





## UNIVERSITY-BASED COACH EDUCATION: THE COMPLEXITY OF THE APPROPRIATION AND DEVELOPMENT OF LEARNER-CENTERED TEACHING

*FORMAÇÃO DE TREINADORES(AS) NO CONTEXTO UNIVERSITÁRIO: A COMPLEXIDADE DA APROPRIAÇÃO E DO DESENVOLVIMENTO DO ENSINO CENTRADO NO(A) APRENDIZ* 

*FORMACIÓN DE ENTRENADORES(AS) EN LA UNIVERSIDAD: LA COMPLEJIDAD DE LA APROPIACIÓN Y DESARROLLO DE LA ENSEÑANZA CENTRADA EN EL(LA) APRENDIZ* 

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**Abstract:** The aim of this study was to investigate the initial development of learner-centered teaching (LCT) in the “Sports Coach” course, from the Sports Science program at the University of Campinas. Following a qualitative approach and action research procedures, we present the planning, implementation, and evaluation of the LCT in the course by the program and institutional plan, lesson plans, and logbook; the professors’ perspective through critical-reflective conversations and logbook entries; the opinions of the student-coaches by questionnaires and focus group. We used the thematic analysis technique. The LCT was shown to be complex, especially due to the appropriation of principles and development as an approach. The student-coaches perceived an approximation of the course to the practical reality of the coach, contributing to motivation and significant learning. We emphasize the need to train professors in LCT and the approximation of the role of coach developers in coach education at the university.

**Keywords:** Higher Education. Sport Sciences. Professional Education.

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## 1 INTRODUCTION<sup>1</sup>

Coach education in the formal context concerns learning and qualification for professional practice, in institutionalized environments, such as universities, which promote education through a system with a curricular proposal (NELSON; CUSHION; POTRAC, 2006). In Brazil, the curriculum of Bachelor's Degree programs in Physical Education (PE), which includes basic knowledge, training knowledge, and internships (MILISTETD *et al.*, 2014), meets international guidelines and those of courses from other countries for coach education (GANO-OVERWAY; DIEFFENBACH, 2019; INTERNATIONAL COUNCIL FOR COACHING EXCELLENCE, 2016). However, these programs are more generalist than specialized (MILISTETD *et al.*, 2014) and students who want to become coaches perceive an excess of theoretical classes, the lack of a relationship between theory and practice, and the superficiality of the content covered (MILISTETD *et al.*, 2018a).

In these PE programs, there is a tendency to adopt a traditional teaching approach, in which the teacher, not the learner, is the center of the teaching-learning process (MILISTETD *et al.*, 2018b). This has been criticized in studies regarding coach education in different countries (CHESTERFIELD; POTRAC; JONES, 2010; MESQUITA *et al.*, 2014; PIGGOTT, 2012). In this scenario, student coaches have noticed a low impact of university programs on their learning and professional practice (MORGAN *et al.*, 2013; NELSON; CUSHION; POTRAC, 2013).

A pedagogical curriculum aims to define educational issues that include but are not restricted to: pedagogical action plans, learning content, structuring of the teaching program, and students' profile, aiming at developing and training people (JONNAERT; DEFISE, 2010). The teaching approach is related to the concept of teaching-learning and the teacher's practice. Thus, the curriculum also translates into the teaching approach and teaching practice, the latter being a "social practice, historically constructed, which transforms subjects through the knowledge that is being constituted, at the same time that knowledge is transformed by the subjects of this practice" (FRANCO, 2009, p.13, free translation). According to the aforementioned concepts and the criticisms aimed at coach education programs, generalist curricula, with an excess of theoretical classes and guided by a traditional approach, do not seem to favor coach education in the university.

Authors have suggested that universities adopt a learner-centered teaching (LCT) perspective for educating coaches (REDDAN; MCNALLY; CHIPPERFIELD, 2016; TRUDEL; MILISTETD; CULVER, 2020). LCT is a constructivist perspective, based on the "Learning Paradigm," collaboratively built between the teacher and the learner (BARR; TAGG, 1995). One of its premises is that "learners develop knowledge instead of receiving it and the development act depends on the prior knowledge and experience that the learner brings to the task" (CULLEN; HARRIS; HILL, 2012, p. 35,

<sup>1</sup>The article was written based on SANTOS, Yura Yuka Sato dos. **Formação de treinadores(as) e o ensino centrado no aprendiz:** uma pesquisa-ação no curso de bacharelado em Ciências do Esporte da UNICAMP [Coach education and learner-centered teaching: action research in the UNICAMP Bachelor's Degree in Sport Sciences]. 2021. 307p. Dissertation (PhD in Physical Education) — School of Physical Education, University of Campinas, Campinas, 2021. Available from: <https://repositorio.unicamp.br/acervo/detalhe/1248292>. Access on: July 17, 2023.

free translation). The teacher's role is to facilitate learning and, based on this, they must encourage learners to take responsibility for the learning process, encouraging collaboration and stimulating reflection on "what" and "how" learning occurs (WEIMER, 2013).

In the Brazilian context, Milistetd *et al.* (2018b) found that there are indications in institutional documents that the Bachelor's Degree in PE should be based on the LCT principles; however, the implementation is still flawed. In order to fill this gap, Milistetd *et al.* (2019a) began a process of developing the LCT in a PE program: the student-coaches were able to expand their understanding of their role as coaches and of sports training. Despite the advances, empirical support for the development of LCT in university programs is still incipient (TRUDEL; MILISTETD; CULVER, 2020).

In Brazil, there are only two bachelor's degree programs in Sports/Sport Sciences (VITÓRIO; YAMANAKA; MAZZEI, 2019). One of them is offered by the University of Campinas (UNICAMP), whose objectives are to train coaches with the skill to carry out sport training in different contexts, and most students have a stated intention to become coaches (UNICAMP, 2018). In 2015, the "Sport Coach" (SC) course was included in the program catalog. Thus, this is an important scenario to investigate the potential of the LCT in the education of coaches in the university context. The objective of this study was to investigate the initial development of the LCT in the SC course of the Sport Sciences program at UNICAMP, considering the perspective of student-coaches and professors about the process.

## 2 METHODS

### 2.1 RESEARCH DESIGN

Starting from the participatory paradigm (LINCOLN; LYNHAM; GUBA, 2018), which delimits the criteria of ontology, epistemology, and methodology, this study followed a qualitative approach (CRESWELL, 2014) and action research procedures, and adopted the cooperative research inquiry process, in which researched subjects and researchers are all participants (STRINGER, 2007). The planning, implementation, and evaluation actions (TRIPP, 2005) were chosen for the development of the LCT in the SC course, that is, the diagnosis of these processes in collaboration with the student-coaches culminated in new educational actions. According to Tripp (2005), reflection is essential in the course of all action research and, therefore, it is not understood as a distinct phase in the cycle. Understanding that the cycles are iterative and result from the research, each stage is presented in the "Results and Discussions" section.

### 2.2 RESEARCH CONTEXT

The SC has a course load of 60 hours, distributed over four hours/week (15 total classes), with two hours of in-person classes and two hours of activities managed by the student-coaches themselves (such as reading, portfolio development, discussions with peers, etc.). There are 40 vacancies, prioritizing those who attend at least the 5th semester (third year of the program).

## 2.3 PARTICIPANTS

### 2.3.1 Student-coaches

All 36 student-coaches enrolled in the SC course in 2018 participated (11 women, aged 21.14 years  $\pm$  0.69, eight with experience in technical committees; 25 men, aged 21.13 years  $\pm$  1.35, 14 with experience in technical committees); they were attending between the 5th and 9th semesters; they had sports experiences as athletes/practitioners in at least one sport; 33 stated their intention to become coaches, two reported intending to become sports managers, and one did not know it.

From this group, eight student-coaches voluntarily participated in the focus group, guaranteeing gender heterogeneity and experiences in technical sports committees (Table 1). Heterogeneity portrays diversity in the context and conditions of the investigated questions (HENNINK, 2014). To guarantee the confidentiality of their identities, pseudonyms were used.

**Table 1** - Characterization of the student-coaches who participated in the focus group.

NAME	AGE	ATTENDED SEMESTER	EXPERIENCE IN TECHNICAL COMMITTEE
Cláudio	20 years	5th	No
Daniel	20 years	5th	Soccer High performance
Francisco	21 years	7th	Futsal; soccer Participation
João	20 years	5th	Beach volleyball; futsal Participation
Juliana	21 years	7th	No
Micael	26 years	7th	Volleyball; artistic gymnastics Participation
Rafael	20 years	5th	No
Roberta	21 years	7th	No

Source: prepared by the authors.

### 2.3.2 Professors and assistants

The research was conducted by the researcher and the professor responsible for the course. The researcher, basketball coach, and Ph.D. student in PE from UNICAMP, was also an assistant professor and will be thus treated in this article. She was part of the first class of the Sport Sciences program and master's degree at the same university. In 2017, she became an assistant in the SC course and, in 2018, she developed the action research in a collaborative process with the professor.

The professor has been working at UNICAMP since 2014, where she carried out research on coach education. She was certified as a coach developer by the Nippon Coach Developer Academy (NCDA). In this study, the professor assumed the role of a critical friend of the assistant professor, having several critical and reflective conversations throughout the stages of the action research. A critical friend is a

person who stimulates reflection and offers constructive criticism, in order to help the researcher discover elements of her practice that she may not perceive on her own (ANDREW; RICHARDS; RESSLER, 2016).

The course also had two teaching assistants, both graduated from the Sport Sciences program, who attended the SC course and were taking their master's degree at the same institution.

## 2.4 PROCEDURES FOR DATA COLLECTION

As primary sources, the perspective of the student-coaches was obtained from: (1) open-ended questionnaires applied in the classroom the week following their completion, focusing on opinions about the workshops and the visit for field observation; (2) a focus group, held four months after the end of the course, focusing on opinions about learner-centered teaching actions (see Charts 1 and 2). The focus group was recorded in audio and video (69 minutes). There was no critical observer, making this a gap in this study. These data were formally analyzed using a technique described in the next section.

Secondary sources included: 1) institutional program and lesson plan; 2) critical-reflective conversations between the researcher (assistant professor) and the professor, with logbook records; 3) the perspective of the student-coaches using the following methods: i) expectation regarding the course by an open-ended questionnaire; ii) in the last week, the student-coaches were invited to describe their perceptions about the course and teaching behaviors; iii) to carry out a self-assessment. These data were sources of feedback for the action research stages. However, they did not undergo an analysis technique.

The collection was approved by the UNICAMP Research Ethics Committee and all participants agreed to participate by signing an Informed Consent Form.

### 2.4.1 Data analysis

The thematic analysis technique was employed in an inductive-deductive way, following the phases proposed by Braun, Clarke, and Weate (2016). In the first phase, the researcher did the verbatim transcription of the focus group (20 pages, A4 sheet, Times New Roman font, size 12, single spacing), and wrote all the answers to the questionnaires in a .docx document (120 pages, the same pattern as the focus group). This process helped familiarize the researcher with the data. The second phase involved the rereading of all the data and, using the Nvivo 11 software, the initial coding was generated inductively, with a semantic focus; the third phase consisted of the identification of the topics in an inductive way with a latent focus on the content, that is, in the search for patterns and their meanings; the fourth phase consisted of reviewing the topics in which some of them were grouped, excluded, and/or renamed; in the fifth phase, the topics were defined and grouped deductively at a latent level, based on the Weimer's (2013) five dimensions of LCT; the sixth phase involved an interactive process between the preparation of the map with the topics

and the selection of citations for the production of the report with results related to the evaluation of the LCT from the perspective of the student-coaches.

#### 2.4.2 Qualitative rigor

Based on a relativistic approach (BURKE, 2016), the authors followed the processes of (1) internal coherence, by different sources of information on action research, and external coherence, by comparing the results with the LCT theory; (2) credibility, based on the verification of the transcript of the focus group by the participants, as well as on the researcher's experience in the investigated context and interaction with the student-coaches on the university campus; (3) transparency, based on the professor's performance as a critical friend of the researcher, holding critical-reflective conversations throughout the action research, and the definition of topics and subtopics, starting with the researcher's analysis and, later, through a discussion with the professor for the final interpretations.

### 3 RESULTS AND DISCUSSIONS

Considering the stages of the action research, we first present the planning and implementation of the LCT in the course and then the evaluation, addressing the perspective of the student-coaches.

#### 3.1 PLANNING AND IMPLEMENTATION OF LCT

In the first critical-reflective conversation, we planned actions that reflected the LCT (Chart 1), which were supported by the supporting literature on the NCDA's Academy of Coaches' Educators<sup>2</sup>, guided by the five dimensions of Weimer (2013).

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<sup>2</sup> The material was exclusively accessible to the educators of coaches. However, on the NCDA website (<https://www.ncda.tokyo/aboutncda>) and in the studies by Callary *et al.* (2020) and Galatti, Santos, and Korsakas (2019), it is possible to obtain some information about the description of the program.

Chart 1 - LCT actions in the SC course in 2018.

<b>THE ROLE OF PROFESSORS AND ASSISTANTS</b>
<ul style="list-style-type: none"> <li>• Facilitation of the teaching-learning process. The activities focused on active strategies such as problem-based learning, discussions, micro-coaching, and reflective activities. This does not mean that there was no expository class, but that it was used at specific times, as an explanation of concepts;</li> <li>• The assistant professor and assistants were available at agreed times to answer questions, and provide feedback and support for guided activities.</li> </ul>
<b>THE FUNCTION OF CONTENT</b>
<ul style="list-style-type: none"> <li>• To access the previous knowledge and experience of the student-coaches, seeking to make the content meaningful, we invited them to reflect and describe their expectations in relation to the course and sports experiences, through a "timeline," together with an essay about their career both as athletes/practitioners and their experiences with internships in technical committees.</li> </ul>
<b>THE BALANCE OF POWER</b>
<ul style="list-style-type: none"> <li>• We planned four workshops relating theory and practice whose topics were chosen in the first module by the student-coaches themselves, based on discussion and self-assessment in relation to the knowledge and competencies for the role of the coach that the student-coaches felt the need to improve;</li> <li>• Student-coaches were invited to describe their perceptions about workshops, field observation, and courses in general, including teaching behavior.</li> </ul>
<b>THE RESPONSIBILITY FOR LEARNING</b>
<ul style="list-style-type: none"> <li>• Of the four hours per week, two were reserved for independent activities, and these credits were under "Supervision". The objective was to guarantee an hour in the weekly schedule and to facilitate the process of autonomous research and studies, considering that the course syllabus is generally dense (up to 34 hours/week).</li> </ul>
<b>THE PURPOSES AND PROCESSES OF EVALUATION</b>
<ul style="list-style-type: none"> <li>• Development of an individual portfolio, containing: (a) sports modality, context, category, number of athletes and competitions of choice; (b) professional résumé; (c) what it means to be a coach and their role in the development of the practitioners/athletes; (d) philosophy as a coach (a); (e) three subsequent training sessions, pointing out the phase of the season and the interventions in each session; (f) descriptive letter of the expectations, policy, and rules of the sports program, to be signed by the athletes and their families, in cases involving children's or teenagers' sports, or a code of conduct letter, to be signed by the athletes, for adult sports; (g) a description of how they would like to be remembered by the athletes. The student-coaches received educational feedback throughout the process - from the professor and from an external evaluator, specialist in sports pedagogy, and/or sports coach.</li> <li>• At the end of the semester, the student-coaches carried out a self-assessment, focusing on their knowledge and skills that were well-developed and those that needed improvement.</li> </ul>

Source: prepared by the authors.

2). We also developed the program and teaching plan for the 2018 course (Chart

**Chart 2** - Program and development plan for the SC course in the year 2018.

<b>General objective:</b> Understand the functions of the sports coach, highlighting skills and abilities in the management of people/athletes both in individual and collective modalities; identify leadership profiles based on the theories that discuss the topic and investigate successful coaches in the different sports modalities.		
<b>Module</b>	<b>Content</b>	<b>Evaluation</b>
<b>1. Developing a common knowledge basis</b> <u>4 weeks:</u> - 8 in-person hours + 8 hours of studies and extracurricular activities - Professor as responsible for conducting all classes	<ul style="list-style-type: none"> <li>● Coaches' learning throughout life;</li> <li>● Professional, interpersonal, and intrapersonal knowledge;</li> <li>● Functions and competencies for the coach's performance;</li> <li>● Characteristics of the different contexts and the performance of the coach.</li> </ul>	Institutional regulations: <ul style="list-style-type: none"> <li>● Minimum attendance of 75%</li> <li>● Minimum grade equal to or greater than 5.0</li> </ul> Course regulations: <ul style="list-style-type: none"> <li>● Coach's portfolio (grade 1) – grade given by the professor and external evaluator;</li> <li>● Study seminars, classroom activities, independent study, practical study, participation, and involvement in the course (grade 2);</li> </ul> The final grade is the average between grade 1 (x2) and grade 2.
<b>2. Development of knowledge and skills</b> <u>12 weeks:</u> - 16 in-person hours + 8 hours of field observation + 20 hours of studies and extracurricular activities - Professor responsible for conducting 8 classes and assisting in 4 classes	<ul style="list-style-type: none"> <li>● Leadership profiles;</li> <li>● Workshops based on the needs of the student-coaches:               <ol style="list-style-type: none"> <li>1) communicate effectively and define success criteria for athletes and practitioners;</li> <li>2) professional knowledge;</li> <li>3) coach philosophy; 4) leadership.</li> </ol> </li> <li>● Portfolio development.</li> </ul>	

Source: prepared by the authors.

According to Milistetd *et al.* (2019b), planning is one of the key aspects for professors to move toward the LCT approach in university-based coach education programs. This is an important moment to define the general objective, the development plan, and the dimensions and components of the LCT in the course. Our planning was an important moment of reflection, especially as we reviewed the 2017 plan and rethought the LCT actions for 2018 (see Chart 1), based on a new objective of the course (see Chart 2).

Another key aspect was the first meeting, a time to learn about the characteristics, sports trajectories, and expectations of the student-coaches (MILISTETD *et al.*, 2019b). We obtained this information as secondary sources (see "Procedures for Data Collection"), as they could influence the function of the contents and the teaching-learning strategies. For example, when identifying the different sports experiences, we defined that in the workshop on "professional knowledge" (Chart 2), it would be important to have discussion groups with student-coaches with and without experience in technical committees, in order to provide the exchange of knowledge between them.

It is also worth presenting and discussing the planning and schedule of the course, in an open way to receive suggestions (MILISTETD *et al.*, 2019b), as well as to renegotiate any necessary changes throughout the semester — after all, a learner-centered environment favors the presentation of opinions and needs of the learners (BLUMBERG, 2009; WEIMER, 2013). Taking this into consideration, we kept the



teaching plan open to modifications, as long as they were relevant to learning and respecting the program. One of the classes in the schedule was negotiated, based on the questions raised by the student-coaches when preparing the portfolio.

One of the difficulties in implementing the workshops was to encourage the engagement of all student-coaches:

As for the practice, some groups were more attentive and proactive. Others [were] less so [...] While some quickly organized the space, explained and demonstrated it more appropriately, others were less confident, interested, or less experienced in leading/organizing/managing. (Logbook, 1<sup>st</sup> workshop).

Faced with the diversity of previous knowledge and experiences, as well as learning styles and autonomy, we understand that in order to make the content meaningful and motivating, as recommended by literature (PAQUETTE; TRUDEL, 2018), it would be important to use different teaching strategies (MCCOMBS; VAKILI, 2005). Hence, we incorporated a variety of active strategies, as shown in subsection 3.2.1.1.1.

Finally, the last aspect mentioned by Milistetd *et al.* (2019b) in the shift to the teaching-learning perspective, is related to the evaluation of the development of LCT, especially focused on the aspects established in the planning, a process that we present in the next section.

These key aspects serve as a basis for the professors' action, who understand that the constructivist approach meets their philosophical assumptions and that they seek to develop learner-centered teaching actions in coach education programs. However, as Paquette and Trudel (2018, p.173, free translation) warn, "the subtleties of approaches centered on the student based on constructivism are complex," therefore, the professors' reflections on pedagogy, the context, and the characteristics of the learners must transcend the recommendations.

## 3.2 LCT EVALUATION

### 3.2.1 Student coach perspective

In Chart 3 we present the topics and subtopics. For each subtopic, we present the discussions subsequently.

**Chart 3** - Topics and subtopics that emerged from the opinions of the student-coaches.

TOPICS: LCT DIMENSIONS	SUBTOPICS
The role of the professors and assistants	<ul style="list-style-type: none"> <li>• Use of active teaching strategies</li> <li>• Importance of organizing and conducting classes</li> </ul>
The balance of power	<ul style="list-style-type: none"> <li>• Opportunity to determine content and openness to suggestions</li> </ul>
The function of content	<ul style="list-style-type: none"> <li>• Articulation of content with previous experiences and knowledge and with future perspectives</li> <li>• Understanding the complexity of the coach's role</li> <li>• Content applied in practice</li> </ul>
The responsibility for learning	<ul style="list-style-type: none"> <li>• Reflection on "my coaching self": self-assessment as a skill for the present and future</li> </ul>
The purposes and processes of the evaluation	<ul style="list-style-type: none"> <li>• Portfolio in association with learning</li> </ul>

### 3.2.1.1 The role of the professors and assistants

#### 3.2.1.1.1 Use of active teaching strategies

Student-coaches reported that active teaching strategies were important for learning. Micael mentioned that discussions with classmates enabled the exchange of knowledge based on "different visions of people who came from different cultures and had different beliefs" (Focus Group), "according to the experience and level of understanding and interpretation of classmates" (Questionnaire 3).

Regarding practical experiences, Rosana commented that the teaching experience is a "possibility of learning one of the coach's skills in practice" (Questionnaire 1), and they were able to improve "a lot in the application of the activity and in the feedback given to the 'athletes' (who were their classmates themselves)" (Marina – Questionnaire 1). Ana commented that "the experiences shared in the round-table discussion conveyed more confidence" (Questionnaire 1), because "there didn't seem to be right and wrong" (Fabiano – Questionnaire 2).

Lastly, the field observation was also remarkable, especially because of the opportunity to learn about the routine of the coaches of a well-structured sports program. "It was a great experience to see the routine and structure of an excellent sports program" (Yuri) and "to see the successful coaches and understand how they work" (Gian). For Danilo, "the coolest thing was the chance to see high-performance training, which we have little chance of [seeing] during the course" (Questionnaire 5).

The student-coaches highlighted differences between active teaching strategies compared to the more passive ones:

Francisco: "An expository class might have the teacher talking and everyone shaking their heads like 'oh, that's ok' and, like, it wouldn't stimulate this discussion, you know?"

Micael: "Yeah, if it was an expository class, none of the reflections, no opinion would have been exposed." (Focus group)

The use of active strategies that stimulate reflection by student-coaches has been a trend in university programs, differentiating them from those offered by

sports confederations/federations (CIAMPOLINI *et al.*, 2019). Pedagogical practices that involve their very classmates and stimulate experimentation, discussion, and reflection can contribute to more meaningful learning (MILISTETD *et al.*, 2017), and influence the construction of personal and professional identity, as this is a process that involves opinions and beliefs developed throughout life, including through socialization (RODRIGUES; PAES; SOUZA NETO, 2018).

Field observation is also important in initial coach education, considering that observing the pedagogical practice of experienced coaches can serve as a reference for developing the coaching vision of the observer (RAMOS *et al.*, 2011). However, the coach's performance is contextual, and being more experienced does not necessarily mean being more competent or effective (TRUDEL; GILBERT; RODRIGUE, 2016). It is important that coach education transcends the reproductive and behavioral approach, in favor of developing the critical-reflective capacity of future coaches (MESQUITA, 2018).

We understand that the adopted strategies contributed to the development of a collaborative environment. According to Weimer (2013), in environments that are more focused on the learner, the teaching role prioritizes the structuring of actions so that students learn from each other and from different experiences, in a process of collaboration to develop knowledge.

#### 3.2.1.1.2 Importance of organizing and conducting classes

The organization and conduct of the classes centered on the learners were important in making the activities interesting:

Francisco: "It was one of the most interesting subjects, precisely because it had very well-organized activities [...]."

Juliana: "Maybe when professors don't have this methodology, they don't feel so sure to change, to get out of their comfort zone. And since it was already a proposal to work on this practice, perhaps they (professors and assistants) had more assurance, more confidence, [...] it was key to achieve this discussion."

Rafael: "Another positive aspect was the number of professors because when divided into small groups, they were always there helping, and assisting in the discussions." (Focus group)

Teaching strategies must be aligned with learning objectives for a more meaningful process (WEIMER, 2013). One of the difficulties is the demand for time to develop an LCT-based teaching plan (MILISTETD *et al.*, 2019b). In addition, not having control over all processes, as the development of activities often depends on the actions of the learners, can generate insecurity in the professors (WEIMER, 2013). In our case, the professor had experience as a coach developer and was certified by a program that valued the constructivist principles of learning. Having coach developers who are in contact with the scientific literature can facilitate the alignment between teaching strategies and the trends discussed in the scientific community (CIAMPOLINI *et al.*, 2019).

One of the aspects that must be considered when adopting the LCT is the number of enrolled students (BLUMBERG, 2009). This was a course with 36 student-coaches. In other contexts, different strategies may be necessary to stimulate discussion such as preparing a script of questions to guide the group, or encouraging learners to lead the discussions (ROBERTS; RYRIE, 2014).

### 3.2.1.2 The balance of power

#### 3.2.1.2.1 Opportunity to determine content and openness to suggestions

The opportunity to choose workshop topics (see Chart 1) was appreciated by the student-coaches.

João: “[...] at the beginning of the course they (professors and assistants) asked what topics we would like to see covered and I think it was really nice.”

Francisco: “It met the needs of the students themselves.” [participants nod in agreement]. (Focus group)

Most of the suggestions were expressed in the focus group. Pietro took advantage of the final questionnaire to comment that “working as a group and discussing the main points raised is a practice that can be explored more often.” (Questionnaire 2). The other suggestions consisted of changes in some activities. For instance, one of the group seminars was on leadership, based on a book chapter that related theories to the behaviors of soccer coach José Mourinho. For Micael, studying based on the behaviors of a coach with whom he had little affinity was “discouraging.” His suggestion was that they could choose a coach with whom they had an affinity or another article/chapter from a book.

Learner-centered professors provide opportunities for control and personal choice (MCCOMBS; VAKILI, 2005). However, learners may feel confused when deciding what to select (GORDON, 2014), as a result of fear and/or lack of experience to deal with the LCT perspective (BLUMBERG, 2009). Thus, the stimulus to balance may need to be gradual (SALLES, 2019). It is worth mentioning that the LCT not only represents what the learners want, but also what they need to learn (BLUMBERG, 2009). Considering that they were young people in the process of completing their courses, it was important to encourage critical thinking about the specific knowledge and skills of the sports coach that they felt they needed to improve.

The openness to the opinions of learners about the quality of the learning experience is also consistent with the LCT (WEIMER, 2013). This is a way of balancing power in the classroom, which can contribute to motivation, confidence, and enthusiasm for learning (WOHLFARTH *et al.*, 2008). However, the opportunities systematically planned during the course for student-coaches to express their perspectives were restricted. It is important that learners have the opportunity to give their opinions during the course, in order to alter the teaching plan, within the possibilities, and to stimulate motivation to learn. After all, motivation influences “what” and “how much is learned” (AMERICAN PSYCHOLOGICAL ASSOCIATION, 1997).

### 3.2.1.3 The function of content

#### 3.2.1.3.1 Articulation of content with previous experiences and knowledge and with future perspectives

The student-coaches commented on the relationships they established between the contents of the course and the situations they experienced, which seems to have contributed to the understanding of the importance of acting as a coach. João related the contents to a lecture he attended: “I think the course dealt a lot with the interpersonal, intrapersonal relationship [...]. There was a lecture by the [elite coach] last year when he talked about that a lot” (Focus Group). Rafael reported a conversation with a former coach:

He said that the best player was doing very well and suddenly started to do very badly [...]. So, like, the coach’s role isn’t like ‘damn, he’s an athlete and he has to play and that’s it.’ No, there’s a human being there. I think that was the main learning I acquired from the course. (Focus group)

The relationship between content and experiences in the course with future prospects of work was also important. Among the experiences, the student-coaches were able to talk to experienced trainers. Ana reported that “seeing that professionals in the area are seeking constant development and improvement with scientific bases is motivating.” (Questionnaire 5). Marina stated:

Having such close contact with people who have experienced many things that we will still go through and see that these coaches, even though they are people of such a high level, still have things to improve and to see that they live in constant evolution, makes us even closer to these coaches [...]. It contributes enormously to our future as coaches. (Questionnaire 5)

Learning complex subjects is most effective when it comes to an intentional process of constructing meaning from information and experiences (AMERICAN PSYCHOLOGICAL ASSOCIATION, 1997). The articulation with knowledge and experience must also provide an understanding of the applicability of the content, because if the coaches do not see the function of the content for practical action, they will hardly engage in a significant learning process (TRUDEL; CULVER; WERTHNER, 2013).

In the study by Rodrigues, Paes and Souza Neto (2018), coaches who recognized the relevance of socialized knowledge in the PE course began to seek new references to qualify themselves professionally, developing a mobility identity. If the search for “who I want to be” promotes professional development (MARCELO, 2009) and the construction of the coach’s identity is constituted by socialization (RODRIGUES; PAES; SOUZA NETO, 2018), the articulation of content in initial coach education must also stimulate future perspectives.

#### 3.2.1.3.2 Understanding the complexity of the coach’s role

The student-coaches commented that they developed a broad understanding of the different factors that influence the coach’s professional performance. As Guilherme commented, “Sport is a complex system [...] and the coach must think of

many actions” (Questionnaire 3). “Each one starts from a different point or has had different experiences,” but there are common functions, such as “leadership, good communication, organization” (Juliana) – (Focus group).

Among the factors mentioned are professional, interpersonal, and intrapersonal aspects: “Despite identifying other attributes as predominant for being a good leader, it was agreed that interpersonal characteristics are the basis for leading” (Tales), but “there is no ideal profile of a leader” (Lucas), but rather “different types of leadership, making it easier to understand that each coach has their own style of dealing with their athletes and can also adapt to the environment in which they are inserted.” (Claudio) — (Questionnaire 4).

I discussed a bit with a friend the issue of creating a game model together with the team, you know? Not getting there and imposing it [...], sometimes they can't even assimilate what that is, so it's about creating it with them. (Francisco — Focus Group)

According to Côté and Gilbert (2009, p. 316, free translation), excellent coaches are able to “consistently apply professional, interpersonal and intrapersonal knowledge in an integrated way to improve the competence, confidence, connection, and character of athletes in specific training contexts.” Professional knowledge is linked to the specific aspects of sports, interpersonal knowledge concerns social relations, while intrapersonal knowledge is linked to the capacity for introspection and reflection (CÔTÉ; GILBERT, 2009). Given the complex and uncertain nature of the coach's role (JONES, 2006), the development of a holistic understanding of the role of the coach becomes important in the formation of student-coaches (MILISTETD *et al.*, 2017).

### 3.2.1.3.3 Content applied in practice

Some student-coaches reported that they modified their practice during the internship based on the application of content seen in the course. Micael commented: “I've never been an organized person in my life,” but when “organizing the training sessions that we created ourselves, I started writing it down in a notebook, spreadsheets and using scouts.” (Focus group). Francisco worked as an intern on a participation team and shared an experience:

I was demanding as if it were high performance. After the course, I stopped and thought: ‘Well, this is participation!’ [...] I completely changed the focus and the team itself grew a lot after I changed the focus, you know? I think this greatly influenced the people to have ideas about the game, and to like entering the field. (Focus group)

The experiences reported go against the lack of relationship between theoretical content and the reality of practical intervention, one of the criticisms in the Bachelor's degree in PE (MILISTETD *et al.*, 2018a). Francisco's experience reinforces the importance of student-coaches facing real problems, making mistakes, reflecting, learning, and trying again (CUSHION; ARMOUR; JONES, 2003). In this context, experiential learning, based on reflective practice and the effort to obtain meaning

from experience, plays an important role in professional development (MOON, 2004; WOODBURN, 2020).

### 3.2.1.4 The responsibility for learning

#### 3.2.1.4.1 Reflection on “myself as a coach”: self-assessment as a skill for the present and future

Learning about the trajectory of coaches visiting the field stimulated the self-assessment of the student-coaches in search of awareness about themselves as coaches and their philosophy, in addition to the understanding that it is a continuous process of development and learning.

“Having these experiences made me rethink my philosophy, my goal, my studies, and my career.” (Jessica — Questionnaire 5)

The visit provided me with the capacity to reflect on my college journey [...]. The round-table discussions with different coaches from different sports showed the need for continuous studies, even after completing college, the various characteristics that we can find in coaches, the forms/methods of managing a team, and the relationship that they must have with the athletes. It was these points that made me think about what I am like as a coach. (Juliana — Questionnaire 5)

It is important that coaches be encouraged to reflect and recognize their trajectory, values, and beliefs, so that they are able to be aware of their own philosophy (VAN MULLEM; BRUNNER, 2013). Each coach, imbued with their beliefs and values, develops the concept of their philosophy (VAN MULLEM; BRUNNER, 2013).

While the previous dimensions focus on the professor’s changes, responsibility for learning requires actions from the learners (WEIMER, 2013). The student-coaches of this course were young people who chose the SC course, motivated by the initial prospects of becoming coaches. This shows a certain capacity for autonomous learning and self-determination (BLASCHKE, 2012; STOSZKOWSKI; MCCARTHY, 2018). Nevertheless, keeping engaged in one subject for a semester, along with other mandatory subjects in the syllabus, plus extracurricular activities, can be challenging. This requires emotional maturity and awareness of the need to learn throughout life (STOSZKOWSKI; COLLINS, 2017; TRUDEL; CULVER; RICHARD, 2016).

### 3.2.1.5 The purposes and processes of evaluation

#### 3.2.1.5.1 Portfolio in association with learning

The portfolio was constituted as a formative assessment tool, with feedback as a key aspect in stimulating learning. Micael reported: “We had to organize the training sessions, according to the context [...] and it’s very positive, because you do it, then someone will look [at it] and give an opinion” (Focus group). João commented that the professor’s feedback was important, mainly because it stimulated coherence between philosophy and the interventions planned in the training sessions: “She (professor) demanded a lot from us, because we developed a philosophy and in the

training session we didn't have that [...]. A training session completely distant from your philosophy ends up running away from who you are" (Focus group).

Among the advantages of the portfolio is the opportunity to organize pedagogical content during preparation, develop critical thinking, and reformulate your learning objectives (NEVES; GUERREIRO; AZEVEDO, 2016; VILLAS BOAS, 2005). However, as there is no model, the portfolio can become an anxiety factor for the learners (PAQUETTE *et al.*, 2014). In our study, the student-coaches reported difficulties, leading us to include a class to help them. Teaching support can facilitate the process, guiding student-coaches to improve independent learning skills (BLUMBERG, 2009).

Professors/instructors can provide adequate feedback and guidance so that learners seek information relevant to their continuous learning (PAQUETTE *et al.*, 2014). Therefore, feedbacks are guiding elements of student evolution (WEIMER, 2013). In addition to feedback from evaluators and faculty, we could have included opportunities for peer review, in favor of the exchange of experiences, and the development of intellectual maturity and autonomy (BLUMBERG, 2009).

#### **4 FINAL CONSIDERATIONS: REFLECTIVE NOTES FROM THE PROFESSOR AND THE ASSISTANT**

In 2018, we began to align actions with the LCT approach, in a process that showed an approximation of education to the reality of the coach's intervention, contributing to more significant motivation and learning. We developed specific actions, perhaps more than a teaching philosophy. However, the change to the LCT may, in fact, begin with a series of strategies and techniques, and then become a pedagogical approach for the professor (WEIMER, 2013). This does not exempt the need for teachers/instructors to appropriate the principles of the LCT. On the contrary, transgression involves a deep understanding of the constructivist learning assumptions that guide this approach (PAQUETTE; TRUDEL, 2018).

Sometimes, the transgression can be complex, even contradictory (WOHLFARTH *et al.*, 2008). The same professor may have teaching practices centered on learners in one course and practices more focused on instruction in others (BLUMBERG, 2016). This is because the adoption of the LCT involves several factors and, therefore, having a course or a teaching program fully aligned with the LCT may be unrealistic (BLUMBERG, 2009).

In the final critical-reflective conversation, we defined some changes for the coming year: 1) rethink the objectives, considering the development of reflective capacity and contextual sensitivity of action, as intentional aspects of the pedagogical curriculum; 2) define specific objectives for each module, in line with the guidelines of the International Council for Coaching Excellence; 3) consistently develop an environment conducive to learning and open to suggestions/opinions from student-coaches throughout the course; 4) align the forms of assessment to encourage responsibility for learning by students-coaches.



Notably, this course represents 60 hours in the syllabus of a 3,525-hour course. A course that represents the first years of training for a career that can last for many more years. Other continuous development actions must be added so that student-coaches become lifelong learners, with critical and reflective skills, for a purposeful and quality professional performance.

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**Resumo:** O objetivo deste estudo foi investigar o desenvolvimento inicial do ensino centrado no(a) aprendiz (ECA) na disciplina “Treinador Desportivo”, do curso de Ciências do Esporte da Universidade Estadual de Campinas (UNICAMP). Seguindo uma abordagem qualitativa e procedimentos da pesquisa-ação, apresentamos o planejamento, implementação e avaliação do ECA na disciplina por meio do programa e plano institucional, planos de aula e diário de bordo; a perspectiva das docentes por conversas crítico-reflexivas e registros em diário de bordo; as opiniões de estudantes-treinadores(as) por questionários e grupo focal. Utilizamos a técnica de análise temática. O ECA se mostrou complexo, especialmente pela apropriação dos princípios e desenvolvimento enquanto abordagem. Os(as) estudantes-treinadores(as) perceberam uma aproximação da disciplina à realidade prática do(a) treinador(a), contribuindo com a motivação e aprendizagem significativa. Enfatizamos a necessidade de formação de docentes acerca do ECA e aproximação com o papel de formadores(as) de treinadores(as) na formação inicial universitária.

**Palavras-chave:** Ensino Superior. Ciências do Esporte. Formação Profissional.

**Resumen:** El objetivo de este estudio fue investigar el desarrollo inicial de la enseñanza centrada en el alumno (ECA) en la disciplina “Entrenador Deportivo” de la carrera de Ciencias del Deporte de la Universidad Estatal de Campinas. Siguiendo un enfoque cualitativo y utilizando procedimientos de investigación-acción, presentamos la planificación, implementación y evaluación del ECA en la disciplina a través del programa y plan institucional, los planes de lecciones y la bitácora. Abordamos la perspectiva de los docentes mediante conversaciones crítico-reflexivas y apuntes en la bitácora, así como las opiniones de los estudiantes-entrenadores a través de cuestionarios y grupos focales. Empleamos la técnica de análisis temático. El ECA resultó ser un enfoque complejo, especialmente en cuanto a la apropiación de principios y desarrollo. Los estudiantes-entrenadores percibieron una aproximación de la disciplina a la realidad práctica del entrenador, lo que contribuyó a la motivación y al aprendizaje significativo. Destacamos la necesidad de capacitar a los docentes en ECA y de abordar el papel de los formadores de entrenadores en la educación universitaria inicial.

**Palabras clave:** Educación Superior. Ciencias del Deporte. Formación Profesional.

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### CONFLICT OF INTEREST

The authors declare that there is no conflict of interest in this study.

### AUTHORS' CONTRIBUTIONS

**Yura Yuka Sato dos Santos:** Researcher responsible for the study design, having worked in the planning, implementation, and evaluation phases of action research. In addition, she was the main responsible for writing the article.

**Larissa Rafaela Galatti:** Critical friend of the researcher, having worked at all stages of the research. She was also the professor responsible for the course in which action research was developed. Finally, she reviewed and collaborated with the writing of the article.

**Diane Culver:** Co-supervisor researcher, having worked especially in the evaluation of the action research, playing a critical role in terms of the qualitative rigor of the research and advising on the possibilities of new interventions.

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### RESEARCH ETHICS

The research was approved by the Research Ethics Committee (CEP) of the University of Campinas, UNICAMP, protocol number 72311917.2.0000.5404

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### EDITORIAL RESPONSIBILITY

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