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# **Original Research**

# From Sports Science to Sport Coaching Bachelor's Degree: Examining the International Context

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**Abstract**: The International Council for Coaching Excellence recently presented a position statement recognizing the professionalization of sports coaching as a global process. The tertiary education sector is assumed to be engaged in coaches' education and producing an evidence-based knowledge foundation. Considering the scenario, the objective of this study is to explore the specific characteristics of the sports science curriculum in higher-education institutions. The method used was content analysis. It included institutions that presented the curriculum available in English on their official website. Grounded on the inclusion criteria, the sample covered thirty-nine universities in Oceania (n = 5), Asia (n = 6), Europe (n = 8), and the Americas (n = 20). The curricula of the high-quality universities were verified to detect which Olympic sports disciplines are a curricular component in undergraduate courses in sports science. Additionally, disciplines with the term sport or sports in the title were identified. Considering the Summer and Winter Olympic sports, thirty-seven sports are not included in any curriculum. The second category of disciplines was established from disciplines with the words' sport or sports in the title. After excluding repeated titles, 386 disciplines were identified. The results from this study suggest that the current higher-education sports science curriculum might be reconfigured to comply with the Sport Coaching Bachelor's Degree Standards of the International Council for Coaching Excellence.

**Keywords:** Formal Education, Professional Development, Olympic Sports

#### Introduction

In 2022, the International Council for Coaching Excellence presented a position statement recognizing the professionalization of sports coaching as a global process of continuous improvement. Lara-Bercial et al. (2022) declared that sports and sports coaching are meaningful elements within current societies. From this perspective, sports coaches must have the appropriate knowledge, skills, and competencies to accomplish the profession's requirements. With the fundamental aspiration being recognition of coaching as a mixed professional field, the proper connection with tertiary education is critical (Bales et al. 2019). Higher education institutions should engage in coaches' education and produce an evidence-based knowledge foundation (Lara-Bercial et al. 2022). The higher education sector has witnessed a recent rise in sports coaching-related courses, making them a crucial stakeholder in offering coach education (Dray and Howells 2019; Petry and Jong 2022). Moreover, a growing number of higher education institutions in numerous countries have offered Sport



Coaching bachelor's degrees in favorable combination with or as a counterpart to coach education supplied by other organizations, like national and international federations. These specific degrees are not purposed as a substitute for governing organization provision but as an appropriate complement (Lara-Bercial et al. 2016).

Taking into account the above context, one of the possible approaches to improve the formal education of coaches is to investigate the specific characteristics of formal education curricula in higher education institutions. Typically, there is a rare opportunity to think profoundly about educational practice and curriculum, particularly in universities today. However, this is a much-needed dialogue as graduates are exposed to a progressively complex world (Barradell, Barrie, and Peseta 2018). According to Kridel (2010), curriculum studies is a field of investigation that deals with various sources offering a perspective on issues about what curriculum should be. In addition, this kind of analysis provides alternative or complementary paradigms of inquiry that allow explorations of such queries and produce diversified possibilities for recommending and enacting responses to the debates in educational theory and contexts of educational practice. In curriculum studies, some aspects stand out. An essential aspect is related to the core curriculum, which represents the body of knowledge, skills, and attitudes presumed to be acquired by all academics, usually associated with a specific group of subjects and learning areas shared with all students (International Bureau of Education 2013). Curriculum coherence represents a characteristic of a curriculum that reveals the degree to which the purposes and contents, as well as textbooks, teaching methods, and evaluation, are all associated and supplement one another. Some research findings advocate that an elevated level of curriculum coherence is connected with highperforming systems (International Bureau of Education 2013; Oates 2010).

That said, the proposal for standards for higher education sport coaching bachelor degrees (International Council for Coaching Excellence, 2016) seems an opportunity to investigate which subjects best suit the academic curriculum. In this way, an educational synergy might be established for developing the sports coach with other sources of information and other sport-related environments. Research about formal education and professional development of sports coaches is a considerably recent subject of knowledge (Stodter and Cushion 2017; Resende, Sequeira, and Sarmento 2016; McCarthy and Stoszkowski 2018). In a recent systematic review of coach development programs conducted by Campbell and Waller (2020), only 5 percent of the research included document analysis, and 4 percent of the study participants examined in this systematic review were curriculum designers. Moreover, while coaches are at the essence of these development programs, they are also typically uninformed about intrinsic curricular aspirations and proposed instructional strategies. As a result, they are frequently not conscious of the educational program's accuracy. Hence, extensive reliance on their point of view regarding program effectiveness should be evaluated carefully.

One of the aspects to be considered is the inclusion of sports disciplines as curricular components in coaches' bachelor's degrees. Before discussing whether sports are essential, verifying that sports, like the Olympic disciplines, are currently part of sports science courses in higher education is necessary. Another required analysis is verifying the inclusion of the sports theme in the curricula through the lens of distinct areas of knowledge. To address this scene, this research aims to verify if sports disciplines are present in sports science courses and verify academic disciplines related to sports. This study was structured as follows: Initially, the curricula of the high-quality universities were verified to detect which of them have sports disciplines as a curricular component in undergraduate courses (e.g., football, handball). Additionally, disciplines that contain the term "sport" or "sports" in the title were checked. Finally, we will discuss the results considering the literature about coach education, especially concerning the International Council for Coaching Excellence proposal (Lara-Bercial et al. 2016).

### Method

The method used was content analysis, which examines texts, specifically through a coding system, classifying and characterizing the content. An analytical procedure portrays this method for reviewing, evaluating, and classifying text content into organized groups in systematic and replicable routines (Bryman 2012; Creswell 2012). When executing the content analysis, the noticed frequencies of particular words and styles of texts might expose confirmed standards (Boréus and Bergstrom 2017). Flick (2014, 259) claims that "documents represent a specific version of realities constructed for particular purposes." Following the aim of this research, the website content analysis registered the frequency of the sports disciplines as a curricular component in undergraduate courses in sports science. In addition, the disciplines with the word "sport" in the title but not related to any specific Olympic sport were registered in a distinct group.

#### **Procedures**

The data were collected from the institutions' official websites between August 2019 and April 2020. The methodical search of official websites of higher-education institutions sought to ensure the essential data's authenticity, credibility, representativeness, and meaning (Morgan 2021). Initially, a search was performed in different international rankings that classify higher-education institutions worldwide: (1) QS World University Rankings; (2) Academic Ranking of World Universities; (3) Times Higher Education; and (4) Best Global Universities Rankings. The rankings evaluate the repercussions of research, quality of education, and graduate employment, among other characteristics. The leading 100 universities in each ranking were registered in an Excel spreadsheet, and repeated institutions' names were eliminated, ending in an identified sample of 167 universities. Next, we detected universities with undergraduate degrees in sports sciences, totaling seventy-one institutions.

Subsequently, we registered the continent, the country, the institution's name, the course's organizational unit, and the specific remark of an undergraduate course in sports science in an Excel spreadsheet. After this, the official website of every higher-education institution was verified to acquire descriptive data about the curriculum and the disciplines or modules of sports science undergraduate courses. Lastly, exclusively, the institutions that properly presented the curriculum and disciplines or modules in English were maintained, totaling thirty-nine universities. Grounded on the inclusion criteria of this research, the sample covered thirty-nine universities in Oceania (n = 5), Asia (n = 6), Europe (n = 8), and the Americas (n = 20).

## Data Collection and Analysis

The methodical examination for educational curricula was conducted on each institution's official website to recognize explicit content about undergraduate courses associated with sports science. The knowledge revealed from each institution's website was ordered by continent, country, institution name, organizational unit, course name, course type, duration in years, disciplines/modules, and classification as mandatory or elective disciplines/modules. If specific elements such as course period or discipline categorization were inaccessible, they were classified as "not provided." The category of Olympic sports disciplines (e.g., swimming and judo) involved only the sports incorporated as part of the Olympic program in the summer and winter editions of the games (IOC, n.d.-a, n.d.-b). The general sports knowledge category included disciplines with the word 'sports' in the title (e.g., coaching sports, sports media). After entering all the disciplines or modules found with this criterion, the duplicate titles were considered only once, regardless of whether the specific title appeared in one or more institutions.

#### Results

This study aims to identify and categorize disciplines with titles related to Olympic sports and disciplines that contain the word sport in the title. In the case of disciplines with titles related to Olympic sports, each sport was considered once, even if offered for diverse programs or curricular emphasis. Concerning the Summer Olympic Games program (IOC, n.d.-a), the following sports detected in the sample of this study were: swimming, golf, football (soccer), badminton, track and field, basketball, tennis, handball, taekwondo, volleyball, fencing, table tennis, baseball/softball, judo, rugby, sport climbing, artistic gymnastics, karate, weightlifting, archery, skateboarding. Considering the list of the International Olympic Committee (IOC, 2022a), twenty-six sports were not observed in this sample of undergraduate sports science courses. Concerning the Winter Olympic Games (IOC, n.d.-b), the following sports were identified: snowboarding, speed skating, figure skating, freestyle skiing, and alpine skiing. In the case of the Winter Olympic Games program,

eleven sports were not noticed in any curriculum. Of the thiry-nine higher-education institutions analyzed, only fourteen offered an academic discipline with a title that referred to a sport of the summer or winter Olympic Games.

The second category of disciplines was established from titles of courses with the words sport or sports. After excluding repeated titles, 386 courses were identified. Figure 1 shows the graphical representation of the words of this category, with the variable size of every word revealing its relative frequency. This word cloud was considered a term that appeared five times or more in the list of disciplines. Figure 2 presents examples of academic disciplines containing the title's words sport or sports.



Figure 1: A word cloud proportional representation of the names of the disciplines related to general knowledge with the word sport or sports in the title, including only words that appeared at least five times.

Source: www,wordcloud.com 2022

#### BIOLOGY

- · Biochemistry of exercise and sports
- · Sport physiology
- · Training theory and analytics for sport performance
- · Biomechanics of sport
- · Functional anatomy of the musculoskeletal system and applied sports medicine
- · Sports injury: evaluation, management, and treatment
- · Sport nutrition

#### BEHAVIOUR

- · Sport psychology
- · Sport pedagogy
- · Sports education
- Core skills in sport and exercise science
- · Principles and theory of sports coaching

#### SOCIOLOGY AND CULTURE

- · History of sport
- · Philosophy sports theory
- · Sociology of sport
- · Humanities and social science: sport theory
- · The historical, cultural, and social dynamics of sport
- · Ethics and values in sport
- · Sport and globalization
- · Sport media and communication
- · Legal aspects in sport

#### MANAGMENT

- · Foundations of sport management
- · Strategic management of sport organizations
- · Sport finance and accounting
- · Governance and organization of sports
- · Sport entrepreneurship
- · Innovation and professional practice in sport

#### RESEARCH AND TECHNOLOGY

- · Applied sport science research
- Research and statistic in sport science
- · Introduction to qualitative methods in humanistics and social scientific sports research
- Introduction to sports science in coaching
- · Sports analytics, game theory and tactics
- Science and practice of training for sport performance
- ·Sport technology, innovation and entrepreneurship
- · Sport big data analysis

Figure 2. Examples of the original disciplines in distinctive areas of knowledge included the word sport in the title.

#### Discussion

This research aims to verify if Olympic sports are essential as disciplines in sports science curricula in sports science degrees in higher education institutions and which academic disciplines are associated with sports. As revealed by the results, few and varied Olympic sports are part of the curricula. Considering the Summer and Winter Olympic sports, thirty-seven sports are not included in any curriculum. Considering the limited and diversified

presence of Olympic sports in Sports Science bachelor's degrees, the results suggest these curricular components are not a priority. The findings suggest no consensus about a standard for specific Olympic sports disciplines in curricula. The disciplines of Olympic sports focus on basic knowledge of official rules, specific techniques, and tactics of the unique sport, sometimes including theory and practice. The premise that including all Olympic subjects in a higher-education curriculum would be unfeasible seems reasonable. Likewise, the specific choice of some sports' disciplines over others would be controversial. Another possible challenge is the appropriate content that should be taught in a sports curricular component when undergraduate students possess heterogeneous knowledge about the topic. In this sense, it seems necessary to reflect on whether sports should be part of the curricula in sports science courses in higher education institutions and how such disciplines effectively contribute to the consistent training of sports coaches. Conceivably, delegating sport-specific content to sports organizations like federations, confederations, and sports-related government institutions is a viable solution. In this sense, the articulation between higher-education institutions and different sports organizations can be an advantageous proposal.

Coaching expertise enhances and accumulates through time. Therefore, higher-education institution's courses for sports coaches should be interconnected with the programs of federations and sports organizations. According to the International Council for Coaching Excellence (Lara-Bercial et al. 2016), distinctive organizations within different segments of the education field contribute to coach development and progression opportunities. In some countries, coaches are customarily trained by governmental sporting organizations and official bodies of a sport, like national and international federations. Coaching has remained conventionally the primary domain of the tertiary education sector in other countries, like universities, colleges, and sports education institutes (Lara-Bercial et al. 2016). However, it has become ordinary in many countries to have a blended design whereby diversified organizations supply plenty of possibilities for coaches to develop professionally (e.g., Santos 2019). The search for synergy determines a profound understanding of knowledge evolution and assists scientists, coaches, and individuals engaged in sports in producing better, more constructive interventions (Pol et al. 2020).

Academic disciplines that contain the words "sport" or "sports" in the title reveal a considerable diversity of approaches to the topic, typically associated with areas of scientific knowledge traditionally belonging to the university environment. Considering the apparent trend toward professionalization of sports coach activities (Lara-Bercial, Bales and North 2020; Gill 2021; North et al. 2019; Santos 2018), the results indicate sports science courses might be configured to become an option for undergraduate curricula that comply with the International Council for Coaching Excellence (Lara-Bercial et al. 2016) standards for higher-education Sport Coaching bachelor's degrees. In this sense, reflecting on which curricular components might contribute to this proposal in the academic environment is noteworthy.

In the behavioral area, knowledge about psychology, pedagogy, core skills, and theories of sports coaching is essential. Kingston, Thomas, and Neil (2013) argued that the general purpose of applied sports psychology is to supply athletes and coaches with the essential mental skills to adapt to the critical requirements of training and competition, assisting each individual in accomplishing their potential. According to Morgan and Sproule (2013), pedagogical theory should represent an essential role in preparing coaches; moreover, coaches should continually assess their sessions with extensive pedagogical reference, which will provide the ability to develop progressively into more reflective and talented coaches. For Laurence, Kingstone, and Gottwald (2013), in sporting practices, varied fundamental movements represent grounded skills for more complex actions that might require a prolonged time to achieve. The coach's competence in promoting the learning of skilled movements can be improved through a more specific understanding of how athletes perform and how to arrange the conditions to provide progress. These premises align with the proposal of the International Council for Coaching for Excellence (Lara Bercial et al. 2016), which mentions psychological theories, leadership theories, movement theories, and motor learning theories as knowledge bases for the bachelor's degree in Sports Coaching.

Considerable knowledge in the sociocultural area is equally valuable in the successful performance of coaches. Disciplines like sociology, history, philosophy, and ethics are indispensable in the adequate preparation of coaches. To Matthews, Fleming, and Jones (2013, 72), "coaching practice involves managing relationships and fostering appropriate social environments to achieve the desired ends." In terms of sociology, considering the conceivable intricacy of relationships overall, it is challenging to identify and evidence the multiple social influences that impact the rapport between coaches and practitioners. Despite that, sociology provides an academic perspective to properly evaluate this interactivity (Matthews, Fleming, and Jones 2013). From a broader approach, Petry, Meier, and Moustakas (2022) critically analyzed how sport can collaborate to confront inequalities and emphasized the beneficial consequence of grounding sport educators about the structural dilemma, flourishing diversity, the dissipation of limits in media and communication, the individualization of lifestyles in an interconnected world. The study of history can reveal the considerable effects of the past on the social presumptions to which coaches are susceptible. This academic field of knowledge is meaningful because it can make coaches conscious of the limits within which they work and the strains they cope with so that they can handle the sportive environment more effectively (Maclean and Pritchard 2013). According to Hardman and Jones (2013), philosophy provides valuable resources and ideas to target a coach's thinking and reflection concerning their aspirations. Assuming the holistic development of athletes as human beings remains the priority of coaches, the values related to this aim should be acknowledged appropriately. This is predominantly an elaborate procedure of philosophical reflection. In this sense, the ethics approach is substantial and has an evident effect on the coaching activity. Ethics is essential to underpinning the profound awareness of the coach-athlete dynamic and, in a more general way, how coaches ought to nurture the integrity of the group in consonance with the sporting routines in which they engage. "It implies that coaching ethics are evident in how coaches decide what, who, why, and how they coach" (Hardman and Jones 2013, 114). Heerdt and Rook (2022) indicate that sports and human rights should be united in sports education in all practice environments. The next generation of professionals and those already involved in sports can pursue and reinforce the tendency to act more sustainably. Sports offer a unique potential to endorse human rights and involve various risks. These areas are also recognized by the International Council for Coaching Excellence as necessary (Lara-Bercial et al. 2016). The standards for the bachelor coaching degree included theories of sociology, ethics, politics, policy, strategy, and administration as broad academic areas to compound the curriculum.

The biological area contains relevant contributions to the coaches' education. Sports physiology is interested in the body's reaction to physical training and competition. Coaches might find relevant fundamental aspects of physiology and how they apply to sports performance for the desirable preparation of athletes. This necessary knowledge emerges from a practical assessment of the athletes' physiological requests for the sportive necessities (Hughes, Oliver, and Lloyd 2013). Irwin, Bezoids, and Kerwn (2013) highlighted the fundamental value of biomechanical principles that should be used by coaching, which establishes biomechanical knowledge as a resource to be critically employed by coaches. The theoretically founded science of sports biomechanics supplies a procedure that might assist coaches in better-comprehending techniques. It can accomplish this by appropriately recognizing the most efficient skill development process. For Miles and Tong (2013), some aspects of medical knowledge might be beneficial to prevent, heal, and manage injuries related to practice and allow the coach to preserve the health, well-being, and fitness and hence, the best performance of athletes. To the importance of the contribution of the biological area in the training of coaches, the International Council for Coaching Excellence lists physiological and planning theories as curricular components. Specific examples of the areas of study are periodization of training, biomechanics, and performance physiology (Lara-Bercial et al. 2016).

Technology is another area that has constituted part of coaches' routine lives, like the employment of match analysis. The direct intention of match analysis within the coaching practice is to support the judgments made by coaches and athletes about how they properly prepare for competition. Hence, match analysis activity should be correctly determined by the coaching method and its information necessities (O'Donoghue 2013). Van Tuyckom and Vos (2022) emphasize the potential value of interdisciplinary association between sport, humanities, and technology. As examples of areas of study, the International Council for Coaching Excellence mentioned notational and motion analysis (Lara-Bercial et al. 2016). In addition, it included research and knowledge generation as a broad theoretical area. According to Pol et al. (2022), it is necessary to renovate scientific premises in sports to

stimulate the critical thinking of scientists, coaches, and practitioners and enhance their methodological outcomes. Instead of emphasizing learning and skill acquisition, a new approach should prioritize enhancing team and athlete diversity and unpredictability, within the structure and constraints that facilitate this development. It combines bottom-up and top-down approaches, from the social to genetic, and can be applied to all types of sports and ages or transferred to other domains. This generator of constraints operates at unprecedented levels and times, making it a unique tool for improving performance.

The results from this study suggest that the current higher-education sports science curriculum might be reconfigured to comply with the Sport Coaching Bachelor's Degree Standards. According to Lara-Bercial et al. (2016), graduates with a bachelor's degree will possess broad and practical knowledge and essential skills for professional occupation and advanced learning. In order to become a proficient coach, one must possess a variety of professional knowledge encompassing the understanding of the coaching process, the contextual environment, the sport, and its curriculum, as well as the participants themselves. Additionally, intrapersonal knowledge, which involves comprehending one's own self, is also an essential component. Lastly, effective interpersonal relationships are imperative, including connecting with individuals and employing effective teaching methods. To attain these objectives, it is essential to design the academic curriculum thoughtfully.

## Curriculum Quality

The success of an academic curriculum depends on several factors. One of these factors is curriculum design, which can be conceived as the elaborate process of significantly composing and linking the incorporated elements of a curriculum to respond to such central questions as what is necessary to be taught, how, and why. The necessary supplies are involved and how learning will be evaluated. In curriculum studies, the scope and sequence interconnect the extensive structure of the curriculum to guarantee its consistency and progression. Scope concerns the breadth and depth of content and skills to be covered. Sequence refers to the capacity to follow a broad range of academic subjects and skills and the chronology offered to learners over time.

Another fundamental aspect being carefully considered is the practical implementation of the curriculum. According to the International Bureau of Education (2013), curriculum implementation remains the process of appropriately applying the designed curriculum into practice. In the case of a new or modified curriculum, this process theoretically comprises institutional development and improvement routines, stimulating human resources guidance and ethos, in-service teacher preparation, and the development of novel academic resources. It is noteworthy that the effective implementation of curricular presents some challenges. According to Karakuş (2021), the tangible impact of curriculum execution on education depends on how well it is carried out. Along with the curriculum implementation, inevitable

problems may be experienced. Consequently, the whole process must be evaluated to detect positive practices and particular difficulties accurately. Karakuş (2021) described the potential obstacles in curriculum implementation in four categories. First, it is mentioned the problems related to teachers, like teachers' inability to translate the curriculum intentions appropriately into reality, the curriculum misunderstanding as a whole, the rigid adherence of the teachers to traditional teaching methods, and differences between their beliefs and the underlying principles of the proposed curriculum. Next, problems are related to students' diverse characteristics and varied previous knowledge. The third category of challenges for curriculum implementation is related to the adaptive process. Among the problems are insufficient time for implementation, the curriculum inadequacy to students' culture and society, and the lack of realistic assumptions of curriculum developers. Lastly, there are problems related to the educational institution, including insufficient opportunities for teachers' collaboration, external pressures on curriculum implementation, the lack of stakeholders' assistance, and the potential effect of the hidden curriculum. Consequently, investigating the possible effects of formal education programs must consider several variables from distinct perspectives to prevent inaccurate conclusions. This scenario applies notably to the possible implementation of highereducation undergraduate courses for sports coaches.

According to Pethry and Jong (2022), education in sports should be more responsive to constant forthcoming innovations. This reveals that education should be established considering apprentices and suitable groups' demands. Furthermore, dealing with the job market, pragmatic circumstances, and worldwide demographic and societal variations in countries is required. The possible directions for the educational framework are to adapt to these changes by articulating the educational process in realistic contexts, with other professionals to observe how to act appropriately in a multidisciplinary approach. The curricular approaches need to be focused on real-world learning, which manifests potencies to enhance profound learning and graduate employability skills. The curriculum design that refers to the significance of learning through novelty, application, and personal development is conceivably more adjusted to students' current necessities for higher education and subsequent employment. The challenge is to transfer real-world learning into a researchinformed standpoint so its execution does not occur by chance but is deliberated against the more conventional taxonomies of learning and instituted pedagogic theory. University profiles may also improve to review learning in higher education institutions to a real-world ethos. Furthermore, higher-education institutions must choose precisely more reflexively to a process-led curriculum with proper attention to individualized and applicable assistance arrangements (Morley and Jamil 2021). This perspective converges with the proposal for the creation of the International Coaching Degree Standards in higher education institutions (HEIs), which explicitly supports:

The creation of an optimal match between Coaching Degrees and the needs of coaches, athletes, and the labor market; the mapping and complementarity of Coaching Degrees to other existing coach education and development routes; greater cooperation between HEIs and other coach education providers such as national and international federations; a greater exchange and cooperation between academia and practitioners for the benefit of athletes and participants; the development of student and faculty professional profiles. (Lara Bercial et al. 2016, 9–10)

The crucial challenge of the coach education curriculum is to prepare coaches who will consistently upgrade successful programs in their coaching environment (Dray and Howells 2019). According to Stodter and Cushion (2017), academic research in coaching education has indicated that efficient coaches constantly increase knowledge about their performance by blending varied learning contexts from their practices. A restricted perspective may limit the coach's competence improvement and discourage the potential evolution of coaching and coach education (Bjørndal, Toering, and Gjesdal 2022). Admitting sports coaching is moving towards professionalization; education represents a critical element of this trajectory. Education is essential, even assuming the academic processes are complex and do not always present the predicted results. Borrowing from Freire's (2000) declaration that if education alone does not transform society, without it, society does not change either; in sports, it can be presumed that if the sport does not evolve only through education, without it, its development will probably be much more difficult.

#### **Conclusions**

This research aimed to identify if Olympic sports disciplines are present in sports science courses and verified academic disciplines related to sports. Specifically, this article has explored the curricula of sports science undergraduate courses to examine the feasibility of practical implementation of the specific proposal of International Council for Coaching Excellence standards for higher education Sport Coaching bachelor's degrees. The specific findings from this study indicate that Olympic sports are limited and heterogeneous as curriculum elements. Considering the data, it is reasonable to presume that these curricular components are not a priority. The results indicate there is no academic consensus about the inclusion of Olympic sports disciplines in curricula. Hence, higher-education institutions' courses for sports coaches should be linked with the educational programs of federations and sports associations. In some countries, coaches are usually instructed by governmental sporting organizations and official systems of sport, like national and international federations. On the other hand, the findings indicate the elevated frequency of academic disciplines focusing on the sport from diverse perspectives, such as biological, behavioral, social, cultural, administrative, scientific, and technological standpoints. Presumably, the

results from this study suggest that the existing higher-education sports science curriculum might be redesigned to adjust to the Sport Coaching Bachelor's Degree Standards.

There are relevant limitations in this study. Initially, the research included a specific group of higher-education institutions mentioned in international education rankings. The chosen sample does not represent sports science courses in general. Second, only the curricula available in English on the institutions' official websites were examined. Some specific information might be missing on the websites. The sample made by disciplines with the term sport in the title represents another study limitation, as expressions such as training or athlete were not included in the selected disciplines. Therefore, proper caution should be taken when interpreting the results. Consequently, the possible generalization of this study to other academic institutions is restricted. On the other hand, such limitations may suggest further research on the theme. Future studies may aim to expand on this research in distinct countries, other languages, and diverse profiles of higher-education institutions. Moreover, a curriculum is composed of several aspects. Further investigations may compare specific groups of curricular components.

Notably, research on coach education involves a broad spectrum of influential factors, like objectives, content, teaching methods, and evaluation systems, among many other elements. Therefore, accumulating accurate knowledge in this area involves scientific investigation in several aspects. Finally, it is necessary to verify whether the difficulties experienced in the education of coaches are specific problems of the field or if these difficulties are general problems of education in other professional areas as well.

# **AI Acknowledgment**

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## **Conflict of Interest**

The author declares that there is no conflict of interest.

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