

SELF-DIRECTED LEARNING: A TRAINING MODEL FOR THE DEVELOPMENT OF PEDAGOGICAL SKILLS IN SPORTS OPERATORS

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Review paper

Abstract

In order to be able to act as a pedagogically competent professional, sports operators must develop those educational and critical-reflective skills that will allow them fully expressing the educational aspects embedded in the sports practice. This paper opens a first theoretical reflection on the possibility of applying one of the major models studied in the field of adult education, i.e. the self-directed learning, in order to promote the development of these skills and the integration with those technical-sports ones, leading to the necessary interdisciplinary relationship between the humanities and sports sciences.

Key words: sports professionals, training, andragogy, self-directed learning.

Introduction

The growing complexity and the economic, cultural and value crisis that has affected today's society has generated forms of vulnerability, fragility and disorientation, particularly among young people. Overcoming this complexity and coping with this crisis is only possible through the co-building of new horizons of meaning, multi-value responses and networking.

Educational agencies must once again become a significant reference point in order to represent the beacon that brightens up safe routes and supports the person in the choice of the appropriate one, in order to navigate the rough sea of complexity.

Among the educational agencies, in addition to school and family, all bodies involved in sports (sports clubs and associations, sports promotion bodies, etc.) should be included. They represent, in fact, instruments potentially capable of developing the psychosocial and physical dimensions of the person. For this educational potential to be realized, it is necessary that sports professionals in the school sector (physical education and motor science teachers), extracurricular sector (coaches, athletic trainers, managers) and those involved in the educational planning through sport, develop reflective educational and critical skills (Maulini, 2019, 2014, 2012, 2006; Maulini et al., 2018, 2016; Turan & Koç, 2018; Maulini & Migliorati, 2017; Isidori, 2017; 2009; Farnè, 2008; Coco 2014; Maulini & Ramos, 2013; Irwin, Hanton Kerwin, 2004; Knowles, Gilborne, Borrie & Nevill, 2001; Gilbert, Trudel, 2001). These are fundamental to operate as "pedagogically competent professionals, able to use sports practice as a possible space for an authentically educational relationship, and which are therefore able to convey values by applying pedagogical principles and educational strategies in the teaching of the technical and tactical aspects of sport" (Maulini, 2019, p.110). Professionals who know how to "mobilize, orchestrate, connect and harmonize the theoretical-practical knowledge,

typical of their sport of expertise, with interpersonal intrapersonal skills and with the use of educational strategies capable of promoting an integral development of the young person as an athlete and as a person, helping him/her conveying, outside the gym and the playing field, the skills acquired (life skill) and the values that will support him/her throughout his/her life" (Ibidem, p.108).

This is reiterated in many European documents (Commission of the European Communities, 2007; European Union, 2013; EU, 2008; European Commission, 2011a and b; Council of the European Union, 2015, 2014) and confirmed by studies on sports pedagogy, the outcomes of which demonstrate the necessity and the recognition of this educational need, and the willingness of the participants to carry out research studies (students of the Degree Courses in Motor Sciences, coaches, physical education teachers, heads of sports associations and clubs, sports managers, and so on) to a more pedagogical-oriented training, in particular by those working in the youth field (Turan & Koç, 2018; Cruz, 2017; Isidori, 2017, 2012, 2009; Maulini, 2019; Maulini et al. 2018; Maulini & Migliorati, 2017; Maulini et al. 2015; Coco 2014).

In order to provide an appropriate response to this need, it is desirable to ask ourselves which training model could be more effective (Lee, Cushion & Potrac, 2006), considering that both the university context and the training agencies, which deal with the qualifications and updating of sports operators (CONI, federations, EPS, and so on), act in the field of adult training. Andragogy, or better "the art and science of helping adults (or even better, human beings who are in the maturation process) to learn" (Knowles, 2002, p.73) consists (to quote Mezirow, 2003) in "an organized and sustained effort to assist adults to learn in a way that enhances their capability to function as self-directed learners" (p.194).

The scholars in this field, Rogers (1969), Kolb (1984) Tough (1971), and then Knowles (2014; 2002), Mezirow (2016, 2004, 2003), Boyatzis (1982, 2001, 2006), Quaglino (2004); Demetrio (2003), Ryan y Deci (2008, 2000, 1985), Pellerey (2004), recommend to start from the educational needs that the adult recognizes himself, pointing out how much they need to feel the usefulness of what they have learned, and thus to find in them a prompt effect on their daily work. They also need to feel that they are free, autonomous and responsible for own their learning process.

The same scholars reaffirm the importance of valuing the background and the cultural heritage that adults have built up over the years through previous experiences, and which represents their identity (Knowles, 2002, p.79). According to the andragogical model it represents "a lever for development, by drawing on the repertoire of lived experiences to establish bonds between theory and practice. The theoretical-practical interweaving and the sharing of experiences aim at prompting a conceptual change in order to question previously developed beliefs and values, and to encourage a shift towards new conceptions enriched by the theoretical contributions and experiences of others" (Berthiaume & Rege Colet, 2013, p.30).

Previous experiences are not exclusively those acquired in the professional field, even if they influence significantly the learning process for those involved in training courses aimed at developing skills for the professional sector in which they operate, or in which they would like to operate.

The research work carried out by Lemyre, Trudel & Durand-Bush (2007) has shown that previous experiences, such as players and assistant coaches, influence the learning process in the training of young coaches, and should therefore be taken into account.

The quantitative research work carried out by Maulini, Fraile Aranda and Cano González (2015) within the Degree Courses in Motor Sciences of the Universities in the Lazio Region (Italy), has shown that almost all third year students attach significant importance to the development of pedagogical skills; 84.4% of the sample claims to possess and have developed them through extra-university courses, mainly at experiential level. This last percentage is justified by the fact that 47% of the sample consisted of students already working in the sports sector and, in particular, 68% of them were engaged in the youth sector (41% with children and 27% with adolescents).

The recent research work carried out by Cruz (2017) shows that coaches acquire skills related to the training methodology mainly through mentoring and exchange of ideas with colleagues and physical education teachers, and some reported that their previous experience as athletes proved very useful. These research activities, in agreement with Meghnaqi (2005), confirm that expertise does not

only result from training acquired in formal contexts, but also from professional knowledge and from the know-how which, as Schön (1983) pointed out, should be valued through critical reflection and be anchored to scientific knowledge.

Knowles (2002), in this regard, would say that "the richest learning resources lie in the learners themselves" (p. 79). This is also important with respect to Dewey's principle of continuity, according to which "every experience gains something from the previous ones, and somehow changes the quality of the next ones". (Dewey, 2014, pp. 21-22).

Training should therefore develop, change and/or enrich the meaning structures that sports professionals possess, whether resulting from previous professional or personal experience; as Mezirow affirmed, "we learn to consolidate, extend or change the structures of our expectations, i.e. of our perspectives and meaning patterns. The learning activity aimed at modifying these meaning structures is substantially transformative" (Mezirow, 2003, p. 65). In order for a transformation process to take place, the experiences and meanings attributed to them will be the subject of reflection. This may involve questioning them; learners may perceive it as a threat and may experience a kind of disillusionment (Bandura, 2000; Lazarus, 1991). In fact, as the professional approaches a more professional state, he/she moves "from the analytical and detached thought of the subjects who consciously decompose their environment into recognizable elements and follows abstract rules, to an internalized competence, based on the accumulation of practical experiences and the unconscious recognition of new situations similar to lived situations" (Dreyfus & Dreyfus, 1992, p. 37).

The experienced sports professional has developed some intuition, a familiarity with stable situations. Intuition, understood as recognition, is only reliable if it occurs in "an environment that is regular enough to be predictable" (Kahneman, 2012, p.706). Intuition and habits can introduce prejudices when the situation resembles past experiences, but there may also be sufficient differences to break regularity (Salembier, 2002). Precisely when events that break stability occur, or when we find ourselves operating in contexts where there is no regularity, professionals experience the inadequacy of the solutions they had already inherited from their experience and find discontinuities, disorienting dilemmas, which force them to reflect on the premises of their actions, starting that transformative learning process "that generates changes in a reference framework¹through which we understand our experiences" (Mezirow, 2016, p.37).

¹A reference frame is a "perspective of meaning", a structure formed by basic assumptions and expectations through which we filter our impressions of the senses. It implies cognitive, affective and conative dimensions; it selectively shapes and delimits perception, cognition, feelings and inclinations, predisposing our intentions, our expectations,

Indeed, in the context in which sports professionals operate, and particularly in the youth sector, discontinuities are endemic. The crisis that has affected labor market, family and welfare, has led to significant social, cultural and economic changes, influencing significantly the social system, generating vulnerability and increasing complexity with new and diversified forms of disorientation and fragility in young people. As shown by the results of Maulini's research work (2019), such fragilities not only manifest themselves in sport, but the latter, according to the participants, represents a mirror (Fiore, 2004), an amplifier, a litmus test, capable of intercepting and revealing situations of social distress even in advance. These results (Maulini, 2019), together with those provided by another study on the same subject (Maulini & Migliorati, 2017), have led to the participants' recognition of the inadequacy of their reference frameworks, making them face disorienting dilemmas and recognize an educational need that is strictly linked to their being able to provide more appropriate responses to the educational needs of the age group they work with.

Sport operators have expressed the desire to acquire skills enabling them to improve educational communication and implement training strategies for individuals and groups, useful to convey values to their athletes by promoting the development of life skills and responsible behavioral models (Ibidem) by means of sports practice. Therefore, we are referring to intrapersonal and interpersonal skills and educational strategies aimed at conveying values through sport, to be integrated in the teaching of the technique and tactics of the sport they are dealing with, which will inevitably lead to the breaking of stability and the start of critical reflection.

Mezirow (2004) warns us about the fact that "adults are not always fully aware of their own interests" (p.19)", and adds that "these may also be distorted, inconsistent and antithetical with respect to the values chosen as reference points, actions and routine behavior". By referring to Freire (2002; 2004) he argues that, in order to achieve significant learning, it needs to raise awareness and consciousness. Knowles himself (2002) suggested that "the first task of the learning facilitator is to help learners become aware of their 'need to know'", and that this awareness is given "by real or simulated experiences in which learners discover by themselves the gap between where they currently are, and where they want to be" (p.77), thus, as Boyatzis (2006) would say, the discontinuity between the ideal self and the real self.

Consequently, it is necessary to implement a training model which is no longer merely theoretical, capable of developing the awareness of

our goals. The reference frames provide the context in which meaning is constructed, where we choose what and how a sensory experience should be interpreted and/or embraced; they are the result of more or less conscious ways of interpreting the experience". (Mezirow, 2016, p. 77).

the role of educators within sports operators, through experiences or simulations which "make it possible to replace or amplify real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a completely interactive way" (Gaba, 2004). This will lead to a discrepancy between where they currently are and where they would like/could get to, which will lead them to plan transformative forms of learning and intentional changes by means of a practical application that will allow them to experiment ways to integrate their past experiences and skills with the pedagogical ones, necessary to work in the youth sector.

This work intends to reflect on the possibility of applying one of the major models studied in the field of adult education, i.e. *self-directed learning*, for the development of pedagogical competences within sport operators.

Discussion

Self-directed learning for the development of pedagogical skills within sports operators

Developing pedagogical skills and integrating them with the technical skills of sports professionals implies that, between the latter and the pedagogue, a relationship of mutual learning is established, in which no one perceives to be other-directed but both share some responsibility for this process. This process aims at building a new way of implementing sports practice while respecting and recognizing each other's experiences and skills (Serra, 2001). Both will have to be open to exchange, to welcome and integrate their own and others' resources in order to overcome the existing gaps.

If this will allow sports professionals to work as sports educators, particularly in the youth sector, it will be an opportunity for pedagogues to start a "synergistic circularity" (Santomauro, 1981) between pedagogical theory and educational practice, which will enrich the theory of educating through sports. These aspects are typical of the self-directed learning model, which is defined as "a process in which individuals take the initiative, with or without the help of others, to diagnose their learning needs, formulate learning goals, identify resources for learning, select and implement learning strategies, and evaluate learning outcomes" (Knowles, 2014, p.49). Thus, in this training model, "the learner takes primary responsibility for the planning, implementation and evaluation of a learning program" (Brockert and Hiemstra, 1991, p.42). Cresson & Dean (2000) argued that self-directed learning is one of the most appropriate approaches to be employed in adult education, and a recent research work by Turan & Koç (2018) has highlighted the effectiveness of this approach with students from the Department of Physical Education and Sports at the University of Erciyes, for the development of critical thinking and self-efficacy.

The theoretical contributions on self-directed learning are manifold and cover different approaches (Merriam & Caffarella, 1999, 1991), focusing on the experience, roles and responsibilities of the adult learner.

In his theory, Knox (1980) used competence as a unifying concept to correlate the acquisition of knowledge, skills and attitudes with performance improvement. This motivates and encourages adults to engage in and carry on learning activities, and to take responsibility for them. To be effective, learning must be transactional and evolutionary; moreover, it must provide for a constant assessment of discrepancies between current and desired competence, necessary to assess needs, set goals and timelines, organize learning activities and evaluate progress. Experience, learning effectiveness, sense of competence and commitment to improving the competence itself influence the adult's search for meaning, who plans the acquisition of new learning and the reorganization of that previously acquired.

Kolb, in 1984, developed his Theory of Learning through Experience, in which he defined learning as the process through which knowledge is created by transforming experience. According to him, the process of learning from experience, in order to be effective, should be developed in four phases: concrete experience, reflective observation, abstract conceptualization, and active experimentation. Individual learning styles are defined by the learning phase to which the subject belongs; the best learning method is to use all four phases.

Another important contribution to competence development came from Richard Boyatzis, who understood the potential of the self-directed learning model by collaborating with David Kolb (Kolb & Boyatzis, 1970) and Daniel Goleman (Boyatzis R.E., Goleman D., Rhee K., 2000; Goleman D., Boyatzis R.E., McKee A., 2002).

Boyatzis (1982) distinguished between threshold and distinctive competences; while the former are essential to perform a job, the latter allow for better performance. The transition from threshold to distinctive competences is what is hoped for sports operators, since they should facilitate the integration of technical-tactical sports skills - related to the discipline of which they are experts - with pedagogical skills capable of promoting education and ensuring an integral development of the person, by means of the intentional use of educational strategies adapted to the context, needs and resources of athletes (Maulini, 2019). To this purpose, Boyatzis developed the Intentional Change Theory, according to which learning and acquisition of new skills occur by reflecting on what one would like to be, thus on the ideal self, the acquisition of the real self-awareness, i.e. on the way we act and we are perceived by others, and of our strengths and weaknesses (Goleman, Boyatzis & McKee, 2002).

From the comparison, the adult acquires awareness of the extent to which the ideal self deviates from the real one, develops a learning plan (identification of objectives and formulation of an action plan), experiments and puts into practice the desired changes, by acquiring new behaviors through experiences in a process of continuous improvement. "This type of self-directed learning is more effective and guarantees more long-lasting results if the process of change, together with the different steps necessary to achieve it, is understood at the very moment when it is faced" (Ibidem, p.93), within relational contexts that support the adult in the different stages of his/her development, helping him/her interpret experiences and restoring the value of his/her learning progress: "[...] we need others to identify our ideal self or to discover what our true nature is, to identify our talents and our gaps, to develop a future action plan, to experiment and apply what we have learned. [...] Others help us discover what we do not see, confirm our progress, test our perceptions and make us understand if we are working in the right way" (Ibid., p. 95).

One of the theories focusing on changes in consciousness from the characteristics of the environment and the experiences is Mezirow's *transformative learning perspective* (2003; 2004; 2016). He described three domains: one cognitive, technical or instrumental, related to the task; one linked to the practice or dialogue, which implies social interaction; and finally on emancipatory, characterized by an interest in self-knowledge and self-reflection.

In this approach, learning does not simply consist of adding information to what has already been acquired, but it turns existing knowledge into a new perspective that empowers the adult learner. Another interesting proposal by this author, which confirms what Boyatzis, Goleman & McKee (2002) affirmed, indicates that the learner and the trainer cooperate in a dialogue that seeks to humanize and set people free. Self-directed learning implies a change in the relationship between the trainer-facilitator and the learner, who investigate the common reality and the socio-cultural situation in which they live by dialoguing with each other.

When applying self-directed learning in training courses aimed at developing pedagogical skills in sports professionals, the pedagogue will be able to take on the role of trainer facilitating the development of these skills, supporting the sports operator in identifying their training needs and in planning and monitoring the learning process, by stimulating critical reflection through the dialogue. Garrison's proposal (2004) is to integrate self-management, self-monitoring and motivation to develop a valid and integrated self-directed learning approach, which should be "considered from a collaborative-constructivist perspective, so that the individual takes responsibility for the meaning construction while including other people"

s participation in determining the knowledge that matters" (p. 106). Referring to Dewey, Garrison (Ibidem) stressed that the integration and coordination of cognitive and social aspects are the real challenge inherent in the design of an educational experience (Ibidem). According to Garrison, "self-direction" does not mean that students are independent and isolated learners. Facilitators provide the necessary support, guidance and standards for a satisfactory educational outcome. [...] Self-directed learning, in an educational context, is always a collaborative experience" (p.111).

As regards this aspect, Knowles (2014) pointed out that, behind the various labels that have been attributed to self-directed learning, there often seems to be the development of a path for learning in solitude and isolation; actually, he said that "it usually takes place in collaboration with various types of facilitators, such as teachers, tutors, mentors, trainers and peers" (p.49). It is the interaction that enables new discoveries and growth (Brockett & Hiemstra, 1991), "taking responsibility for one's own learning does not mean deciding in isolation" (Garrison, 2004, p. 120). In this regard, Birenbaum (2002) pointed out that "Self-directed learning entails the capability of assimilating new knowledge and applying it to solve problems, the ability to think critically and perform self-assessment as well as that of communicating and collaborating with others" (p.120).

For this reason it is fundamental that the pedagogues assume the role of facilitators and not of instructors, as it happens in the traditional model of heterodirect teaching; they should adopt a perspective of mutual exchange of knowledge and experience, making available all the necessary supports to co-build, with the sports professional, a training model for young people, as well as for future sports professionals (university students, for example), capable of implementing the educational potentialities of sports practice, while giving the professional learner personal freedom and responsibility for his/her own learning process.

Therefore, the trainer-facilitator "works himself/herself out of the job of authority figure to become a co-learner by progressively transferring his/her leadership to the group as it becomes more self-directive" (Mezirow, 2016, p.45).

Between learner and facilitator there is the construction of a collaborative learning process, based on reciprocity and the right balance between external feedback - to be understood as an opportunity for constant communicative exchange, useful for the negotiation of new meanings and the shared verification of new knowledge - and self-direction by the adult learner. This requires the assumption of responsibility, and implies willingness and ability to self-monitor the learning process, whether it is aimed at the acquisition of new concepts or their integration in previous knowledge.

It will be the integration between the learner's internal feedback (self-monitoring) and the facilitator's external feedback the factor that will guarantee the quality of learning, but first of all, it will be the motivational drive to ensure meaningful learning.

Regarding this specific aspect, Knowles (2014) argued that, in self-directed learning, it is essential that "learners are motivated by internal incentives, such as the need for esteem (especially self-esteem), the desire to achieve, the urge to grow, the satisfaction of accomplishment, the need to know something specific, and curiosity" (p. 51). In addition to this, Garrison reiterated that "they are intrinsically motivated to assume responsibility for constructing meaning and understanding when they have some control over the learning experience" (p. 119) and when they "feel they have some delegated or direct control - over the space in which they act" (Jarvis, 2004 p. 72).

Therefore, it needs to give the opportunity and leave time for sports professionals undergoing training to think about what they want or need to learn, and about how to proceed in order to learn. The process cannot disregard considerations about the criteria or the way in which they will be evaluated, and their opinion in relation to the process itself (Williams, 2001; Brockett and Hiemstra, 1993). Taking responsibility for one's own thoughts and actions and their consequences is fundamental to making self-learning work and building real motivation in adult learner (Brockett and Hiemstra, 1991).

What motivates adults to explore their learning needs? Mezirow (2004), with reference to self-directed learning postulated by Knowles, helps us answer this question: "the paradox is that this type of learning lends itself better than any other to defining the skills required and those to be acquired, in order to allow measuring the learning benefits in terms of more demonstrable skills. The learner cannot know what his learning needs are if he does not know what skills are needed [...] The learner would know his learning needs if he could know what he might want" (p. 18).

If sports professionals undergoing training gain the awareness that, in order to work as competent coaches (especially if we refer to those who work in youth sports), it is essential to acquire skills in the pedagogical area; then "they will approach these contexts with a mental attitude aimed at research and investigation, and they will value them effectively as learning resources, without stopping self-directing themselves" (Knowles, 2014, p.51). The sports operators participating in the qualitative research carried out by Maulini (2019) and Maulini & Migliorati (2017) showed that they were aware of the importance and necessity of developing these skills to promote well-being in young people, and to become part of an integrated network of educational agencies capable of guiding young people in the complexity of social reality.

Even if the outcomes of such research work are not representative of the entire population, i.e. of all sports operators in the youth sector, they have shown anyway that the use of in-depth interviews has facilitated a greater development of awareness in sports operators, through the activation of a critical reflection on their work and needs as sports professionals; furthermore, the use of focus groups has given rise to informal learning networks, or better, to communities of practice (Alessandrini, 2007; Wenger E. et al. 2007; Wenger, 2006). These have not only fostered a shared critical reflection, a negotiation of new meanings, an exchange of information, ideas, skills, resources and experiences, able to provide solutions to practical dilemmas, but above all, they have led participants to the recognition of a widespread need for pedagogical training. This testifies that future sports professionals, and also those already working in this field, through the self-directed learning model that makes extensive use of such participatory methodologies (in-depth interviews, focus groups, role-playing, simulations, case studies, etc.), could acquire this awareness, transform their reference frames and enrich their daily work, thus enabling the implementation of the educational potential of sport.

The application of self-directed learning for sports operators

Creating a self-directed learning path means establishing a reciprocity between facilitator and adult learner, who undertake a research-action project together (Knowles, 2014; Mezirow, 2016). It will be necessary to create the right environment, as Knowles (2014) would say, by establishing a welcoming atmosphere of trust and mutual respect, dialogue, participation and interaction, curiosity, transparency and confidence. According to Mezirow (2016), dialogue is the central element to promote critically reflective thinking and meaning construction. Effective dialogue enables the development of a learning context in which participants are free from coercion, feel they have equal opportunities, are critically reflective, empathetic, open to other perspectives and willing to listen, seek common ground or a synthesis for different points of view, and feel they can make the best possible judgment to guide their action (p. 44).

The trainer, which in our case is the sports pedagogue, will be able to act as a facilitator, an enforcer (Ibidem, p. 45), a guide, a support and a source of information, while sports professionals undergoing training will assume responsibly and independently the role of researchers, respecting their own pace, resources and learning style (Knowles, 2014).

It will then be the time of the analysis of needs, which can be carried out by means of methods aimed at the self-perception of skills, such as: role-playing, simulations, swot analysis, life stories, analysis of metaphors, analysis of critical incidents, analysis of the skills profile, and so on (Knowles,

2014; Mezirow, 2016). These methods could be used with the support of the facilitator, and will enable a reflection on the discrepancy between the real self and the ideal self, from which the learning objectives will arise. Knowles, in his work entitled *Self-directed Learning* (2014), suggested the use of the spreadsheet to formulate the learning objectives, which involves the analysis of five different behavioral aspects, i.e. knowledge, understanding, skills, attitudes and values, each to be developed in content areas. According to Goleman, Boyatzis & McKee (2002), learning objectives should derive from a realistic analysis of strengths and weaknesses, be specific and defined over time, leveraging on the strengths of the adult who will independently define them. In self-directed learning, in fact, it is important to leave the adult learner the freedom to "select objectives from a range of options, define approaches and choose the most appropriate learning tasks" (Garrison, 2004, p. 119), allowing him/her to internalize "[...] the external objectives and external rewards that are often predominant in the early stages of learning. Intrinsic motivation is essential for meaningful and valid learning, i.e. it is capable of producing quality educational outcomes [...] and leads to responsible and continuous learning" (Ibid.).

At this point it might be useful to sign "a negotiated contract between the learner and the facilitator, paying particular attention to the type of study to be undertaken, the methods of validation and evaluation, and the outcomes to be achieved" (Stephenson & Laycock, 1993, p. 17). In this agreement, defined by Knowles as *Learning contract*, the learner defines the objectives, resources and strategies, the products and results, the evidence in terms of learning and the pace of the planned activities (Anderson, Boud, & Sampson, 1996). Through this tool, with the support of the facilitator, it is possible to structure ad hoc learning experiences, according to personal and/or group needs, in compliance with the principles of autonomy and responsibility typical of the self-directed learning and of its basic assumptions, that is to say: "the need to know why one learns something; the need to be self-directed; the need to consider personal experience in one's own learning process; the need to acquire the learner's willingness to learn; the need to organize learning on real life tasks and problems; the need to be fostered by a strong motivation to learn" (Knowles, 2014, p.11).

Once the learning plan has been defined and shared, the activities must be undertaken. Meaningful learning is the result of an experience combined with critical reflection, facilitated by the trainer, which allows for a synergistic circularity between theory and practice. Dewey (2014) stated that: "Everything depends on the quality of the experience one makes" (pp.13-14), and for practical experience to be of quality, it should be based on at least three principles: continuity, interaction and reflection. Continuity refers to the idea of an experiential continuum, that is, an

increasing order in terms of complexity and risk, as well as an adaptation to the learning characteristics of the subject involved in it. This assumes that experiences should represent not only cognitive development, but also personal and moral development. The principle of interaction raises the need to understand practical situations as examples of reality, in which the different conceptual or methodological components interact, and these can analytically be presented separately to students in different subject/course formats. Finally, if we learn from experience, it is because we reflect, analyze what we do and why we do it, which leads us to become aware of the complexity of professional work (Ibidem). In order for learning to be meaningful/transformational it is necessary that the experience is educational, by "a choosing and organizing appropriate educational methods and materials" (Dewey, 2014 p.17). The choice, according to Knowles (2002), must be oriented towards participatory and experiential learning techniques, i.e. towards focus groups, simulation, problem-solving activities, case and laboratory methods, peer education, and role-playing.

In order to facilitate transformational experiential learning, trainers-pedagogues should support sports professionals in the field by stimulating critical reflection, curiosity, motivation to experiment and experiment oneself in alternative practices, in order to break those reference frames that have characterized their work up to now, in addition to allowing for the development of pedagogical skills. While respecting the principle of autonomy and responsibility of the self-directed learning model, sports professionals should give themselves the opportunity to experience the creation of a positive climate, by working on effective communication made up of active listening and dialogue, in order to establish an authentic educational relationship with their athletes. For this reason it could be useful that, with the support of the facilitator-pedagogue, they develop educational strategies and tools to be integrated in the teaching of sports technique and tactics, and/or when choosing among the existing ones (Maulini, 2019; Isidori, 2008). The facilitator will also be able to support them during the practical application, and can guide them in the subsequent critical reflection, by helping them interpret the experiences and giving them back the value of their learning progress; at the same time, they can decide if and what changes they want to make to the tools or strategies employed.

Finally, it will be useful to design tools that allow sports operators undergoing training to reflect critically on the actions they are putting in place in order to develop their pedagogical skills, self-evaluate their learning and feel that they can control and take responsibility for their change/learning process.

A useful tool could be the logbook in which to record the activities that are being carried out in the learning process, in addition to their reflections,

the competences they have adopted, the ones they have developed, the way they have found solutions to problems, the way they have felt in implementing and integrating educational strategies with sports technique and tactics, and what improvements or changes they would like to make; this could be useful when confronting themselves with the learning community of the sports professionals involved in the training. Therefore, continuous interactions, exchanges, and reflections that will allow establishing the theory-practice circularity underlying any discipline that wants to be considered as pedagogical.

Conclusion

The self-directed learning model questions the traditional heterodirect model of a merely theoretical content transfer, mainly used in the teaching of humanistic disciplines, in the contexts dedicated to the training of sports professionals.

Consequently, the implementation of this model implies the start of a deep transformational process that requires teachers, who are willing to overcome the barriers of their discipline and the protective boundaries of their classrooms, becoming learning facilitators in order to undertake a research-action project together with their learners. This project should be aimed at co-constructing a training model not only for young people, but also for future sports professionals.

It would be important that teachers belonging to sports science areas also engage in this transformational process, in order to finally make possible the integration of pedagogical and technical sports skills that would facilitate authentic and meaningful interdisciplinary learning in sports professionals. This would mean overcoming that "approach to the values of sport [which] is still a generic and preachy pedagogy, with a moralizing and merely prescriptive tone, which hides a frightening void of content and a non-existent impact on practice under its pre-packaged formulas" (Isidori, 2008, p. 13).

In conclusion, we can say that, through the self-directed learning model, we could finally give the opportunity to "all those who work in the field of sport and motor activities [to develop], through specific training, a pedagogical knowledge that allows them to interpret and critically understand the educational values of these fundamental human practices, to engage continuously in the search for meaning and in the experimentation with new ways of teaching them" (Isidori, 2008, p. 17).

This transformational process of the teaching-learning model, turning from heterodirect to self-directed, represents a challenge that would be important to accept in order to demonstrate, through experimental research, the impact and effectiveness of the use of self-directed learning in the contexts aimed at training sports and physical education professionals in our country.

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