee	U.S.A.	9	9	Experience, training/teaching parkour
Mike	Canada	8	10	Experience, biomechanics, research, workshops
Jereme	U.S.A.	7	11	Reflection, experience, collaboration
Tyler	Canada	2	8.5	Experience
Blake	U.S.A.	5	6	Travel, experience, other smaller things
Chad	Canada	5	8	Formal education (sport science), other athletes
Justine	Canada	2	6.5	Head coaches' direction/feedback, reflection

² The names of some participants have been altered to protect their anonymity.³ The primary sources of learning column comprises verbatim responses from the participants.

Data Analysis

The data collected for this research project were first transcribed using InqScribe software (InqScribe, 2005) and subsequently coded using thematic analysis in NVivo 10 (NVivo, 2010). Data was analysed from a constructivist perspective (Crotty, 1998). The six steps of thematic data analysis described by Braun and Clark (2006) were used as a guide when the data were analysed: (a) data familiarisation; (b) initial code generation; (c) searching for themes; (d) reviewing themes; (e) defining and naming themes; (f) producing the report. After the initial coding of the data, a concept map was created using CMapTools software (CMapTools, 2014) (See Figure 1 to view a section of the concept map).

Figure 1. Section from the first concept map: *How Do Parkour Coaches Learn To Coach?*



According to Novak and Cañas (2006), “concept maps are graphical tools for organising and representing knowledge” (p.1). The relationships between concepts on a concept map are indicated by connecting lines, which are used to link multiple concepts together (Novak & Cañas, 2006). Additionally, concept maps are best constructed with reference to what Novak and Cañas (2006) referred to as a *focus question*, which for this concept map was the question, “How do parkour coaches learn to coach?”. The use of our concept map may be more similar to what Miles and Huberman (1994) referred to as *pattern coding*. Mapping out the interrelations of

pattern codes is not meant as a final step, but instead it can be used to promote further analysis, and help the researcher to develop a deeper understanding of the analysed data (Miles & Huberman, 1994). Similarly, this concept map was created in order to allow the researchers to reflect upon and reorganise the data that was already present in the node structure.

Most of the points in the concept map stemmed from the node in NVivo entitled '*Sources of Learning*', as this node most closely related to the focus question. The '*Sources of Learning*' node contained the following sub-nodes, which were used in the creation of the concept map: Academics, Athlete experience in other sports, Coaching context, Coaching experience in other sports, Experience as a parkour athlete, Experience as a parkour coach, Family, Feedback, Interactions with athletes, Interactions with non-parkour coaches, Interactions with parkour coaches, Internet research, Mentorship, Non-sport leadership experience, Other experiences, PCEPs, and Reflection.

It is important not only to identify sources of learning, but also to describe the coaching components influenced by those sources (Werthner & Trudel, 2006). Table 2 allows an understanding of how different coaching components were developed through different sources. In addition to the analysis that took place in NVivo and CMapTools, the demographic information of the participants was exported into Microsoft Excel and was analysed for any emerging patterns or trends.

1016 *Table 2. Coaching components and their sources, from the ‘How Do Parkour Coaches Learn to*
 1017 *Coach?’ concept map.*

<u>Skill/technical progression</u>	<u>Feedback/discussion</u>	<u>Class management</u>	<u>Networking</u>	<u>Diverse skillset</u>
Experience as parkour coaches	Experience as parkour coaches	PCEPs	PCEPs	Non-parkour coaches
PCEPs	Other parkour coaches	School	Internet	Experience as athletes in other sports
Internet	Internet	Other parkour coaches		
Other parkour coaches		Non-parkour coaches		
		Previous leadership experience		

1019 Findings

1020 Participants’ responses relating to their sources of learning as parkour coaches were
 1021 divided into the themes of: Experiences before coaching parkour and Parkour coaching
 1022 experiences. This article was written not only with the intention to list the most influential
 1023 sources of learning for the parkour coaches who were interviewed, but also to describe the
 1024 specific influences of those sources on their parkour coaching.

1025 Experiences Before Coaching Parkour

1026 The participants in this study frequently discussed how their learning as parkour coaches
 1027 was influenced by experiences they had before beginning to coach parkour. The experiences that
 1028 were discussed included: previous leadership experiences, experiences as parkour athletes, and
 1029 academic learning experiences.

1030 *Previous leadership experience.* Before gaining coaching experience in parkour,
 1031 participants frequently reported that the skills they gained through experience in other leadership
 1032 positions contributed to their learning as parkour coaches. These contributions included learning
 1033 coaching techniques by coaching other sports, developing the mindset of a leader, improving

1034 their abilities to work with children, improving social skills, developing class management skills,
1035 and gaining experience in leadership positions.

1036 Fifteen of the interviewed parkour coaches had coaching experience in other sports,
1037 including various team sports, gymnastics, martial arts, breakdancing, handball, crossfit, barefoot
1038 running, personal training, track and field, circus, and pole dancing. When asked about the
1039 contributions that coaching other sports made to their parkour coaching, the participants
1040 frequently described that having previous coaching experience made the transition to parkour
1041 coaching much easier. They stated that they had had a chance to develop coaching skills and
1042 techniques from other disciplines, leading to a diverse coaching skillset. As an example, Trevor⁴
1043 had a diverse background coaching a variety of recreational sports, and he described the
1044 confidence he has developed as a parkour coach because of his familiarity with coaching.

1045 I like just being able to flip back and forth from being like, ‘Oh this is a really creative
1046 way to teach this skill’, versus ‘Oh, this is the gymnastics way, and there's a reason why
1047 they use that, they've found that to be the best way’... This background allows me to teach
1048 to all skills levels, to all different body types, to all different genders. (Trevor)

1049 ***Experience as a parkour athlete.*** Another commonly referenced source of learning for
1050 parkour coaches was past experience as a parkour athlete. All the participants in this study had
1051 experience as parkour athletes before becoming parkour coaches. The participants reported that
1052 their times as parkour athletes gave them opportunities to learn by instructing their peers,
1053 learning skill and technical progressions through personal failures, being coached themselves, or
1054 merely through practicing as athletes. As parkour athletes, the participants had opportunities to

⁴ The names of participants as well as people they mentioned in quotes may have been replaced with pseudonyms in order to protect personal information.

1055 learn how to analyse movement patterns, and they reported that they sometimes attempted to
1056 replicate their own learning experiences with their students.

1057 Nearly all of the participants interviewed for this study did not seek out professional
1058 parkour coaches when they first began their journeys as parkour athletes. Most of them learned
1059 to do parkour by training alone and with friends. Training with others allowed for the
1060 opportunity for the participants to interact with other parkour athletes, and also potentially
1061 provide coaching or instruction to those who did not have the same skillset.

1062 Jordan described his experiences of learning and teaching his peers when he first
1063 discovered parkour, and how those experiences influence his current coaching tactics.

1064 [T]here wasn't anyone who was way better than us who could teach us these things.

1065 We've learned simply by watching each other and kind of guessing at how we could fix
1066 that, and then working together to get these moves to work. And so again it comes into
1067 our coaching with letting them have a little free will in what they want to learn. You
1068 allow them to feed off each other and not just feed off of what you tell them. And it
1069 allows them to learn in multiple ways. (Jordan)

1070 When asked to elaborate on how their experiences as athletes influenced their parkour
1071 coaching, many participants noted that by making mistakes as athletes they had learned what not
1072 to do. They described how they can now help prevent their athletes from making similar
1073 mistakes. When Courtney was asked how she learned to coach, she responded by saying

1074 By failing as a student (laughs)... I think by being a student in general was how I learned
1075 to coach... So if I walked into the gym and I was able to do a kash vault without even
1076 thinking about it, I'd never be able to teach anybody. I would never be able to tell them
1077 how to do it. All I could say is 'I don't know, I just did it! So you guys should just do it!'

1078 But since I failed doing moves like that I had to break it down and learn the steps of it,
1079 then I can coach people. (Courtney)

1080 Similarly, Mike saw the potential in learning from not only his own failures, but the mistakes of
1081 his peers as well.

1082 I'd say from personal experience it's really 100% mistakes that I've made personally. I
1083 will try as hard as possible to not let other people make the same exact mistake. Mistakes
1084 that I see friends make, or injuries that I see friends get, I work hard to make sure that
1085 other people don't receive those injuries. (Mike)

1086 In addition to learning from their failures, the participants also tried to replicate the
1087 successful learning opportunities they had experienced as parkour athletes. Courtney elaborated
1088 that in addition to learning how to perform parkour movements, she also wanted to transmit the
1089 values that she developed while progressing as a parkour athlete.

1090 I'm not just teaching my students the movements and how to do it safely... I'm trying to
1091 teach them how to be respectful to each other, and motivating to other people, and not
1092 judgemental of people. I want them to have the experiences that I had, and I want them to
1093 give those experiences to other people too. (Courtney)

1094 Brandee also spoke about how she felt it was important for her students to eventually take
1095 control of their own training. Brandee described her own parkour philosophy, including the fact
1096 that she feels parkour should be a core part of the identity of her athletes, as it is for her.

1097 I want to teach people to teach themselves parkour. I want them to not need me at all...

1098 My goal is to get them to understand that parkour is not a list of movements, it is not
1099 something you do just sometimes. It is a mindset and a way of interacting with the world
1100 as a whole. (Brandee)

1101 ***School.*** A number of participants described experiences where school had been
1102 influential to their parkour coaching. These influences related to travel opportunities, learning
1103 about coaching, and learning from parkour coaches.

1104 When asked about what he considered to be his most influential sources of learning as a
1105 parkour coach, Blake's first response was 'travel'. While other participants also spoke about the
1106 influences of travel on their learning, during his time at college Blake was awarded a fellowship
1107 which allowed to him travel across the world for a year, in order to study and train parkour.
1108 Blake understandably described his trip as being, 'a pretty life-changing experience'.

1109 When Blake started his travels, he first went to France, where he was fortunate enough to
1110 meet, train with, and become friends with various members of the Yamakasi, the original
1111 founders of parkour, as well as other members of the French parkour community. Blake next
1112 went to London. He, 'was supposed to be there for a month, [but] ended up staying for four'. As
1113 Blake continued his travels, he also participated in a PCEP during his trip.

1114 Where school gave Blake the opportunity to travel and learn about parkour, other parkour
1115 coaches, such as Scott, learned about coaching in school itself. When asked to describe the
1116 sources that most influenced his parkour coaching, part of Scott's response was, '[M]y education
1117 from university about coaching in general... setting up classes and group management and so
1118 on... [gave me] the foundation of the practical way of coaching.'

1119 **Parkour Coaching Experiences**

1120 All but three of the nineteen participants listed personal experience, coaching experience,
1121 or trial and error as one of their most influential sources of learning on the demographic
1122 questionnaire, even before participating in an interview. During the course of the interviews, and
1123 as the participants spoke more in-depth about their learning experiences once they had begun

1124 coaching parkour, the participants spoke about on-the-job experiences, experiences with PCEPs,
1125 interactions with others, and reflection.

1126 ***On-the-job coaching experiences.*** When participants discussed their most influential
1127 parkour coaching experiences, they provided examples of different elements of parkour coaching
1128 that contributed to their learning, such as learning from practice, learning from their students,
1129 and learning as coaching professionals in a variety of coaching contexts. Many of the parkour
1130 coaches said that simply spending time practicing as a coach provided them with opportunities to
1131 improve their coaching skills. For example, Brandee described that she learned most by,
1132 ‘...experience. Training and just teaching parkour... I feel like I learned to coach by... doing it
1133 and practicing it’. Sabrina also described how, ‘...as you keep coaching, you always get better
1134 and better, and I think I keep getting better as a coach because of experience.’

1135 ***Experience with PCEPs.*** When asked to describe what they felt were the most influential
1136 sources of learning, many of the parkour coaches explicitly referenced personal experience and
1137 learning from interactions with others. Interestingly, where thirteen out of the nineteen parkour
1138 coaches had been PCEP participants, none of the coaches specifically mentioned PCEPs as a
1139 primary source of learning. Three of those thirteen had even participated in more than one such
1140 programme. However, over the course of the interviews, the participants did describe the impacts
1141 and learning opportunities provided to them by participation in the various PCEPs. The described
1142 learning events related to learning coaching techniques, learning technical skills or progressions,
1143 learning class management skills, and opportunities for networking.

1144 Max described that he normally tends to rely on feedback from his students in order to
1145 assess their current abilities and provide them with suitable technical progressions, but during his

1146 participation in a PCEP Max was exposed to a more structured set of pre-defined progressions,
1147 which he then had the opportunity to introduce into his coaching.

1148 The exact progressions for each movement, how you would go from the last progression
1149 to the first progression there's always a certain flow to it. And also where you're standing
1150 when you're spotting, stuff like that. That was a little bit more structured. (Max)

1151 ***Interactions.*** In addition to learning from past experiences, another described source of
1152 parkour coach learning was learning from interactions with others. Eight of the parkour coaches
1153 who participated in this study reported on the demographic questionnaires, before beginning
1154 their interviews, that interactions with others were highly influential to their learning as parkour
1155 coaches. Although during the interviews, participants mostly discussed interactions with other
1156 parkour coaches, they also mentioned interactions with non-parkour coaches, and online
1157 interactions.

1158 Overall, the participants described some of the different influences that interactions with
1159 others had on their parkour coaching. These influences included providing an introduction to
1160 coaching, providing feedback, prompting self-reflection, providing information about class
1161 management, illuminating specific coaching styles and techniques, and providing knowledge
1162 about experts, specialists, and resources in a given area.

1163 Trevor spoke explicitly about the influence and importance of communicating with other
1164 parkour coaches on his coaching practices.

1165 I feel that my classes and workshops are just an amalgamation of people from New
1166 York... D.C.... Vancouver... Montreal, and everywhere I've gone, I've just taken all their
1167 little drills and activities and incorporated it into what I call my toolbox of different
1168 methods of teaching. (Trevor)

1169 Jordan and Tyler spoke about interacting with the parkour athletes whom they coach, and
1170 how they realised that, as coaches, they are responsible not only for teaching their students
1171 parkour techniques, but for helping their students to develop their identities as parkour
1172 practitioners.

1173 Tyler: Kids don't come in wanting to learn basic moves. They want to learn the touch-
1174 down Raiz, double cork that they saw somebody do at the Art of Motion

1175 Jordan: They want to learn that but they don't want to put the time in to get their
1176 flexibility up... Instead of us saying, 'This is how you do a parkour skill' It would be
1177 good to say, 'Okay, this is how you do a parkour skill, but here's how to be a parkour
1178 athlete.' And put in stuff like, 'Train your flexibility' 'Eat right', and just giving them
1179 more of a lifestyle rather than a specific training regime. (Jordan, Tyler)

1180 **Reflection.** In addition to external factors such as learning from others or learning from
1181 PCEPS, participants also mentioned learning from themselves, learning from reflection.
1182 Reflection was rarely mentioned explicitly by any of the parkour coaches as sources of learning,
1183 however, they did acknowledge the importance of looking inward to develop as coaches. The
1184 parkour coaches described that reflection may provide opportunities for improvement and
1185 development, and it can be prompted by other parkour coaches or even through interactions over
1186 the Internet.

1187 Jereme did specifically mention the impact of reflection on his learning as a parkour
1188 coach.

1189 I listed self-reflection first because that's definitely the biggest thing... After I teach a
1190 class I'm still thinking about the class... Before the class, I'm still thinking about the
1191 class... I've found that that has allowed me not just to be able to teach as comfortably as I

can, but it's also created an environment where I'm really just incredibly obsessed with the progression of my own teaching skills and abilities. So I feel like even after ... 7 years of coaching, I still feel like I'm not even close to filling up the cup. (Jereme)

Discussion

This study was conducted in North America, where there are no national governing bodies for parkour, and so private parkour organisations across the continent each have their own influences on the development of the sport. Parkour in North America is therefore *unregulated*. Research has already been conducted on how sport coaches learn to coach, however such research has discussed only regulated sports that have their own governing bodies, such as ice hockey, soccer, and baseball (Cushion et al., 2010; Lemyre, Trudel, & Durand-Bush, 2007; Werthner & Trudel, 2006; Wright, Trudel, & Culver, 2007). Parkour has not existed for as long as these more traditional sports, nor is it as popular. More importantly, the process of coach learning has not been researched in unregulated sports. By studying the learning sources of coaches of non-regulated sports and the influences of those sources, in addition to the available research on regulated sport coach development, it may be possible to gain further insight into the field of coach learning.

Coach Learning

Trudel, Gilbert, and Rodrigue (2016) presented a model on how sport coaches learn to coach. The model was first introduced by describing that the content a coach is required to learn varies based upon their coaching context (recreational, developmental, or high-performance). However, coaches may experience different types of learning situations: mediated learning situations, where the content of learning is decided by others; unmediated learning situations, where the individual coaches are in control of their own learning content; and internal learning

1215 situations, where no new material is learned but the coaches reorganise what they already know,
1216 regardless of their coaching contexts (Trudel et al., 2016).

1217 Examples of these different types of learning situations can be seen in the responses of
1218 the parkour coaches. For example, participants described their engagement in mediated learning
1219 situations while participating in PCEPs, and even while being coached as athletes. Participants
1220 reported involvement in unmediated learning situations most frequently, including examples
1221 such as learning from on-the-job experience, and intentionally participating in discussions with
1222 their peers. Finally, the participants also described their involvement with internal learning
1223 situations by reflecting upon what they already knew. By reflecting upon mediated learning
1224 experiences they had as athletes, some parkour coaches were able to mentally switch roles and
1225 provide learning situations for their athletes that mirrored what the coaches had experienced in
1226 the past.

1227 At some point in their pasts, most of the parkour coaches in this study have participated
1228 in a PCEP, and thus, according to Trudel et al. (2016) they may share traits with competent
1229 coaches by obtaining a minimum coaching standard. However, because parkour coaching is
1230 unregulated, there is no governing body to set the standards for parkour coaching. The model by
1231 Trudel et al. (2016) does not accommodate certification programs for unregulated sports, and so
1232 parkour coaches who have participated in PCEPs may not necessarily display similar levels of
1233 competence to coaches of other sports who have completed formal programs that are overseen by
1234 governing bodies. That being said, some of the parkour coaches in this study spoke about the
1235 importance of learning new things and customising their own personal coaching styles,
1236 indicating these coaches may have exhibited behaviours that are associated with
1237 SuperCompetent coaches (Trudel et al., 2016). There are also some examples of the participants

engaging in behaviours attributed to innovators, for example stressing the importance of reflection to their coaching (internal learning situations), seeking novel experiences (experimenting), and realising the importance of interactions with others (networking). It is therefore encouraging that, despite the sport of parkour being relatively new and not yet having a governing body to oversee the development of the coaches who were interviewed, some parkour coaches may exhibit similar behaviours to those of very experienced, potentially expert coaches (Trudel et al., 2016).

Interestingly, the current nature of parkour may promote innovative behaviours in parkour coaches, before they might even be considered competent. Parkour coaches, especially those coaches who focus more on creativity and freerunning, may have more experience coming up with new ideas as part of both their coaching and training practices. Specifically, the descriptions of observation and experimentation used by Trudel et al. (2016), ‘learning new ways to do things by being aware of their environments’, and ‘engaging in novel experiences’ respectively, may exactly reflect the training methods of many traceurs who are not given any instructions on what or how to practice, but nevertheless constantly find their own unique ways to move and interact with any given obstacles in their environment.

The pressure for parkour coaches to innovate might also be heavily influenced by the fact that parkour coaching is unregulated. According to Trudel et al. (2016), the five traits displayed by coaching innovators are: association, questioning, observing, experimenting, and networking. Parkour coaches may be driven to *associate*, by seeking out coach development experiences from other sports, but because parkour is not overseen by a national governing body, parkour coaches may *question* the way that other coach education programmes operate. Parkour coaches will also have to *observe* and *experiment* with their own coaching to find optimal coaching

methods that work for them, and finally through *networking* and interacting with others, parkour coaches can continue to improve their own coaching practices.

However, the innovation conducted by parkour coaching newcomers may be more superficial than the innovations of those with more coaching expertise. That is to say, newcomers to parkour coaching may innovate in terms of creativity and originality, however these same newcomers may not have extensive understandings of the field of parkour coaching or even sport coaching. Alternatively, innovation that is performed by coaches with greater levels of expertise may still retain components of creativity and originality, but these coaches may also be able to engage in a ‘deeper’ form of innovation, and proceed to critique and improve the field of parkour coaching itself.

Sources of learning. When asked about experiences that contributed the most to their learning as parkour coaches, nearly all of the participants’ first responses referenced their experience as parkour coaches. Other common responses were interactions with others, previous leadership experience, and reflection. Interestingly, where thirteen out of the nineteen participants had participated in PCEPs, none of them explicitly mentioned a PCEP having a substantial impact on their learning. The absence of PCEPs in the initial responses is not particularly surprising however, considering that most of the PCEPs described lasted only a few days. All of the participants had over a year of coaching experience, with some having been parkour coaches for up to eleven years. A PCEP lasting a few days, or even those lasting a few weeks or months would not make up a significant percentage of the experiences had by parkour coaches who had been coaching for such a long time. This trend of placing higher value on day-to-day coaching experiences rather than coach education programmes has been frequently cited across other studies (Trudel, Gilbert, & Werthner, 2010; Werthner & Trudel, 2006; 2009). It is

also common to see similar reports of influential learning sources such as interactions with peers, interactions with other coaches, learning from the Internet, and reflection; however, some of these influences may vary in perceived importance between coaches (Werthner & Trudel, 2006).

Travel. A source of learning that is less commonly cited by sport coaches is the influence of travel on their coaching. When discussing travel, sport coaches have described their opportunities to interact with foreign coaches (Irwin, Hanton, & Kerwin, 2004). There were a number of parkour coaches in this study who also emphasised the influence of travel on their coaching. Most notably was Blake, who spent a full year travelling the world on a fellowship before briefly returning home, and then soon embarking on more travel adventures. Trevor, who did not initially reference travel as a valuable source of learning, also provided details about how he learned different coaching techniques from parkour coaches local to each of his destinations.

Because parkour is a physical sport, there is a lot of motivation for parkour athletes to travel to meet one another in person, train with each other, and learn from each other through movement, in addition to just discussion. Many cities around the world host large gatherings of parkour athletes, or ‘jams’, where many traceurs come together to explore and train in popular parkour spots (Kidder, 2013). Traceurs may also participate in parkour competitions, such as the Red Bull Art of Motion (Papantoniou, 2013), North American Parkour Championships (Thompson, 2013), and the APEX International Competition (Endres, 2016). Parkour competitions are often host to many of the world’s best parkour athletes, who both attend and compete. Attending jams and competitions may provide parkour coaches with opportunities to interact with and learn from the competitors and other attendees. Parkour competitions may be held at desirable training spots, such as ‘parkour gyms’, which are facilities that have been built

1306 specifically for training parkour, or even on the rooftops of Santorini, Greece, in the case of the
1307 Art of Motion.

1308 In addition to providing opportunities to train with and learn from other parkour
1309 practitioners, travel might also be an influential source of learning to parkour coaches based on
1310 different locations of training areas. Parkour is a sport related to overcoming obstacles, and a
1311 trait that is often revered in the practice of parkour is that of adaptability (Miller & Demoigny,
1312 2008), so parkour practitioners who wish to be well-rounded must be able to train in a diverse
1313 range of environments, as different environments offer different training challenges. Travel is
1314 essential to the learning of both parkour athletes and parkour coaches, because specific
1315 techniques may only be able to be performed and taught in a given environment, and each new
1316 environment offers different parkour training and teaching opportunities.

1317 *Coaching experience in other sports.* Fifteen out of the nineteen parkour coaches who
1318 were interviewed reported some level of coaching experience in other sports. Eight of those
1319 fifteen coaches had coaching experience in gymnastics, and only two of those eight were
1320 coaching gymnastics before they began to coach parkour. Additionally, the only two parkour
1321 coaches who had any experience as coach developers for other sports also had those experiences
1322 in the field of gymnastics.

1323 It is reasonable to wonder why gymnastics coaching is so popular among parkour
1324 coaches. While there is no obvious answer, it is possible to speculate why coaches of parkour, a
1325 relatively new sport, might seek out coaching experiences from a more developed sport such as
1326 gymnastics. There are at least four potential reasons: 1) to use the gym as a coaching space; 2) to
1327 use the gym as a training space; 3) to develop diversity in their coaching skillsets; 4) because
1328 gymnastics is a regulated sport.

1329 First, parkour coaches may wish to use a gymnastics gym as a coaching space either for
1330 the purposes of having an indoor facility that is accessible regardless of weather, or also to offer
1331 parkour instruction to those who may be hesitant to try parkour techniques outside on harder
1332 surfaces for their first time. Offering parkour coaching in a gymnastics gym can allow for the
1333 athletes to progress in both their skill and confidence levels, so that they may eventually become
1334 comfortable training parkour on harder surfaces and during unpredictable weather, if they choose
1335 to do so.

1336 Second, parkour coaches might want to use gymnastics gyms as a training space in order
1337 to develop their own skills as athletes. Being employed at a gymnastics facility would allow
1338 them more frequent access to a variety of different equipment, potentially for free.

1339 Third, there is a significant overlap between the sports of parkour and gymnastics in
1340 terms of skills. Athletes in both sports may train movements relating to vaulting, tumbling, and
1341 acrobatics, despite the fact that the specific execution of the techniques is likely to vary.
1342 Therefore, it could be expected that parkour coaches may display interest in learning about and
1343 eventually coaching gymnastics classes, if they desired.

1344 Finally, a prominent difference in coach education between parkour and gymnastics is
1345 that gymnastics coaching is typically regulated, while parkour coaching is not. Parkour coaches
1346 may perceive gymnastics coach education programmes as creating a widely accepted standard
1347 for coaching in a sport that shares similarities with parkour. By becoming gymnastics coaches,
1348 parkour coaches may not only have the opportunity to learn about and develop a foundation for
1349 their coaching knowledge, but they may also receive the added benefit of being perceived as
1350 more legitimate coaches because they coach a more popular, regulated sport.

In addition to gymnastics coaching experience, the parkour coaches who participated in this study reported coaching experience in other sports or activities, including martial arts, breakdancing, handball, crossfit, barefoot running, personal training, track and field, circus, pole dancing, and various team sports. Such a wide breadth of coaching experience among the relatively few coaches who were interviewed is impressive. Similar to the potential motivations connecting parkour coaches to gymnastics, most of the aforementioned activities share a potential skill overlap with parkour. Engaging in coach development programmes for other sports in addition to parkour coaching would therefore provide the coaches with more coaching time overall, and also coaching experience in a variety of contexts, including a mix of regulated and unregulated sports.

Adventure Sport Coaching

Besides being an unregulated sport, parkour is also an adventure sport (Kidder, 2013). All of the participants in this study had prior experience as parkour athletes before becoming parkour coaches, a trend that is common across adventure sports coaches (Lorimer & Holland-Smith, 2012). This trend also accounts for the numerous references to the coaches' experiences as parkour athletes. Although there is an increase in adventure sport athletes training under the supervision of coaches, adventure sport athletes are nevertheless sceptical about the importance of coaching to their sports (Ojala & Thorpe, 2015). Adventure sport athletes tend to learn most from their peers and other informal forms of learning (Ellmer & Rynne, 2016). Of the nineteen parkour coaches who participated in this study, only one was formally coached and took parkour classes before becoming a coach himself. Adventure sports athletes have reported that coaches may only be helpful for newcomers to the sport, or less-skilled athletes (Ojala & Thorpe, 2015),

and coaches like Brandee from this study have also reported that they aspire to progress their athletes to a point where they no longer need coaches.

Collins, Collins, and Grecic (2015) described adventure sport coaches, similar to responses from Jordan and Brandee in this study, as promoting athlete independence as a long-term coaching goal. Adventure sport coaches have also been noted to hold and promote positive views of the concepts of adventure, challenge, and risk in their athletes. (Collins et al., 2015).

One of the example coaches mentioned by Collins et al. (2015) described the constantly changing level of risk in canoeing, saying that on a calm day on a lake, the level of risk to the athletes is comparable to a padded gymnasium. Parkour athletes, not needing flowing water to practice, actually do have the opportunity to use such padded facilities to train for their sport. Some parkour coaches, like Brandee, feel that parkour ought to be practiced outside in more urban environments, and will encourage their athletes to practice in this more ‘risky’ environment. However, parkour coaches have been noted to hold perceptions that reject parkour as a high risk sport (Clegg & Butryn, 2012). It was found that parkour athletes consider those who take high risks without sufficient preparation to be inauthentic, or ‘posers’ (Clegg & Butryn, 2012).

Some participants, like Mike for example, spoke about trying to minimise the risk of injury in the athletes they coach by preventing the athletes from making the same mistakes that the coaches had made, which led to injury. Given that there are no formal skill progressions for parkour as an unregulated sport, could parkour athletes miss out on important learning opportunities if they are deprived of the experience of making mistakes? Maybe, but it is our opinion that the risk of injury is not worth the knowledge that can be gained from potential learning opportunities. Instead, the burden falls to parkour coaches to find a way to optimise the

1396 learning of their athletes, while simultaneously keeping them safe and minimising the
1397 possibilities for injury.

1398 Fortunately, there are strategies that parkour coaches can use to help their athletes to
1399 develop parkour skills safely. Two popular examples are the falling continuum (Rendao, 2011)
1400 and landing continuum (Ford, 2009). Each continuum contains a set of parkour techniques that
1401 allow parkour practitioners to land safely while taking multiple variables of their landings into
1402 consideration. Rendao (2011), when describing the falling continuum, noted how parkour
1403 practitioners ought to be able to roll in any direction (360 degrees) when falling. Additionally,
1404 there are different techniques that can help traceurs fall safely, including placing a foot on the
1405 ground while doing a dive roll in order to keep a traceur's hips above his or her shoulders, and
1406 learning to breakfall (Rendao, 2011). Similarly, the landing continuum consists of seven
1407 different techniques parkour practitioners can use when jumping to a wall or ledge, ranging from
1408 landing with both feet on top of a wall to landing with both hands and both feet on the front of
1409 the wall and dropping down to land on the ground (Ford, 2009). Ford (2009) described how
1410 traceurs should be able to adapt their movements mid-jump in order to modify their landing
1411 position to accommodate for variations in speed, height, and distance of any given jump.

1412 Some PCEPs may include information for parkour coaches on how to effectively transmit
1413 the techniques found in both of these continua to their athletes. However, because parkour
1414 coaching is mostly unregulated, there is a likelihood that even among parkour coaches who have
1415 participated in PCEPs, not all parkour coaches will be familiar with the falling and landing
1416 continua. The regulation of PCEPs could ensure that parkour coaches, and thus parkour athletes,
1417 are given safe progressions to approaching various techniques. Given the potential danger

inherent to parkour and other adventure sports, including these techniques in PCEPs may prevent a large number of injuries.

Parkour as a Lifestyle Sport

Many adventure sports, with parkour being no exception, also adhere to the definition of a lifestyle sport (Ellmer & Rynne, 2016). Lifestyle sports promote alternative values (Wheaton, 2004) and lifestyle sport athletes have their sports heavily integrated into their lives (Lorimer & Holland-Smith, 2012). A number of parkour coaches who participated in this study spoke about the influence of parkour on their lifestyle. We were unable to find any literature specific to lifestyle sport coaching, but the responses of the parkour coaches might be able to illuminate the learning processes of lifestyle sport coaches. It would not be unexpected to discover that, like adventure sport coaches, lifestyle coaches have histories as athletes in the sport that they coach. Lifestyle sport coaches may be deeply immersed in their sports, because of the values that the sports provide outside the context of practice.

Parkour specifically has adopted two values from the teaching of George Hébert's Natural Method (Atkinson, 2009), in the form of two mottos, *être fort pour être utile* (be strong to be useful), and *être et durer* (to be and to last) (Belle, 2009; Brown, 2007). These mottos represent the values of utility and longevity that are important to many parkour athletes. The potential impact of holding these values might be represented in traceurs' focuses on fluidity, adaptability, and safety in their training, because they are likely to want to be able to perform parkour techniques in any situation and to be able to keep training parkour for a long time. Parkour coaches who hold these values may also try to promote the practices of training to be adaptable and training for longevity in their athletes.

1440 To bring examples from our study, Jordan and Tyler spoke about the values they think
1441 parkour coaches should instil into their athletes in order to maximise their athletic potential, such
1442 as a healthy diet and mobility training at home. They also mentioned the importance of making
1443 sure their athletes have foundation skills before progressing to higher-level techniques, thus
1444 promoting safe progression in their athletes. Mike showed that he values safety as well, when he
1445 discussed how he feels that it is his duty to his athletes to provide them with the skills they need
1446 to not make the same mistakes that he did in his training, thus maintain the athletes' well-being
1447 in the long-term. Brandee discussed how she tries to promote independence in her athletes so that
1448 they become competent and no longer need to be coached. Finally, Courtney described values
1449 that were important to her, noting that she tries to develop in her athletes a sense of respect, the
1450 drive to motivate others, and a resistance to placing judgment on their peers both within and
1451 outside of sport.

1452 Parkour coaches seem to have some influence on the values held by their athletes. But
1453 many questions still remain, such as:

- 1454 • What other values do parkour coaches currently promote?
- 1455 • How do parkour coaches learn to promote given values in their athletes?
- 1456 • Are the values that are being promoted by parkour coaches ideal?
- 1457 • What values should parkour coaches promote in their athletes?

1458 It seems as though parkour-associated values are currently being passed down informally from
1459 traceur to traceur, possibly without deliberation. The regulation of parkour would allow the
1460 possibility for a parkour governing body, PCEPs, and parkour coach developers to have a more
1461 direct influence on which values are both inherent and important to parkour, which values

parkour coaches ought to promote in their athletes, and potentially even to provide strategies for parkour coaches regarding how to promote those values.

Limitations and Future Research

It is important to acknowledge the first author's position and relationships with the participants of this study. Given that he is both a parkour athlete and a parkour coach, he had previous connections to, and sometimes close friendships with some of the participants in this study, but other participants he had met for the first time solely for the purposes of conducting interviews. The first author had the opportunity to interact with some participants prior to beginning the interview, which helped him to establish a rapport, but then he was also introduced to other participants at the beginning of the interview itself. These variations in researcher-participant relationships may have influenced a difference in the openness and comfort levels of the participants during the interviews. Another factor that may have influenced the responses of the participants is that some interviews were conducted face-to-face, while others were conducted over Skype. Among the Skype interviews, some were conducted with both audio and video, and others used only audio. The different styles of interview may have also influenced the openness of the participants' responses.

Finally, as previously mentioned, this research was conducted in North America where there are no national governing bodies for parkour and so it is an unregulated sport. However, parkour is regulated in the United Kingdom. No U.K. participants were interviewed for this research, but in the future it could prove informative to study parkour coach development in the U.K. in addition to parkour coach development in North America.

Conclusion

Overall, most of the influential sources of learning reported by parkour coaches have also been reported to be influential by coach development research in regulated sports. Many of these sources, such as learning from experience as an athlete in other sports or learning from previous leadership experience, are not usually influenced by national governing bodies. However, the presence of such a body would have potential influences on sources such as coach education programmes, learning from peers, and reflection. It should prove interesting to see if the influences of parkour coaches' sources of learning will change if parkour in North America becomes a regulated sport.

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Article Two

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1607 What Does It Mean to be a Certified Parkour Coach?

1608 Parkour Coach Perceptions of Formal Coach Education Programmes

1609

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Abstract

Parkour is a relatively new sport that has not been heavily researched, and at the time this study was conducted, no research was found relating to parkour coaching, despite the large body of knowledge that exists relating to coach education in other sports. Unlike many of the sports where coach development has been researched, parkour is unregulated; this study was conducted in North America, where there is currently no national parkour governing body. Despite the lack of regulation in parkour coaching, there exist a number of parkour coach education programmes worldwide. The goal of this study was to gain insight into parkour coaches' perceptions of parkour coach education programmes. The participating coaches discussed the impacts and effects of these programmes, the contents of the programmes, their opinions on the regulation of parkour, and their experiences with coach education programmes for other sports. There were mixed perceptions of the effectiveness of parkour coach education programmes; some participants spoke about the programmes' potential benefits, while others reported gaining little from their participation in the programmes. There were also varying responses regarding the regulation of parkour, and development of national parkour governing bodies. While these bodies might have the potential to standardise the contents of parkour coach learning, the participants also mentioned a risk of parkour coaches losing the ability to innovate within their own coaching.

Keywords:

Parkour, coach learning, certification, education, development

Introduction

Parkour practitioners, or traceurs, utilise movements such as running, jumping, climbing, vaulting, swinging, rolling, and occasionally acrobatic manoeuvres to navigate obstacles in both urban and rural environments (Atkinson, 2009; Ford, 2016; Ortuzar, 2009). Parkour could be considered a new sport, first developed in the 1990's in Lisses, France, by David Belle, Sebastian Foucan, and a group of their peers who called themselves '*Yamakasi*'. (Archer, 2010; Ford, 2016). Belle described being inspired by his father, a member of the French military and part of the firefighters' squad of Paris, and the military obstacles courses that were a part of his training. These courses, or *parcours du combattant*, supplied the origin of the word 'parkour'. Both the words 'parkour' and 'traceur' were first coined by David Belle, and the word 'freerunning', which was originally created as an English synonym for parkour, was later credited to Foucan to describe a more creative and aesthetic form of the sport that uses more extraneous movements such as flips and acrobatics, in contrast to parkour's original focuses on speed and efficiency (Ford, 2016; Fuggle, 2008). Some of the biggest differences between parkour and freerunning lie in the intentions of the practitioners, and often the distinction between parkour and freerunning does not concern many parkour/freerunning athletes. It may therefore be difficult to differentiate between the sports even while watching a practitioner training (Ford, 2016), and so for purposes of simplicity, the use of the word parkour in the remainder of this article will refer to parkour, freerunning, and parkour's original French name, *l'art du déplacement*, except where otherwise specified.

Since its development in France, parkour has spread across the world. With the growth of parkour, there has also been a growing demand for parkour coaches (Ford, 2016). There are a number of independent organisations worldwide that offer parkour coach development,

certification, apprenticeship, and education programmes, such as the Art du Déplacement and Parkour Teaching (ADAPT) Qualification (Parkour Generations, 2014), the American Parkour (APK) Instructor Certification Programme (American Parkour, 2015), the ParkourEDU Coaching Certification (ParkourEDU, 2016), and the World Freerunning & Parkour Federation (WFPF) Teaching Certification (World Freerunning & Parkour Federation, 2016), among others. With the exception of the ADAPT Qualification, which is affiliated with Parkour UK in the United Kingdom, (Parkour UK, 2012), there were no other national governing bodies for parkour at the time this article was written. Therefore, the standards for parkour coaching and the contents of most PCEPs worldwide, including North America where this research was conducted, are unregulated.

The fact that parkour coaching is mostly unregulated allows for the opportunity to study the development of parkour coach education programmes in conjunction with the development of parkour. It is also possible to question parkour coaches about the different parkour coach education programmes (PCEPs) in which they have participated, if any, and to see how their responses may differ from the perceptions of formal coach education programmes held by coaches in other sports. Additionally, the parkour coaches can be asked about their experiences with coach education programmes in sports that have governing bodies, and how those programmes compare to PCEPs. The parkour coaches can also provide their opinions on whether parkour might benefit from becoming regulated in the future.

In areas where parkour coaching is not regulated, such as North America where this study was conducted, parkour coaches are not required to become certified or to participate in parkour coach education programmes in order to coach parkour. Despite the lack of necessity, and the cost of paying potentially hundreds of dollars at least for participation in PCEPs, many parkour

coaches, including the first author of this article, have found sufficient motivation to complete one or even multiple PCEPs. Given that each PCEP is run independently by different organisations, participants of different PCEPs will necessarily have had different experiences, and some parkour coaches have not participated in PCEPs at all. This article was therefore written with the intent to answer the question, ‘What are the perceptions of PCEPs held by parkour coaches?’

Formal Coach Education

The specific impacts of coach education programmes in various regulated sports have already been researched. For example, Leduc, Culver, and Werthner (2012) studied coaches’ perceptions of formal coach education programmes run by Canada’s National Coach Certification Programme (NCCP). It was found that the specific impacts of the courses varied from coach to coach, depending on the sum of each coach’s previous experiences (Leduc et al., 2012). For example, some coaches felt that, after reflecting upon the contents of a given coach education programme, they found the programme to be useful and could make modifications to their coaching. Other coaches felt like the same programme did not present any material that was new or relevant to them, and so these coaches did not make any alterations to their coaching practices (Leduc et al., 2012).

Another factor that may influence the impact of coach education programmes is the depth of learning in which the coaches engage as a result of participation. If coaches try to memorise the information that was presented, and only as much as is necessary, this type of learning may be categorised as surface, nonreflective learning (Werthner, Culver, & Trudel, 2012). Alternatively, participation in the programmes may prompt deep learning in coaches, which is categorised by reflection and a desire to grasp both the content and meaning of the material being taught

(Werthner et al., 2012). Independent of the specifics of programme contents, coach education programmes have been shown to increase coaches' confidence and coaching efficacy (Gilbert, Lichtenwalddt, Gilbert, Zelezny, & Côté, 2009; Lemyre, Trudel, & Durand-Bush, 2007), and also to provide a foundation for the basics of coaching (Mallet, Trudel, Lyle, & Rynne, 2009).

Current models of coach learning, such as the model presented by Trudel et al. (2016), discuss coach development in relation to formal coach education programs that are implemented by governing bodies. Some sports, like parkour, exist mostly without national governing bodies, and so the models for coach learning need to be revised in order to accommodate the learning processes of coaches of unregulated sports. It may be possible to reveal the importance and impacts of regulation by researching coach perceptions of formal coach education programs for unregulated sports.

Perceptions of Formal Coach Education Programs

Coaches of regulated sports have reported mixed perceptions of formal coach education programs (Araya, Bennie, & O'Connor, 2015; Carter & Bloom, 2009). As a result, when considering something like the price of participation, coaches who perceived a formal program as being effective will describe the program as having an 'acceptable price', whereas less effective courses might be described as being 'too expensive' (Nelson, Cushion, & Potrac, 2013). Perceptions of other components of formal programs also differ depending on each individual's experiences.

Positive perceptions. Despite overall inconsistencies between coaches, there are still many reports of positive perceptions of formal coach education programs. For example, coaches have described that formal programs may be useful for developing necessary coaching skills, such as reflection (Griffiths & Armour, 2013; Stoszkowski & Collins, 2016), as well as

providing insight into sport-specific skills and pedagogy (Araya, et al., 2015). Formal programs have also been described as being useful for those coaches who may be unfamiliar with the sport they are coaching (Sherwin, Campbell, & MacIntyre, 2016). Furthermore, coaches reported gains in specific skills from their participation in formal programs. For example, some coaches have described general improvements to their overall coaching skills and strategies, including gaining sport-specific knowledge, which allowed the coaches to feel better equipped to develop athlete performance (Araya et al., 2015).

Negative perceptions. Alternatively, coaches have also shared negative perceptions they held regarding coach education. Formal programs can often be regarded as being ineffective, offering no new material, needless repetition, and not challenging current ways of thinking (Nelson et al., 2013). A common criticism of formal programs is that they are too focussed on technical skill development (Galvan, Fyall, & Culpan) or sport-specific content, without sufficiently addressing other aspects of sport coaching, for example sport psychology, pedagogy (Nash & Sproule, 2016), and practical coaching components (Carter & Bloom, 2009). Formal programs do not always provide value to the coaches who participate (Araya, et al., 2015; Griffiths & Armour, 2013; Nelson et al., 2013), and because participation in such programs is typically expensive, the development of coaches' beyond what is required may be hindered due to monetary costs (Nash & Sproule, 2016).

It has also been suggested that the current systems for coach development do not meet the learning needs of coaches (Sherwin, Campbell, & MacIntyre, 2016). For example, formal coach education programs in Canada's NCCP have been noted to not present new material, not apply material in practice, have a lack of consistency in the delivery of course material, a lack of

interactive opportunities between participants, and an inability to present sufficient information over the course of a single program (Erickson, Bruner, MacDonald, & Côte, 2008).

Effective coach education. Although coach perceptions of formal programs are typically mixed, previous researchers have presented strategies that can be used to potentially increase the effectiveness of formal coach education programs. Nelson et al. (2013), described how effective coach education should be thought provoking, relevant, and result in skill development, knowledge acquisition, and a better understanding of the material being covered. They also suggested that formal programs should provide interactive educational experiences, as well incorporating components of practical experiences, reflective practice, and observation (Nelson et al., 2013).

Similarly, Lyle, Jolly, and North (2010) provided recommendations for the format and content of coach education materials. They suggested that it is important for formal programs to provide engaging activities, place value on examples and case studies, and to provide feedback to the participants (Lyle et al., 2010). It is also important for the programs to provide opportunities for self-paced learning (Lyle et al., 2010), as well as context-specific guidance (Griffiths & Armour, 2013). Finally, formal coach education programs should challenge the coaches who participate to re-examine their practices, providing them with useful information at opportune times (Griffiths & Armour, 2013), as well as presenting the entirety of the programs in a visually appealing and stimulating format (Lyle et al., 2010).

Despite the potential benefits that coach education programmes can offer, they may not be optimal as primary sources of coach learning (Piggot, 2012). Because coach education programmes provide participants with mediated learning situations, the participants have little control or influence over what material is taught. Typically coach education programmes aim to

provide a foundation for the development of coaching skills, and so participants of coach education programmes view the programmes as either too basic or too abstract for their own coaching contexts (Mallett et al., 2009; Piggot, 2012). Coaches are more likely to receive greater benefits from unmediated learning situations, such as seminars, workshops (Mallett et al., 2009; Piggot, 2012), communities of practice, and mentorship (Vella, Crowe, Oades, 2013), which tend to be less formal and have more opportunities for discussion than formal programmes. Because there is not yet a national governing body for parkour in North America, North American PCEPs may be less formal and less rigid than coach education programmes for other more regulated sports. PCEPs may therefore have a different potential influence on parkour coaches when compared to the influences of other regulated coach education programmes on the coaches of regulated sports.

Methods

Data Collection

Each participant in this study took part in a semi-structured interview. The first author, who conducted the interviews, used an eleven-question interview guide¹ to direct the interviews, but also asked specific probing questions when necessary. The questions asked during the interview related to the participants' histories both as parkour coaches and as parkour athletes, and the participants were asked about their sources of learning as parkour coaches, their perceptions of PCEPs, and their perceptions and experiences with coach certification and apprenticeship programmes in other sports.

¹ Interview guide available upon request to the first author.

1790 Recruitment for this study was conducted either by email or in person. Participants who
1791 were contacted through email were either: (a) parkour coaches whose contact information was
1792 made publicly available online after they had completed a PCEP; (b) parkour coaches who were
1793 referred by other participants; or (c) parkour coaches who were contacted directly by the first
1794 author because he thought they could provide beneficial responses. Alternatively, participants
1795 who were contacted in person were recruited at various parkour events.

1796 Before participating in an interview, each participant filled out a questionnaire, thereby
1797 providing basic information about their demographics. This questionnaire was used to gather
1798 information regarding each participant's age, gender, years of parkour experience, years of
1799 parkour coaching experience, and to inquire about participants' experiences with formal coach
1800 education programmes both for parkour and also for other sports (See Table 1).

1801 *Table 1. Participant demographic information*²

<u>Name</u>	<u>Country</u>	<u>PK Coaching Exp. (Years)</u>	<u>PK Training Exp. (Years)</u>	<u>Parkour Coach Developer (Y/N)</u>	<u>PCEP Participant (Y/N)</u>	<u>Other Coach Education</u>
Trevor	Canada	5	7	No	Yes	Gymnastics, NCCP, Quest, High-5
Vanya	Belarus → U.S.A.	3	6	No	Yes	No
Jordan	Canada	3	6	No	No	Gymnastics
Andrew	U.S.A.	7.5	8.5	In progress	Yes	Gymnastics
Max	U.S.A.	6	8	Lightly involved	Yes	First Aid
Greg	Canada	6	7	Yes	No	Martial arts
Scott	Denmark	8	10.5	Yes + in process	No	Handball, other sports, academics
Carl	Australia	1	5	Yes	Yes	No
Ryan	U.S.A.	9	11.5	Yes	Yes	Crossfit, barefoot running, pole, team sports
Courtney	U.S.A.	3	5	No	Yes	No
Sabrina	Canada	2	5	Yes	No	Gymnastics
Amos	U.S.A.	8	9	Yes	Yes	Can't remember
Brandee	U.S.A.	9	9	Yes	Yes	UPS
Mike	Canada	8	10	No	No	Personal Training
Jereme	U.S.A.	7	11	Yes	Yes	Gymnastics/ tumbling apprenticeship
Tyler	Canada	2	8.5	No	No	Gymnastics Training
Blake	U.S.A.	5	6	Yes	Yes	Track & Field
Chad	Canada	5	8	Yes	Yes	Gymnastics, weight lifting, personal training
Justine	Canada	2	6.5	No	Yes	Circus School

1802

² The names of some participants have been altered to protect their anonymity.

Participant biographies. We interviewed nineteen parkour coaches for this project over the course of seventeen interviews; two interviews were conducted with two participants simultaneously. Four of the participants were female, and fifteen were male, and the participants were between 19 and 34 years of age. They had between 1 and 9 years of experience as parkour coaches, and between 5 and 11.5 years of experience as parkour athletes. Twelve participants had parkour coach developer experience, thirteen participants had participated in PCEPs, and three of those thirteen had participated in more than one PCEP. Whereas fifteen of the nineteen participants had experience as coaches in other sports, only two participants had non-parkour coach developer experience.

Data Analysis

In order to analyse the data collected from the participants, we used InqScribe software (InqScribe, 2005) to transcribe the participants' interviews, NVivo10 (NVivo, 2010) to create meaning units from the transcripts and code those meaning units into a thematic hierarchy, CMapTools software (CMapTools, 2014) to create a concept map.

Novak and Cañas (2006) described concept maps as “graphical tools for organising and representing knowledge” (p.1), and concept maps use connecting lines to link concepts together. Pattern coding is a similar process to concept map creation, where the interrelation of pattern codes are mapped in order to develop a deeper understanding of data and promote further analysis (Miles & Huberman, 1994). Our concept map (Figure 1) was created with the intention to allow the data from the node structure to be reflected upon and reorganised. Most of the concepts in the map were included from the NVivo node in the thematic hierarchy entitled ‘*Perceptions of PCEPs*’ (See Table 2), and Microsoft Excel for purposes of time management and to analyse the participants’ demographic information.

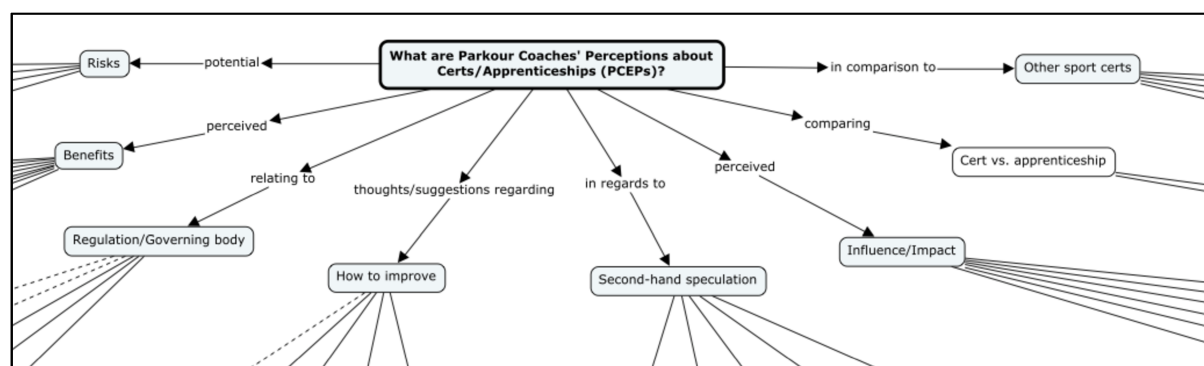


Figure 1. Section from the second concept map: *What are Parkour Coaches' Perceptions about Certs/Apprenticeships (PCEPs)?*

Table 2. Examples from the node structure used to create 'What are Parkour Coaches' Perceptions about Certs/Apprenticeships (PCEPs)?' concept map.

<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Level 4</u>
Parkour Coaching	PCEPs	Perceptions of PCEPs	Certifications vs. apprenticeships
			How to improve or what's missing
			PCEP speculation
			Perceived benefits
			Perceived necessity
			Perceived risks
			Second-hand perceptions

The process of data analysis was conducted from a constructivist perspective (Crotty, 1998), and was guided by the six steps of thematic analysis described by Braun and Clarke (2006): (a) data familiarisation; (b) initial code generation; (c) searching for themes; (d) reviewing themes; (e) defining and naming themes; and (f) producing the report.

Findings

The responses coded within the *Perceptions of PCEPs* sub-nodes were grouped and categorised into the following themes: Effects of PCEPs, PCEP operations, Second-hand speculation, and coach education programmes for other sports.

1839 **Effects of PCEPs**

1840 *Perceived benefits.* Participants listed a number of benefits that they either saw the
1841 potential for, or actually received due to participation in PCEPs. Some benefits that were
1842 mentioned related to development as coaches, outreach/networking, and increasing legitimacy.

1843 Many coaches spoke about the positive impacts that PCEPs can have on coach
1844 development. For example, Max³ described how PCEPs may be able to establish a minimum
1845 standard for parkour coaching, which could also help to reduce injuries in parkour athletes.

1846 [I've] seen coaches who... ask their students to do things [where there's a high risk that it
1847 will] end up in that student getting injured just because they don't know... how to teach a
1848 certain way, and if they took a certification that would correct that problem, because they
1849 just need the information. To me that's a huge benefit, is just providing a base standard
1850 for parkour coaching. (Max)

1851 In addition to producing a coaching standard, many participants also described the
1852 networking opportunities that can be provided by PCEPs. Scott specifically mentioned how
1853 parkour athletes may share information or training techniques with one another, but parkour
1854 coaches do not always have easy opportunities to discuss coaching habits.

1855 When you're training [with others] you jump and you talk about the jump and you
1856 probably don't start talking about how you coach. And a coach certification programme
1857 hopefully puts you in a situation with other coaches so you can discuss and share
1858 experiences and points of view on how you coach. (Scott)

³ The names of participants as well as people they mentioned in quotes may have been replaced with pseudonyms in order to protect personal information.

1859 **Potential risks.** Besides the benefits that participants of PCEPs may receive, the parkour
1860 coaches who were interviewed also described potential risks related to PCEPs. Common themes
1861 among the responses relating to PCEP risks were: PCEPs are new and unregulated, PCEPs are
1862 expensive, false legitimacy, and limited learning.

1863 Participants frequently mentioned that a potential risk of PCEPs is that there is currently
1864 no regulating body to oversee the development and contents of all PCEPs. For example, Brandee
1865 described how, ‘inevitably, right now all the certs are just going to focus on the values [of] the
1866 people who wrote them.’ And so there is not necessarily any overlap between one PCEP and
1867 another.

1868 In addition to the potential inconsistency in PCEP contents, PCEP participants will
1869 inevitably have to pay for each PCEP they want to complete. In addition to costing money,
1870 participants of PCEPs can also contribute anywhere from a couple hours to a few months of their
1871 time to complete the programmes. Vanya described the value of time in his response regarding
1872 potential risks of PCEPs: ‘Time is pretty invaluable for a lot of people... you've put in some time
1873 to earn this money. So basically, yeah, I guess you're [investing] a whole lot of time on this
1874 programme so it better be worth it.’

1875 The investment of time and money into PCEPs may be wasteful even if the material
1876 taught during the PCEP is valuable. Brandee mentioned how some of her fellow PCEP
1877 participants were too focused on taking notes for the test at the end of the PCEP, rather than
1878 allowing themselves the opportunity to absorb the information that was being presented.

1879 I was in the back of the class like ‘Hallelujah!’ because they kept saying all this relevant
1880 important stuff that I agree completely with, but I think [other] people were really

1881 missing it because they were focusing on the idea of ‘Oh I have this test so I can pass my
1882 cert’. (Brandee)

1883 Another risk mentioned by the participants is that completing a PCEP may project a false
1884 sense of legitimacy. For example, Justine described the inaccurate assumption that merely
1885 participating in a PCEP will ensure that a parkour coach is a good parkour coach.

1886 The potential risk is that those certification processes will produce instructors who people
1887 trust inherently based on the certification... Surely there are people that come out of
1888 those certifications who are still kind of not really sure what's going on and maybe not
1889 the most helpful instructor[s]. (Justine)

1890 PCEP participants may even develop a sense of false confidence or overconfidence in their own
1891 abilities, simply because they completed a PCEP.

1892 Potential risks could be [an] ego boost. Making you think like, ‘Okay well I got this and
1893 now I'm done!’... When, just like anything, we have to constantly be improving,
1894 constantly be practicing. So I feel like sometimes, someone taking a cert can maybe get a
1895 little bit big-headed. (Jereme)

1896 ***Perceived influence/impact.*** When asked about the influences and impact of PCEPs, the
1897 parkour coaches’ responses reflected the themes of programme development, coaching
1898 techniques, opportunities for learning, and minimal impact.

1899 Many of the coaches reported that they learned specific coaching techniques from
1900 PCEPs, and participating in a PCEP caused them to reflect on their own coaching practices.
1901 However, not all coaches reported learning much from PCEPs. When asked about the impact of
1902 a PCEP, Andrew responded by saying, ‘It wasn't really a big influence... they spent a little bit
1903 more time than maybe I would’ve on dissecting the skills and troubleshooting common issues

1904 with teaching certain movements.’ Andrew elaborated, describing how he perceived that the
1905 influence of PCEPs is heavily dependent on the personal histories of the participants in the
1906 programmes.

1907 If the certificate doesn't add value to the person's experience, then their coaching style
1908 isn't really going to change too much... And of course that depends where the coach is at
1909 in their life. If they have minimal experience... it'll [have] more value, versus if the
1910 person already has a lot of experience then... they need to be challenged at a deeper
1911 level. (Andrew)

1912 **PCEP Operations**

1913 *Areas for improvement.* As previously mentioned, some of the parkour coaches who
1914 participated in this research were sceptical about the effectiveness of PCEPs, or stated that they
1915 did not personally receive much benefit from participating. All participants were asked for their
1916 input as to how to improve PCEPs as they experienced them. The participants’ responses related
1917 to the themes of modifying PCEP difficulty, changing programme structure, changing
1918 programme contents, focusing on developing both physical and mental skills, and promoting
1919 connections between PCEPs.

1920 Participants had varying opinions of the overall difficulty of PCEPs. Some participants,
1921 like Max, perceived the PCEP that he had experience with to be too simple.

1922 I think it could actually be even more difficult. And it was difficult, but I think having a
1923 rigorous testing- coaching certification is always better than having a slightly less
1924 rigorous one... I do think that it's always good to have a high standard. (Max)

1925 Alternatively, Amos facilitated a PCEP, and he took pride in the fact that the PCEP he was
1926 involved with had only a 50% pass rate.

1927 We have the lowest pass rate of any certification, definitely. Whereas, you know, other
1928 certifications out there will let a 12-year-old go through it, no matter what happens, he
1929 walks out with his certification; I think we are at like a ...50% pass rate. And this is
1930 something that people are investing a lot of time and money into. And that's not as
1931 important as the credentials and the standards. (Amos)

1932 Jereme had another critique for PCEPs, in that he advocated for a more hands-on approach to
1933 learning within PCEPs in order to focus more on coaching rather than focusing on parkour.

1934 I feel like it didn't offer enough kind of hands on technical assistance with the minutia of
1935 teaching... So there's one thing to understand and be able to transmit cues or the
1936 teachings of parkour, but it's completely different than... to just be a good teacher.
1937 (Jereme)

1938 Because each PCEP is currently developed and facilities by an independent organisation,
1939 any PCEP might be considered to be somewhat isolated from every other PCEP. A number of
1940 participants advocated the development of more connections between PCEPs. Max, for example,
1941 spoke about the benefits of collaboration between PCEPs. Max described how he perceived each
1942 PCEP as having different strengths, and so PCEP participants will be exposed to different
1943 content by participating in different PCEPs: 'It seems like each certification has strong and weak
1944 points, and they complement each other a little bit.'

1945 ***Regulation/parkour governing body.*** The parkour coaches who participated in this study
1946 also had a variety of perceptions regarding the regulation of parkour and the development of a
1947 parkour national governing body in North America. The participants' responses related to
1948 legitimacy, limiting creativity, and the standardisation of parkour coaching.

1949 Participants had mixed views relating to the potential benefits and risks of a parkour
1950 governing body. Blake noted that without regulation, the value of any one PCEP cannot easily be
1951 distinguished from that of another.

1952 I think having so many certs out there means that people don't really know what they
1953 mean. And so if I say I'm an ADAPT coach and you say you're an APK coach, and
1954 somebody else says they're a WFPF coach, to the layman you're just saying funny
1955 acronyms... And especially in the U.S. there are so many certs that I think there's a kind
1956 of cert-confusion right now. (Blake)

1957 Alternatively, Carl saw the potential for risk in developing a governing body for parkour,
1958 because he feared that with regulation there will be a loss of creativity in parkour coaching.

1959 It is possible to follow these certifications... and still be a good coach, and still be a
1960 creative coach and coach in these ways you've described, but with regulation there tends
1961 to be less and less of that. There tends to be more of an emphasis on coaching techniques,
1962 and less on coaching people to coach themselves. (Carl)

1963 **Second-hand Perceptions/Speculation**

1964 Because parkour is not regulated in North America, there is no mandate for parkour
1965 coaches to participate in PCEPs, and so not all parkour coaches who were interviewed had
1966 attended a PCEP. Despite these coaches' lack of first-hand experience with the programmes, we
1967 chose to ask the six participants who had not participated in any specific PCEP to speculate on
1968 PCEPs in general, and also to report anything they may have heard from their peers who did
1969 have PCEP experience. The responses from the coaches who had not attended PCEPs related to
1970 the concepts of certifications vs. apprenticeships, legitimacy, positive impressions, and necessity.

1971 Chad, a parkour coach who was also a personal trainer, provided his input on the value of
1972 extended apprenticeship programmes over brief certification programmes.

1973 For a weekend certification I've always been sceptical. For an apprenticeship programme,
1974 that's the way to go I think. But that's just my opinion and what I want for my own gym.

1975 Personal trainers, I'm not impressed with a lot of them who are just weekend certified.

1976 (Chad)

1977 Sabrina, alternatively, saw benefits in completing any type of PCEP, which can help parkour
1978 coaches to gain legitimacy and obtain coaching insurance, because she felt that, 'once you can
1979 say you're certified... it can protect you because you have the certification.'

1980 However, there were also participants who did not see the need for PCEPs as they
1981 currently exist. Greg discussed how he believed that PCEPs are too oriented on teaching the
1982 participants how to coach parkour, rather than teaching them how to coach.

1983 I do not think they are necessary from the standpoint of an organisation, but I think they
1984 carry a lot of weight for somebody outside of a traditional parkour box... The current
1985 parkour certifications that are out there teach you parkour. They don't teach you
1986 classroom management for parkour, or all of the stuff that your athletes really need. I
1987 think they are too much skill-oriented, and therefore they make more sense for, for
1988 instance a gymnastics coach who has no experience in parkour, to go and take one of
1989 these, so that they can bring [parkour] back to their facility. (Greg)

1990

1991 Other Sport Certifications

1992 Besides coach education programmes for parkour, many of the participants of this study
1993 had participated in coach education programmes for other sports. Of the nineteen participants,
1994 fifteen had coaching experience in other sports, including various team sports, gymnastics,
1995 martial arts, breakdancing, handball, crossfit, barefoot running, personal training, track and field,
1996 circus, and pole dancing. When discussing these other programmes and how they may relate to
1997 PCEPs, the participants' responses recounted their relevance to parkour, and potential overlaps in
1998 content. Ryan spoke about his learning experiences while participating in coach education
1999 programmes for sports other than parkour, and how he can transfer those skills to his parkour
2000 coaching.

2001 I did the barefoot running cert... [It was] 40 hours' worth of biomechanics and the
2002 application just happened to be barefoot running. So I took a lot of that influence of the
2003 science behind movement and applied it to parkour. And then the pole one... she had
2004 really great like cueing drills and hands-on like mini teaching lessons and we actually,
2005 like incorporated some of the same ideas. (Ryan)

2006 Greg, as a coach developer and a parkour gym owner, spoke about how he encourages his
2007 coaches to take part in training programmes not just for other sports, but for any skill that has the
2008 potential to transfer to parkour coaching.

2009 I want our guys to go and take the WFPF training, I want them to take the APEX training,
2010 PK Generations, I want them to go and learn First Aid, and their gymnastics level one,
2011 and if they want to take a trampoline course, go take a trampoline course. Because, even
2012 if everything they learn doesn't correspond with what we do, something will. (Greg)

2013 Finally, Trevor discussed how other, more developed sport coach education programmes have
2014 more apparent legitimacy, which lends more credence to those programmes and to the coaches
2015 who have completed them.

2016 I feel like with those courses that I've taken, I knew that when I was done that cert,
2017 people are going to look at this and be like, 'Alright, that's valid, that's great'. I knew
2018 going into the [PCEP] though that it's at the back of my head still that, 'Oh, no one really
2019 cares about this cert'. (Trevor)

2020 **Discussion**

2021 Parkour has become increasingly popular worldwide, with some events and competitions
2022 drawing from two to five hundred people in attendance (American Parkour, 2015; Canada
2023 Parkour, 2013). With this increased interest in parkour, there has come an accompanying demand
2024 for parkour coaches. Such a desire for qualified instructors has led to the creation of many
2025 organisations that offer parkour coach education programmes, or PCEPs, worldwide. However,
2026 with the exception of the ADAPT Qualification, which is affiliated with Parkour UK in the
2027 United Kingdom, (Parkour UK, 2012), there were no other national governing bodies for parkour
2028 at the time this article was written. Therefore, the standards for parkour coaching and the
2029 contents of most PCEPs worldwide, including North America where this research was
2030 conducted, are unregulated.

2031 **Formal Coach Education**

2032 Among published literature examining coach education programmes for regulated sports,
2033 there seems to be a trend that these formal programmes often exert minimal influences upon the
2034 coaches who participate. Even within the results of this study, where thirteen out of the nineteen
2035 participants had completed at least one PCEP, when asked about their most influential sources of

learning, not a single participant referenced their participation in PCEPs. A common justification for the lack of impact is the fact that formal coach education programmes often last for only a few hours or days, which is a relatively short period of time when compared to the available on-the-job learning opportunities that coaches can experience through potentially hundreds of coaching hours (Trudel, Gilbert, & Werthner, 2010; Werthner & Trudel, 2006; 2009). Thus formal coach education programmes are faced with a challenge of trying to induce changes in the learning and reflective processes of the coaches who participate over a short period of time (Trudel Gilbert, Werthner, 2010). As described by Andrew, a participant in this study, and by Trudel, Gilbert, and Werthner (2010), formal coach education programmes cannot easily cater to the needs of all participants, because each participant will have different past experiences.

Perceptions of PCEPs

The differences in participants' histories can also help to explain the differences in their responses when asked about their perceptions of PCEPs. Although the delivery of PCEPs may be similar from the perspective of the PCEP facilitators, all coaches who participated will have experienced the programmes differently, based on their previous experiences, both relating to parkour coaching and their overall pasts. For example, when discussing the difficulty of PCEPs in which they had participated, many parkour coaches addressed the importance of having a sufficiently challenging programme, but there were disagreements as to whether current PCEPs are challenging enough. However, these differences in perceptions could also be attributed to the fact that different participants completed different PCEPs in addition to the different individual experiences of the participants themselves. Some participants did not participate in any PCEPs at all, and among all the participants there were mixed perceptions about the necessity of PCEPs and mixed desires to participate.

2059 Another inconsistency in the participants' responses was whether or not they gained
2060 knowledge related to coaching techniques from participating in PCEPs. In order to foster
2061 learning in participants, coach education programmes need to be structured in ways that allow
2062 learning, provide the opportunity for participants to apply the learned material, and are more
2063 interactive than a typical lecture-based classroom setting (Mcculick, Belcher, & Schempp, 2005).
2064 Many of the interviewed parkour coaches discussed how they would have preferred more hands-
2065 on coaching than was offered in the PCEPs in which they participated, and so those PCEPs may
2066 not have offered optimal learning environments.

2067 Finally, while many participants described that they appreciated different elements of
2068 parkour-specific information that was presented during PCEPs, it was also frequently reported
2069 that it is important for PCEPs to not only teach how to coach parkour skills, but how to coach in
2070 general. The opinions of these coaches is also reflected in the available coaching literature on
2071 formal coach education programmes. The inclusion of general coaching principles during formal
2072 programmes has been shown to be more useful to participants than the inclusion of sport-specific
2073 information (Mccullick Belcher, & Schempp, 2005; Werthner & Trudel, 2009).

2074 However, as described by Greg, who was a parkour coach developer from this study, and
2075 Werthner and Trudel (2009), the inclusion of sport-specific coaching knowledge can be useful in
2076 coach education programmes when the participants do not have previous experience as athletes
2077 in the sport they are learning to coach. Greg specifically provided an example that gymnastics
2078 coaches may gain some benefit from participating in current PCEPs, so that they can learn to
2079 apply their pre-existing coaching knowledge to parkour coaching. But would gymnastics
2080 coaches, coaches who are involved in a regulated sport, even be interested in completing a coach
2081 education programme for the unregulated sport of parkour? From the first author's experience,

most of the current participants of PCEPs are also parkour athletes, and so PCEPs should have a greater focus on general coaching principles in order to attempt to best accommodate the current demographics of their participants. However, in order to ensure that PCEPs are parkour-specific and do not exclusively provide general information regarding how to coach, PCEP facilitators may request that PCEP participants have previous experience with parkour.

Coach Education Programmes for Other Sports

Coach education programmes do sometimes invoke prerequisites to participation, although the prerequisites are not usually extensive (Trudel, Gilbert, & Werthner, 2010). Interestingly, while some PCEPs have minimal recommendations, such as, ‘familiarity with basic parkour techniques... some coaching experience’ (American Parkour, 2015), and that the ‘candidate[s] have been training regularly in parkour’ (World Freerunning & Parkour Federation, 2016), the ParkourEDU certification requires a minimum of one year of parkour experience, but also ‘at least 3 years experience in movement arts such as parkour, martial arts, breakdancing, acrobatics, crossfit, dance, climbing, or track & field’ (ParkourEDU, 2016).

In addition to the fact that some, if not all, PCEPs value the potential for learning experiences to be gained from merely participating in other sports as athletes, many of the parkour coaches who participated in this study also had coaching experience in other sports, eight of whom had experience as gymnastics coaches. Why does there seem to be a source of motivation within parkour to seek out coach learning experiences from other sports, as opposed to specialising within the sport of parkour?

Although the answer to this question was not directly addressed in the participants’ responses, we are able to speculate in order to create potential explanations based on the lead author’s experiences with parkour. The first potential explanation has to do with the nature of

2105 parkour itself. Parkour athletes are driven to be well-rounded and adaptable (Miller & Demoigny,
2106 2008). Traceurs often utilise movements from other disciplines, including those mentioned
2107 above, in their own training, and so as Greg, one of the participants of this study, described,
2108 parkour coaches may see the contents of coach education programmes for other disciplines as
2109 potential learning experiences that are potentially transferrable to parkour coaching.

2110 Second, parkour is a new sport, and so there is not currently a vast amount of cumulative
2111 parkour coaching experience that can be shared among parkour coaches. Therefore, parkour
2112 coaches may seek out coach education programmes from sports that have been in existence for
2113 longer as potential sources of coaching knowledge.

2114 Finally, parkour is still an unregulated sport in most of the world, and so, as Brandee
2115 described, the contents of PCEPs are possibly no more than a presentation of the lessons learned
2116 from the PCEP facilitators' personal experiences coaching parkour. By attending coach
2117 education programmes for more developed sports, such as gymnastics, parkour coaches can gain
2118 potential sources of coaching knowledge from coach education programmes that have been
2119 refined and accepted by governing bodies. Completing such programmes would also provide
2120 parkour coaches with the added benefit of projecting legitimacy to others, both by having
2121 additional coaching credentials, and specifically by being coaches in a regulated sport.

2122 **Regulation/Governing Body**

2123 If more governing bodies for parkour were to be created internationally, these bodies
2124 would be responsible for helping coaches to develop, and so they would have control over the
2125 creation and management of PCEPs (Trudel, Gilbert, Werthner, 2010). Sport governing bodies
2126 can be created for different purposes, and with different goals. For example, if a sport becomes
2127 regulated because there exists a governing body that wishes to improve coach development and

2128 coaching outcomes, any coach education programmes for that sport should focus on the
2129 outcomes of coaching (Mcculick et al., 2005) and allow only sufficiently competent coaches to
2130 complete the programmes. There are, however, some coach education programmes that boast of
2131 a 100% success rate, possibly because there is a pressure to certify all available coaches within a
2132 given sport or given region. Because such programmes have goals that are different from
2133 developing the coaches themselves, these programmes cannot then claim to focus on effectively
2134 increasing the skill level of coaches who participate (Mcculick et al., 2005). As described by
2135 participants in this study, most current PCEPs seem to focus on the development of parkour
2136 coaches.

2137 Parkour might benefit from the development of additional national governing bodies
2138 outside of the United Kingdom. With the regulation of parkour would hopefully come a unified
2139 PCEP which would prevent ‘cert confusion’, as Blake referred to it, where parkour coaches
2140 would no longer be overwhelmed with many choices of programmes within the same country,
2141 without being easily able to differentiate between their contents. Each country’s national
2142 governing body for parkour would ideally have a single harmonious approach to coach
2143 development.

2144 However, there are potential risks to parkour becoming regulated. For example, if
2145 parkour coaches are obligated to participate in PCEPs in order to coach parkour, they might not
2146 learn as much as coaches who see coach education programmes as learning opportunities
2147 (Trudel, Gilbert, & Werthner, 2010). That being said, the regulation of parkour may not extend
2148 to all parkour coaches, as there are varying possible motivations for creating a parkour governing
2149 body. For example, a parkour governing body might be created to advance and regulate only a
2150 competitive, sport-style of parkour and parkour coaching. If that were the case, there are still

many parkour practitioners who do not practice parkour to compete, but rather recreationally or as a form of fitness, physical activity, or self-expression. Both parkour coaches and parkour athletes who relate to such ideals may not directly benefit from the regulation of sport-style parkour coaching. If parkour regulation were to proceed down such a path, it could cause a further separation in the global parkour community, dividing traceurs based on their personal philosophies regarding how parkour ought to be practiced.

At the moment, any parkour coaches who do not coach in the United Kingdom are under no obligation to participate in PCEPs, and so all of the participants in this study who participated in PCEPs did so voluntarily, because they saw some potential benefit to the programmes. PCEP facilitators outside the U.K. can know that, at least the way things currently stand, all of their participants have elected to complete the programme out of self-interest, and not because the programmes are necessary for them to coach parkour.

Limitations and Future Research

It is important to acknowledge the position of the first author within the context of parkour and parkour coaching. As both a parkour athlete and a parkour coach, this author had previous connections and relationships with some of the participants of this study before beginning our research. Because he may have been closer with these participants, they may have felt more comfortable sharing their knowledge with him in a more open manner than participants who the author was meeting for the first time, solely for the purposes of participating in an interview.

Even among the participants with whom the first author was not acquainted before beginning the interview process, there were differences in the interview contexts. The first author had the opportunity to interact with some of the participants before conducting the interview, thus

2174 allowing him a chance to establish some rapport with these participants. Whereas for other
2175 participants, the first author had met them for the first time at the start of the interview.

2176 Additionally, some interviews were conducted in person, with both the interviewer and
2177 interviewee in the same room, while other interviews were conducted over Skype. Even among
2178 the Skype interviews, some were conducted with both audio and video, and others used audio
2179 exclusively. These less-personal means of conducting the interviews may have resulted in the
2180 development of a weaker rapport between the interviewer and the participants, which may have
2181 hindered participants from being optimally open or comfortable interacting with the interviewer.

2182 Finally, all of the interviews that were conducted for this research project took place in North
2183 America, where there are no governing bodies for parkour, and so it is unregulated. Parkour has
2184 a governing body in the United Kingdom, but no U.K. participants were interviewed for this
2185 study. It could be interesting to research the differences in PCEP perceptions between parkour
2186 coaches who had completed PCEPs run by governing bodies as well as those run by private
2187 organisations. It could also be interesting to discover how the perceptions of PCEPs by North
2188 American parkour coaches will differ if parkour becomes a regulated sport in North America in
2189 the future.

2190 **Conclusion**

2191 Overall, the parkour coaches who were interviewed for this study had mixed perceptions
2192 of parkour coach education programmes. Of the coaches who had participated in such
2193 programmes in the past, none explicitly said that they gained no value from participating or
2194 regretted the experience, but many reported feeling as if PCEPs, as they currently exist, are not
2195 worth the investment in time and money.

2196 There were also inconsistencies among the participating parkour coaches as to whether
2197 regulation of parkour, the creation of national parkour governing bodies, in North America,
2198 would be a benefit or detriment to the sport. Although regulation was reported as a potential
2199 means to develop legitimacy in parkour coaching and offers a consistent method to educate and
2200 develop parkour coaches, some participants also expressed a worry that regulation may limit the
2201 potential for creativity and innovation in parkour coaching; and there is also the risk of
2202 producing inexperienced parkour coaches who are perceived as legitimate simply because they
2203 completed a programme run by a national governing body. It will surely be interesting to see if
2204 the perceptions that North American parkour coaches hold relating to PCEPS will change if
2205 parkour coaching becomes regulated in North America as in the United Kingdom.

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General Discussion

The purposes of this master's dissertation were to explore how parkour coaches learn to coach and explore the perceptions held by parkour coaches regarding parkour coach education programmes. In the first article, 'How Parkour Coaches Learn to Coach: Coaches' Sources of Learning in an Unregulated Sport', we discussed various sources of learning described by the parkour coaches who participated, as well as the specific influences of those sources on their learning. We were able to interpret the impact of sources such as travel and previous coaching experience, and the speculate regarding the different apparent significances of these sources to parkour and potentially other unregulated sports, when compared to regulated sports. Additionally, the researchers speculated on the pressures that may exist, independent to the coaching experiences and coaching identities of unregulated sport coaches, for them to become innovators.

In the second article, 'What Does It Mean to be a Certified Parkour Coach? Parkour Coach Perceptions of Formal Coach Education Programs', we discussed the perceptions held by parkour coaches related to parkour coach education programmes as they currently exist, and their perceptions relating to coach education programs for other sports. We were able to consider potential causes for differences in perceptions across participants, and also how these perceptions might change if parkour were to become a regulated sport in North America.

From its birth, there have been internal debates and disagreements among the global parkour community that have lasted to this day, with some of the most popular being:

- Is there a difference between parkour, freerunning, and ADD? If so, what are those differences?
- Is parkour a sport, discipline, physical activity, art form, or all of the above?

- 2326 • Does competition have a place in parkour?

2327 In recent years, parkour has been becoming increasingly institutionalised, with a number of
2328 parkour organisations worldwide offering unique parkour coach education programmes, parkour
2329 classes, and parkour competitions. These different organisations may never come to a consensus
2330 regarding the aforementioned topics, and if so, each organisation is likely to present its own
2331 version of parkour. There is already evidence of such specialisation among parkour
2332 organisations, with Origins Parkour offering a more sport-style parkour curriculum (Origins
2333 Parkour, 2014), and Parkour Generations teaching parkour in a similar fashion to how it was
2334 originally trained by the Yamakasi (Parkour Generations, 2016). As parkour and parkour
2335 coaching continue to develop, we may see further individualisation and segregation between
2336 parkour organisations.

2337 **Communities of Practice**

2338 This master's dissertation had a focus on parkour coaches' learning, however, there are a
2339 number of theories and frameworks for understanding learning that were not mentioned in either
2340 of the articles. One social learning concept that has been applied to learning in sport coaches is
2341 that of communities of practice (Culver & Trudel, 2008; Nelson, Cushion, & Potrac, 2006).

2342 Parkour coaches in this study provided frequent examples of learning from their peers.
2343 When a group of peers interact on an ongoing basis in order to learn more in a certain area that
2344 they relate to or are passionate about, and they co-create knowledge amongst themselves, the
2345 group may be referred to as a community of practice, or CoP (Wenger, 2000; Wenger,
2346 McDermott, & Snyder, 2002).

2347 Groups of parkour athletes may exist as CoPs. As described by some participants of this
2348 study, and also from the primary researcher's experience as a parkour athlete himself, the

2349 members of a parkour community may often arrange regular meeting and training times to
2350 interact with each other. During these training sessions, the athletes will frequently work together
2351 to conquer new obstacles and innovate amongst themselves to create new challenges to
2352 overcome. Hosting parkour ‘jams’ can also serve as networking opportunities to gain insight
2353 from practitioners who are not regular members of the community of practice, who may then
2354 introduce new knowledge into the community.

2355 With the current scarcity (but increasing number) of parkour coaches, it is unlikely that
2356 there are anywhere near as many parkour coaching communities of practice as there are
2357 communities of parkour athletes. There are, however, a number of online platforms for parkour
2358 coaches that may possess similar properties to CoPs, such as Facebook groups for coaches who
2359 have participated in certain PCEPs, or just general groups for parkour coaches that have an
2360 international reach. Some of these Facebook groups may act as informal knowledge networks,
2361 networks of relationships between individuals who are familiar with each other who then collect
2362 and distribute information among themselves (Culver & Trudel, 2008). Alternatively, the groups
2363 may be examples of networks of practice, in which unfamiliar individuals exchange information
2364 online with comparatively minimal reciprocity (Culver & Trudel, 2008). Regardless of whether
2365 online interactions between parkour coaches may be categorised as CoPs, networks of practice,
2366 or informal knowledge networks, there already exists the potential for social learning
2367 opportunities between parkour coaches.

2368 Additionally, as mentioned by Scott, a parkour coach from this study, PCEPs may
2369 provide opportunities for coaches to interact and learn from one another. If parkour becomes
2370 regulated, it might be beneficial for parkour coach developers, rather than imposing formal
2371 PCEPs, to take advantage of the current social learning situations that already exist within

2372 parkour communities, and adapt their approaches to coach education to be compatible with those
2373 social learning structures.

2374 **Landscapes of Practice**

2375 Wenger-Trayner and Wenger-Trayner (2015) provided a framework for understanding
2376 knowledge creation and other types of learning experiences within and between multiple CoPs
2377 and networks, which they referred to as landscapes of practice. They described that ‘the body of
2378 knowledge of a profession is best understood as a “landscape of practice” consisting of a
2379 complex system of communities of practice and the boundaries between them’ (p.13). The
2380 authors also described that if a body of knowledge is a landscape of practice, then personal
2381 learning experiences are journeys through those landscapes (Wenger-Trayner & Wenger-
2382 Trayner, 2015).

2383 On an individual’s journey across a landscape of practice, he or she may interact with
2384 multiple CoPs. When entering a novel CoP, an individual has to interact with and cross a
2385 boundary into that CoP (Wenger-Trayner & Wenger-Trayner, 2015). Boundary interactions are
2386 frequently problematic and can generate internal tension within the individual crossing the
2387 boundary. When crossing boundaries, a negotiation takes place regarding the relevance of an
2388 individual’s existing competencies in relation to the CoP in which he or she is trying to enter
2389 (Wenger-Trayner & Wenger-Trayner, 2015). For example, with regard to crossing the boundary
2390 from parkour athlete to parkour coach, there were multiple participants of this study who referred
2391 to the importance of developing the general coaching knowledge of PCEP participants as
2392 coaches, rather than solely promoting parkour-specific knowledge. The PCEP participants’
2393 competency in executing parkour techniques was mentioned as not necessarily transferring to

2394 competency in teaching those same techniques, and there are components of coaching that
2395 cannot be learned by solely practicing the sport as an athlete.

2396 Notwithstanding potential tensions, crossing boundaries in a landscape of practice creates
2397 the potential for innovation, as it allows individuals to adapt their competencies from one CoP
2398 into another. Parkour coach developers may be able to use the landscapes of practice framework
2399 to take advantage of the potential for learning that occurs at boundary interactions by bringing
2400 materials from existing coach education programs into PCEPs. However, the potential for such
2401 innovation is accompanied by risks in getting lost or wasting time (Wenger-Trayner & Wenger-
2402 Trayner, 2015). These risks were exemplified in this study, as the primary researcher attempted
2403 to innovate with his use of Microsoft Excel for data analysis purposes while crossing the
2404 boundary into qualitative research. These attempts led him to invest time, effort, and create
2405 spreadsheets which were ultimately not useful to his project.

2406 Finally, Wenger-Trayner and Wenger-Trayner (2015) introduced the idea of boundary
2407 brokers. These brokers can facilitate an individual's transition across the boundaries that divide
2408 CoPs, and help to relieve the individual's potential internal tensions caused by the transition
2409 (Wenger-Trayner & Wenger-Trayner, 2015). PCEP facilitators may be in the position to act as
2410 boundary brokers for both parkour athletes who want to make a transition into coaching, and for
2411 coaches of other sports who wish to transition to coaching parkour. A national parkour governing
2412 body may create opportunities for PCEP facilitators to interact with one another, and form a
2413 potential community of brokers. The interactions between these potential boundary brokers could
2414 enhance the effectiveness of PCEPs and increase the quality of parkour coaching and parkour
2415 coach learning.

2416

2417 Recommendations for Future Research

2418 As this study was exploratory and there was a scarcity of existing literature relating to
2419 parkour and parkour coaching, there are many potential areas of future research. Primarily, as
2420 this research was created with the intention to help pioneer research into coach learning in
2421 unregulated sports, additional research in sports where there are currently few or no governing
2422 bodies is recommended. Coach learning in unregulated sports can also be further researched with
2423 a focus on formal coach education programmes, and how both the programs, and coach
2424 perceptions of the programs may differ between regulated and unregulated sports. We were also
2425 unable to find any research pertaining specifically to lifestyle sport coaching, and so we
2426 recommend looking at learning in lifestyle sport coaches as a potential area of future research, in
2427 addition to researching coach education programs for both lifestyle and adventure sport coaches
2428 in comparison to more popular, mainstream sports.

2429 Over the course of this study, many participants provided information and responses that
2430 were not directly relevant to the research questions, but were interesting nonetheless. For
2431 example, all of the parkour coaches who participated in this study were professional coaches;
2432 they were paid to coach parkour. A future area of research could therefore study the potential
2433 differences in learning between professional and volunteer coaches, particularly in the contexts
2434 of unregulated sport, adventure sport, and lifestyle sport.

2435 Additionally, there was a participant in this study who had extensive experience training
2436 parkour with the sport's founding members. He therefore was able to provide a large amount of
2437 insight into how parkour has changed since its founding. For example, he mentioned that the 'old
2438 generation' of parkour practitioners were forced to learn how to train and coach parkour by trial
2439 and error and by interacting with each other, whereas the 'new generation' he described as

2440 having less foundation and increased recklessness in their skill development, despite their access
2441 to larger amounts of information. These differences may also help to explain why all but one of
2442 the parkour coaches interviewed were not coached themselves as athletes; parkour is a new sport,
2443 and parkour coaching is even newer. We therefore recommend research on the progression of
2444 sports as they age and transition from unregulated to regulated, and the potential effects such a
2445 transition could have on coach learning.

2446 During the interview process, one participant from this study spoke extensively about her
2447 position as a female in parkour. She addressed both her experiences as a female parkour coach,
2448 and in coaching female athletes. The influence of gender in sports like parkour (unregulated,
2449 adventure, lifestyle) is therefore also a recommended area of future research, potentially in the
2450 form of a critical inquiry.

2451 A number of participants in this study were coach developers for both parkour and other
2452 sports. Although the influence of their experience as coach developers on their learning as
2453 coaches was not extensively mentioned during this study, that does not eliminate the potential for
2454 coach developer experience to influence coach learning.

2455 Penultimately, as mentioned by some participants, the effects of regulation on coach
2456 learning might hinder the coaches' abilities to innovate. Without regulation, there is a potential
2457 pressure for coaches to constantly be creative just in order to figure out how to coach, regardless
2458 of their levels of expertise as coaches. Such a drive towards innovation could challenge the
2459 model presented by Trudel et al., (2016). In their model, certification is seen as a threshold to
2460 competence, before the progression to SuperCompetent, and finally to innovator. However, the
2461 threshold for innovation may be lower among parkour coaches than it is for coaches of other
2462 sports, both because parkour is unregulated, but also due to the creativity-fostering nature of

parkour itself. Parkour coach developers outside of the U.K. should therefore strive to maintain the drives for innovation and creativity in their coaches should parkour become regulated in their own countries. It is possible that Trudel et al.'s (2016) model may also need to be modified to account for innovation pressures throughout the process of coach identity evolution, especially in unregulated sports.

Finally, as there is no other research on parkour coaching to our knowledge, we recommend that such research be conducted, as there is always the possibility of different results leading to different points of speculation and different conclusions.

General Conclusion

This master's dissertation was completed with the intention to study the experience of learning in parkour coaches. The two articles written for the dissertation discussed the sources of parkour coach learning and the influences of those sources, and the perceptions of formal parkour coach education programs held by parkour coaches respectively.

Common themes were gathered from the described sources of parkour coach learning, for example: parkour coaching experience, previous leadership experience, experience as an athlete in parkour and other sports, other parkour coaches, non-parkour coaches, parkour coach education programmes, school, reflection, and the Internet. We also speculated about the specific impacts of sources such as travel and coaching experience in other sports, and how these sources may exert different influences on parkour coaches when compared to other sport coaches.

Next, parkour coach perceptions of parkour coach education programs were somewhat mixed. Some participants of PCEPs listed positive benefits of participating in the programs, such as standardised parkour coaching and adding legitimacy to their coaching. However, there were also a number of risks mentioned regarding PCEP participation, including the fact that PCEPs

2486 may not be optimal sources of learning, and that they are potentially expensive in both time and
2487 money. Participants also discussed how completing a PCEP may lead to assumptions of false
2488 legitimacy. There is a risk of people external to parkour coaching assuming that holding a
2489 certificate is a sufficient credential to value a parkour coach as a good coach. There is also a risk
2490 that parkour coaches will become overconfident in their own coaching abilities after completing
2491 a PCEP, and might no longer seek out additional learning opportunities. The responses from the
2492 participants suggested that there is a lot of room for improvement within parkour coach
2493 education programs.

2494 The overall contributions of this master's dissertation are related to the fact that not only
2495 is parkour a new sport, an adventure sport, and a lifestyle sport, but it is unregulated in most of
2496 the world. The fact that parkour does not have a national governing body anywhere but the
2497 United Kingdom provided the unique opportunity to study coach development in a sport where
2498 nearly all of the coaches are solely responsible for the content of their own learning. The
2499 potential effects that regulation of parkour would have upon parkour coach learning is presently
2500 unclear, but we are optimistic for the future.

Statement of Contribution

Ethan Greenberg, the first author, was responsible for collecting and transcribing data, was the primary conductor of data analysis, and primary writer of this dissertation. Professor Diane Culver, Ethan's supervisor, worked with him to develop the concepts and design of this study. She also acted as a peer-debriefer through the entire course of the study, including helping to read, write, and edit the articles. Professor Culver also worked with Ethan to help edit and shape the final product. Tiago Duarte also acted as a peer-debriefer and as a source of discussion and feedback for Ethan as he conducted this study. Vakhtang Berri transcribed one interview from a parkour coach who participated in this study. Vakhtang used the transcript from that interview in his own research.

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2738

Appendices

Appendix A: Demographic Questionnaire

Name: _____

Age: _____ Gender: _____

Years of parkour experience: _____ Years of parkour coaching experience: _____

Have you ever been involved in the **development** of a **parkour coach education programme**?

Yes / No (If yes, please specify) _____

Have you ever participated in a parkour coach education programme?

Yes / No (If yes, please specify) _____

Have you ever been involved in the development of a coach education programme relating to

another sport?

Yes / No (If yes, please specify) _____

Have you ever participated in a coach education programme relating to another sport?

Yes / No (If yes, please specify) _____

What would you say has been the primary source of learning in your experience as a parkour

coach? _____

Appendix B: Interview Guide

- 1) Tell me about your personal relationship with parkour. How did you first get into it?
 - a. How did you discover parkour?
 - b. What were your motivations?
 - c. How did your involvement develop?
 - d. Were there any particularly influential individuals?
- 2) Describe your transition from your first involvement in parkour to becoming a parkour coach (and/or coach developer)
- 3) Were you ever involved in a PCEP? If so, please tell me about it.
 - a. Why do you think this PCEP was created? What do you perceive as its intended purpose?
 - b. Why did you decide to develop/participate in the PCEP? What did you expect to get out of it?
 - c. Did you learn anything new from developing/participating in the PCEP? If yes, please elaborate.
 - d. Did you face any challenges in the development/participation in the PCEP? If so, please describe.
 - e. Does your programme provide any additional resources for coaches after they have completed it? Please describe (e.g., Facebook group, access to additional resources, other)
 - f. Did you have parkour coaching experience before participating in the programme? If so, do you think your coaching differed before and after participating in the programme? Why or why not?

- 2785 g. Do you think parkour certification programmes do what they intend? Is anything
2786 missing? Is there anything that could have been done more effectively?
- 2787 4) As you may or may not know, there have been a number of programmes developed
2788 regarding parkour coach education. Do you think that these programmes may have
2789 benefits? What and why/why not? Do you think there could be any risks or negative
2790 consequences to the coaches who participate in these programmes? What and why/why
2791 not?
- 2792 5) Have you created/taken part in coach certification programmes for any other sports? How
2793 would/might you compare those programmes to parkour coaching programmes? How do
2794 you think those programmes might have affected your parkour coaching?
- 2795 6) Do you have an area of focus in your coaching? (e.g., creativity, speed, control, safety?)
- 2796 a. To what do you attribute your coaching style? (e.g., your programme? A special
2797 mentor, etc.)
- 2798 b. Do you have a consistent/specific coaching philosophy? How would you describe
2799 your coaching approach?
- 2800 i. How did you develop this approach?
- 2801 7) Where and when do you feel you have learned the most about parkour coaching?
2802 (PCEPs, seminars, coaching experience, other coaches, jams, YouTube)
- 2803 8) How do you feel about discussing coaching knowledge/experience with other coaches?
2804 What might you see as some benefits to sharing, if any? What do you think might be
2805 some disadvantages, if any?
- 2806 9) Describe any coaching experiences that stood out as particularly memorable? What were
2807 your actions and why do you think you acted in this way?

2808 10) Have you faced any particular challenges in your time as a parkour coach? If so, how did

2809 you deal with these challenges?

2810 11) Would you be available for a short follow-up interview?

2814

Appendix E: Consent Form

2815

**Consent Form**

**Title of the study: How Do Parkour Coaches Learn to Coach?
An Exploration of Parkour Coach Learning and Education.**

Ethan Greenberg
Honours B.Sc.
M.A. (Candidate)
Human Kinetics
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Invitation to Participate: I am invited to participate in the abovementioned research study conducted by Ethan Greenberg (as part of his master's research) and his supervisor, Dr. Diane Culver.

Purpose of the Study: The purpose of the study is to research how parkour coaches learn to coach. Parkour coach learning will be studied with respect to both coaches who have participated in coach education programs, as well as those who have not.

Participation: My participation will consist essentially of a single 60 minute audio-recorded interview during which I will answer questions pertaining to my history as both a parkour coach and a parkour athlete. I will be given the opportunity to review the digital transcripts from the interview, and I will also be asked to participate in a short follow-up interview

Risks: My participation in this study will entail that I volunteer personal information, and this may cause me to feel uncomfortable. I have received assurance from the researchers that every effort will be made to minimize these risks, as identifying information will be kept confidential and anonymous, as described in the Confidentiality and Anonymity section below.

Benefits: My participation in this study will contribute to the advancement of knowledge relating to the development of coach learning and education in new sports, specifically relating to parkour. My participation will also give me the opportunity to engage in reflection and raise my self-awareness relating to my own personal learning experiences with parkour and parkour coaching. I may also be given access to the final product of this study, upon request.

Confidentiality and Anonymity: I have received assurance from the researchers that the information I will share will remain strictly confidential. I understand that the contents will be used only for analysis of themes and that my confidentiality will be protected as my personal identifying information will not be disclosed to anyone but the primary researcher and his supervisor.

Anonymity will be protected in the following manner: Information regarding my name and any affiliations I have with specific parkour organizations will not be

2816



disclosed in the researchers' presentation of this research. I will be given a pseudonym. My identity will not be revealed upon publication of this study.

I may choose to forfeit my anonymity and have my identity (i.e., name, age, years of parkour coaching experience) revealed in the presentation and publication of this study. Please indicate your preference by checking the appropriate box below.

I would like to have my identity, including information relating to my name, age, and parkour history revealed upon publication of this study:

☐ Yes

☐ No

I have been made aware that, regardless of which box is checked, due to the small sample size in this study and the public availability of information, there is a risk that some potential identifying information may be indirectly revealed in the publication of this study.

Conservation of data: The data collected (interview notes, audio recordings, digital interview transcripts, demographic questionnaires) will be kept on a secure hard drive in a locked desk on University of Ottawa campus. Only the primary researchers will have access to the collected data. This information will be conserved for a minimum of 5 years from the end of the data collection process.

Voluntary Participation: I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If I choose to withdraw, all data gathered until the time of withdrawal will be permanently deleted and no longer considered a part of this study.

Acceptance: I, _____, agree to participate in the above research study conducted by Ethan Greenberg of the Department of Human Kinetics, Faculty of Health Sciences, University of Ottawa, whose research is under the supervision of Dr. Diane Culver.

If I have any questions about the study, I may contact the researcher or his supervisor.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5

Tel.: (613) 562-5387

Email: ethics@uottawa.ca

There are two copies of the consent form, one of which is mine to keep.

Participant's signature: _____ Date: _____

Researcher's signature: _____ Date: _____