The purpose of this article is to highlight the use of innovation sprints, flash teams, and inter-disciplinary collaboration in sport management programs that reduce the apparent proficiency gaps that exist between the expectations of industry and the college graduate. Companies in a variety of industries are using these tools to solve complex problems as the velocity of change and volume of data are increasing at a rate that makes constant innovation a necessity. However, higher education traditions and curricular silos appear to be causing graduates to fall further behind the needs of industry. Two innovation sprints have shown the ability to provide students with improved skills for industry while enhancing their understanding of sport management competencies through rapid prototyping, human centered design, and flash teams. One innovation sprint involved a cross-campus collaborative experience. The second focused on a multi-college/university collaboration within sport management. Though both experiences produced better-than-expected results, the inter-disciplinary sprint may have produced a higher level of outputs. Furthermore, faculty and students alike appear to benefit from inter-disciplinary interactions as everyone learns more about each field represented and allows everyone to have an equal voice through a common lens. If sport management programs remain in their designated silo, their graduates may be falling further behind the expectation of employers. Previous literature suggests the benefits of innovative practices significantly enhance learning and drive creative problem-solving. Therefore, sport management programs may want to explore using innovation sprints, flash teams, and interdisciplinary collaboration practices as viable practices to enhance student learning outcomes.

Keywords: human-centered design, effective teams, innovation, organizational structures, rapid prototyping, higher education
Introduction

The National Association of Colleges and Employers (NACE; 2018) published that a significant competency gap exists between how college graduates perceive their competencies and how employers perceive those same competencies relative to career readiness. NACE (2018) identified seven competencies believed to be indicative of career readiness (work ethic, communication, critical thinking/problem-solving, teamwork/collaboration, leadership, digital technology, and career management) and surveyed more than 200 employers and 4,000 graduating college students. According to NACE (2018), nearly 80% of college graduates perceive themselves to be proficient at problem-solving. Conversely, less than 56% of employers consider college graduates to be proficient at problem-solving. Overall, college graduates perceive themselves to be proficient when employers consider many to perform well below expectations. Why is this occurring? Is higher education maintaining pace with changing needs occurring in business? The evidence suggests it is not.

Many businesses in the tech industry (Intel, Atlassian, and Katalyst), healthcare industry (Brain Forest, Harris Health System: Center for Innovation, and The Innovation Studio at Children’s Hospital Los Angeles), and consumer goods industry (Tesla, Walmart, and Target) are utilizing concepts such as business agility, human-centered design (HCD), flash teams, and rapid prototyping to drive innovation and combat the ever-changing conditions in society. Additionally, businesses operate in cross-functional teams while higher education appears resistant to change as curricular specificity (10,000 hours theory) and silos remain as the prevalent educational structure. Such is the case for many sport management programs, as funding mechanisms are driven by credit hours. The disconnect in strategies between industry and higher education appears to leave students under-prepared for the workplace and employers disenchanted with the learning outcomes being produced in colleges and universities. The purpose of this article is to highlight the need for innovation in sport management programs through flash teaming and innovation sprints as increased volume of data, velocity of change, and the unpredictable nature of the sports industry could be causing an increased gap in graduate proficiencies.

The Solution: Flash Teams, Innovation Sprints, and HCD

The original classroom design of putting desks in rows and for children to sit for long periods of time simulated the factory working experience. Today’s career environment looks vastly different and the skills needed for today’s careers are also vastly different. Innovation and collaborative problem-solving are high-
demand attributes in businesses (Torres et al., 2020). As such, many businesses are utilizing concepts such as business agility, HCD, and rapid prototyping to drive innovation and combat the ever-changing conditions in business and society while higher education has remained relatively consistent. Sport management programs and students could be benefitting from the innovation practices being utilized in other industries. The 2020 pandemic has shown the need for creativity and innovation to pivot and adapt to rapidly changing conditions, even for those industries that are thriving. No longer can manufacturing, tourism, government, retail, sport, or higher education continue to do business as usual.

The evidence clearly suggests that businesses and institutions of higher learning need continuous innovation to adapt and thrive as the velocity of change increases, beginning with knowledge acquisition, talent development, and working collaboratively to produce graduates that can make a substantive, meaningful, and positive impact upon graduation. Organizations cannot afford to take a ‘wait-and-see’ approach and are building innovation-based cultures to proactively combat an ever-changing world. Sjödin et al. (2020) suggest that to compete in this era of constant change, businesses should invest in co-creation and innovation practices to maintain their position in the market. Therefore, sport management programs should reflect the changes occurring in business and society. However, financial resources and tradition may not provide the flexibility needed to meet the rapid changes occurring in business, suggesting an alternative structure may be required to fully prepare students for shifts occurring in business and society as well as advancing innovations in higher education.

The benefits of adopting an innovation-based culture extend beyond the art of business in higher education to include new learning opportunities for students. In 2015, the first 24-Hour Challenge was created and executed at IUPUI, capitalizing on cross-campus collaboration with a variety of students at differing majors (a total of 11 different majors) and points in the educational career (first year to doctoral). The students were asked to form a team of four and create a product or service that would enhance the fan experience. The results were better than expected as students produced three patent-worthy products. In 2019, three sport management programs from IUPUI, North Central College, and Concordia University–Wisconsin engaged with a community partner for an innovation sprint. Each program brought four students that were then asked to form four teams of three and create a sport experience that would transform the property from a single-day visit into a multi-day experience all in 24 hours. Once again, the partner was impressed as each of the four teams presented a unique multi-day experience supported by data.

Perhaps the most important outcome from these innovation sprints came directly from the student participants. They reported the experience enhanced
what they had been taught in the classroom and gave them confidence collaborat-
ing with someone they just met. The students’ responses are consistent with that found in research. The literature review provides the foundational elements and learning benefits that will better prepare graduates for industry.

**Interdisciplinary Flash Teams**

According to Bartlett (2013), improvements in technology and increases in volume and velocity of data as well as the emergence of a global economy require organizations to create a nimble infrastructure that can rapidly react to dynamic changes in industry. Additionally, Fernhaber et al. (2015) and Reiter-Palmon et al. (2018) suggest interdisciplinary and interprofessional teams demonstrate higher degrees of innovation and higher levels of quality than isolated expert-centric teams. Tannenbaum et al. (2012) were the original researchers to suggest the term ‘flash team’ and argued that members of a team did not have to know each other but each knew his/her role and worked together to provide a solution. For example, Gordon et al. (2016) suggest the medical field commonly engages flash teams, putting the needs of the patient ahead of all other matters. Therefore, the flash team construct is not a new phenomenon, but recently appears to be receiving application to other business sectors.

According to Retelny et al. (2014), flash teams are comprised of highly inter-
active experts from multiple fields convened for short intervals to solve complex issues believing that the collective expertise is greater than normalized groups and individuals only versed in a single field (Retelny et al., 2014). Furthermore, Benkler (2017) argues flash teams provide organizations the ability to activate a wide variety of personnel “on-demand” for a given task with less friction as constraints such as titles, power, and rank are replaced with only time as the teams are disbanded upon completion. Therefore, flash teams appear to have trem-
mendous influence for short periods of time and are pressured to find an effective solution. Additionally, flash teams appear to empower every person on the team engaging each person’s best talent regardless of position or title.

**Multidisciplinary Team Roles**

Li et al. (2018) contend businesses are engaging in multidisciplinary teams with varying degrees of education and talents to spark the innovation needed for societal and industry changes. Information-sharing appears to be critical in developing multidisciplinary teams so that members can determine their role and make relevant contributions (Uitdewilligen & Waller, 2018). However, a role formula may provide some insights in identifying the ingredients of multidisciplinary teams. For example, van Veelen and Ufkes (2019) suggest cultural diversity
and willingness to accept members of different backgrounds appear to enhance productivity and creativity. Furthermore, members’ willingness to engage in meaningful communication and self-reflection are more likely to avoid long-term conflicts, social loafing, and groupthink (Wheelan, 2016).

Cognitive reasoning and learning appear to be essential ingredients for all members on the team (van Veelen & Ufkes, 2019). Interestingly, expert knowledge of the project does not suggest improved team effectiveness. In fact, Li et al. (2018) suggest a basic understanding of the project creates the freedom to explore ideas that may not be explored by experts. Therefore, soft skills and personality fit appear to be more critical to multidisciplinary teams than expertise. Goodall (2013) argues a member’s attitude is more influential on team performance than hard skills that can be learned.

**Innovation Sprints**

Innovation sprints to date have not received much in the way of empirical research. Ma and Morris (2017) argue innovation sprints are designed to empower participants to rapidly unpack the tacit needs of the end-user, the competitive landscape, and the available resources to gain understanding and identify the pain points, and develop innovations that resolve all the issues facing the organization or end-user. The majority of information available about innovation sprints come from a term known as “business agility” or “agile business.”

Nagel et al. (1991) coined the term “business agility” as the result of a government-funded study on the construct of lean manufacturing implemented by Japanese manufacturing enterprises. However, rapid unpredictable changes in business were outpacing organizations’ ability to adapt, which resulted in the following definition: “[agility is] the ability of an organization to thrive in a continuously changing, unpredictable business environment” (Dove, 1999, p. 19). The evidence suggests that businesses need continuous innovation to adapt and thrive as the velocity of change increases, beginning with knowledge acquisition. Since then, research on the agile business has deepened, primarily achieved through observation.

Early research focused on acquiring knowledge about the business cycle, but recent research appears to be focused on the dynamics of interpreting tacit knowledge into explicit knowledge. For example, Bider and Jalali (2016) argue short bursts of innovation drive knowledge outputs that can be built upon as changes in business and industry occur. More clearly, leading change provides more viable outcomes than reacting to change. However, Pulakos et al. (2019) suggest agility is proactive in the pursuit of innovation and responsive to changing conditions simultaneously. The simultaneous proactive pursuit and response to change led to the idea of solution challenges and innovation sprints.
Most people associate innovation with products, services, and processes and less with efficiencies, employee satisfaction programs, or quality, but it is the latter that has the most organizational impact (Stoyanov, 2017). Furthermore, the agile organizations that focus on removing barriers, reducing complexity, and increasing stability for their members achieve higher returns than organizations that focus solely on innovation (Pulakos et al. 2019, p. 315). Furthermore, projects do not appear to be initiated by executives or managers in agile organizations. Rigby et al. (2016) suggest that projects are initiated by employees at any level of the organization who feel empowered and motivated to pursue a solution. Therefore, power is given to employees to pursue initiatives they are passionate about or for which they find a greater sense of purpose.

Organizations adopting HCD, rapid prototyping, and flash teaming concepts can theoretically address many more issues, resulting in additional opportunities for innovation, improved employee satisfaction measurements, and higher returns on investment. However, organizational structure and leadership style appear to greatly influence the organizational direction as more power is given to low-level employees in agile organizations. Therefore, it seems plausible to create interdisciplinary flash teams with consideration to HCD that could produce high-performing teams in an “as needed” basis to rapidly respond to a variety of situations.

Conversely, Wheelan (2016) argues effective teams appear to maximize their performance only after the team has gone through a series of developmental stages taking no less than six months. However, the pace of change occurring in some industries does not allow six months for teams to maximize their effectiveness. The recent increased use of flash teams, innovation sprints, and HCD in business facilitates the need for understanding so that higher education can also benefit from such practices. However, the majority of higher education institutions remain in silos, thus underutilizing the talents of everyone associated with the institution.

**Human-Centered Design**

HCD begins with the end-user as the focal point rather than traditional feasibility and financial viability focal points generally thought to be the two most important components for decision-making (Chung & Kong, 2016). Pierce et al. (2019) suggest HCD aids in handling complex issues that are difficult to define. Additionally, HCD pioneers Kelley and Kelley (2013) emphasize that innovations of the past began with a business mindset, thus leaving people to determine if the innovation was useful. Today, however, rapid advancements in technology and increases in data velocity require an approach that puts people first to create sustainable innovations (Chung & Kong, 2016). For example, cell phones have evolved into smartphones that adapt to the user rather than the user adapting to the phone.
HCD and solutions-focused design constructs appear to have roots in brief therapy, as therapists work with patients by focusing on the future and what’s possible as opposed to what happened in the past (Palmer et al., 2016). Lars et al. (2016) suggest that cities and communities should adopt HCD approaches to developing infrastructure that focuses on present human needs and anticipating future needs rather than capital gains. However, HCD must be integrated into the organizational culture so that identifying the right balance of strengths among members of the team can fully optimize the benefits of HCD (Hehn et al., 2020). Therefore, higher education might be considered a team of diverse, experienced, and competent educators who are purveyors of educational innovations that would benefit the end-user.

HCD team development for radical innovation development engages skill diversity and interdepartmental collaboration to achieve the deepest level of understanding possible about the issue (Roberts et al., 2016). Furthermore, interdepartmental collaboration opens the door to additional resources not present in a single department (Hehn et al., 2020; Roberts et al., 2016). Therefore, a broader range of skills and experiences lends to the possibility for radical innovation and an emotional connection with the product, end-user, or the greater purpose. However, HCD assumes that everyone on an HCD team has the ability and skills necessary to contribute to the process (Schweitzer et al., 2016), yet little is known about the impact of soft skills within flash teams.

**Expected Skills**

Stanley and Williamson (2017) argue skill improvement is simply the ability to apply appropriate knowledge from a given situation that improves through experience, time, and reflection. In other words, a person improves his or her skills over time with practice and experience. However, skills are divided into two categories: hard skills that reflect technical abilities related to a task and soft skills that reflect intangible abilities such as leadership, interpersonal (social) skills, or behavioral skills, which complement the performance of hard skills (Fan et al., 2017; Wesley et al., 2017). Since HCD requires hard skills and soft skills such as emotional intelligence and empathy, it would appear that recruiting for high technical skill and a high degree of emotional intelligence would aid in creating a high-performing HCD team.

*Emotional intelligence and empathy*

Emotional intelligence was originally described as one’s ability to accurately assess personal emotions and the emotions of others as well as regulating personal emotions to produce the best possible life (Salovey & Mayer, 1990).
More recently, Miao et al. (2018) suggest that emotional intelligence includes the ability to not only recognize the emotions of others but to also empathize with others. In other words, emotional intelligence is understanding one’s emotions, the emotions of others, and the ability to connect with others on an emotional level. Furthermore, effective leadership has been positively correlated with high degrees of emotional intelligence as well as cognitive abilities (Miao, Humphrey, & Qian, 2018).

Saad et al. (2018) argue that personality attributes, in addition to emotional intelligence, influence member engagement and are crucial in developing team cohesion. Specifically, Jada and Mukhopadhyay (2019) argue three of the “big five (OCEAN)” personality attributes positively influence leadership (agreeableness, extraversion, and openness) while the other two (conscientiousness and neuroticism) negatively influence leadership. However, the definition of these terms appears to alter their findings.

Sun and Shang (2019) suggest conscientiousness relates to cognitive intellect and openness relates to emotional stability in that one is open to the opinions of others and demonstrates a high degree of emotional stability. Conversely, Jada and Mukhopadhyay (2019) suggest conscientiousness relates to personal drive for power, which negatively influences relationships. Additionally, openness relates to a person’s willingness to empower others (Jada & Mukhopadhyay, 2019). Therefore, a researcher’s field of study and perspective can significantly impact his or her interpretations of the data. However, no matter the definition, personality and other soft skills appear to significantly influence team development and leadership abilities, but can be developed over time to enhance their effectiveness.

*Interpersonal skills (social skills)*

Interpersonal or social skills are positively correlated with collaboration, effective communication, and conflict resolution within a team (Kiernan et al., 2019). Furthermore, social skills such as communication appear to be directly proportional to emotional intelligence levels (Moradi et al., 2018). Low emotional intelligence levels appear to predict poor social and communication skills; as emotional intelligence improves so do the social and communication skills. Additionally, Moradi et al. (2018) and Schutte and Barkhuizen (2016) suggest social skills are reciprocal skills in that a person can learn and respond to another person in a similar manner.

Popoola and Chinomona (2017) argue communication, commitment, and trust appear to be sequential, as communication inspires commitment, and both communication and commitment inspire trust, and all influence behavior. However, Mayer and Gavin (2005) argue trust stems from communication and
demonstrated ability. In other words, performance combined with communication (direct or indirect) inspires trust. Furthermore, trust is defined as having faith in someone or something without control or the willingness to be vulnerable to any inherent risks (Mayer & Gavin, 2005).

Communication appears to be a key consideration in determining a person’s social skills. Communication skills are important to leadership, conveying strategy, understanding and empathizing, and creating sustainable relationships (Arcos, 2016). Furthermore, Park et al. (2017) conclude agile businesses and leaders adapt to change or pivot more efficiently due to high levels of communication skills influencing personal and organizational behaviors. Therefore, communication appears to be a linchpin in the social skills construct and is strongly connected with leadership and influence.

Leadership skills
Fostering a culture supportive of HCD begins with the organizational leader removing organizational barriers, being a catalyst but not directly involved in the project, encouraging interdepartmental collaboration, rewarding creativity as well as performance, supporting HCD teams with the resources needed to solve the issue, and empowering HCD teams to activate solutions (Mahmoud-Jouini et al., 2019). Sorice and Donlan (2015) suggest that leaders wanting to create an HCD organizational culture should adopt the same concepts of HCD where the end-users are members of the team. Therefore, applying HCD principles to one’s leadership construct puts members of the team first, empathizes with their situation, creates incentives through rapid-prototyping, and accepts ideas from throughout the organization (Sorice & Donlan, 2015). Therefore, creating an HCD culture begins with human-centered leadership.

Hendrikz and Engelbrecht (2019) argue values-based leadership constructs such as transformational, servant, authentic, and ethical share three foundational commonalities: openness (vulnerability), transparency, and emotional intelligence (self-awareness). Bartz (2009) argued that leadership begins on the inside by examining one’s heart and motives. Therefore, leadership appears to be dependent upon soft skills, which is consistent with HCD principles. However, evidence-based practices such as business acumen and performance continue to be the primary factors for evaluating personnel (Farokhzadian et al., 2015). Consequently, leaders should have both hard and soft skills to be effective.

Implementation
Interprofessional education (IPE) is a well-known and critical step in the development of students in the healthcare industry. According to Buring et al.
Jinkins (2009), IPE improves quality of care, reduces healthcare costs, and improves student learning as they prepare to enter the field. Innovation sprints act as vehicles for interdisciplinary learning, thus achieving similar results to IPE. Therefore, innovation sprints in collaboration with other departments could be highly beneficial to sport management student learning as well as organizations that hire them. For example, designing a product or service that enhances the visitor experience is a prime example where faculty and students from art, design, engineering, sport management, business, psychology, or a host of other disciplines could come together for a short innovation sprint. Concepts in each discipline are presented with a high degree of density in a very short timeframe followed by an implementation period to the given project (interdisciplined layering) and enhanced by interactive coaching by faculty. Students, programs, and departments benefit from shared knowledge and suffer minimal disruption due to the short timeframe (12-48 hours). The experience is volunteer-based and generally occurs when classes are out of session.

HCD and flash teams can also be implemented in the classroom through the utilization of some interactive activities. For example, a single dad is taking his three young children to a ball game. He stops by the concession stand for drinks and snacks. Once the order is fulfilled, he realizes that he has no way of holding his children’s hands to escort them to their seats. A student-led team could design something that solves this issue for the fan. The goal is to work through the HCD process in enough time to have multiple iterations but not so much time that students get bored. Additional learning occurs during the discussion phase. Why did they choose that solution? What questions did they consider before ideation? How did their team interact? My experience with these types of activities is that they improve student learning and engagement.

**Conclusion**

Sport management programs could benefit from innovation sprints and flash teams, as with other high-impact practices, to engage students in multiple types of learning modalities. Furthermore, faculty could benefit from such practices to dramatically change their involvement in the sport industry, providing additional research opportunities as well as potential sources of revenue. Additionally, institutions operating in silos and rigid organizational constructs may be failing in their primary role of preparing students for life and careers as well as falling further behind the needs of a global economy. However, a dramatic shift would need to occur by flattening traditional hierarchical and silo structures, removing titles within flash teams, and encouraging inter-disciplinary collaboration while providing resources to explore radically creative solutions to complex issues to thrive and lead in a rapidly changing world. Agile colleges and universities,
multi-disciplined collaborations, and external partnerships focused on innovation could not only transform the sports industry but the future of higher education as well. Maybe higher education could be leaders of change rather than respondents to change, beginning with sport management programs adopting and engaging in the innovation practices used in industry.

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