Service-Learning in Physical Education Teacher Education: Towards a Critical and Inclusive Perspective

Abstract

The purpose of this study was to analyse the impact of service-learning (SL) in physical education teacher education. The pre-service teachers (*n*=169) completed one of the editions of a SL program carried out between 2015-2018. This program consisted of designing and leading motor game sessions to facilitate the inclusion of 116 children with special educational needs (SEN). The program was based on Kolb's learning stages to promote reflection and critical thinking(Kolb 1984). Reflective journals were used as instrument to gather information from their experiences. These data were analysed qualitatively through a multiphase approach, initial open-coding and axial coding (Flick 2014), using the NVivo (10) software. Results were displayed through the categories of Butin's Conceptual Model: technical, cultural, political and post-structural perspectives(Butin 2003). SL provided the pre-service teachers a more inclusive educational experience, allowing them to link theory and practice in a truly operative way.

Keywords: physical education teacher education, inclusion, reflection, perspectives, special educational needs.

Wordcount: 6001or 5764

Introduction

The future of physical education teacher education (PETE) should aspire to breaking the separation between theory and practice, trying to go beyond the teaching of "inert knowledge" (Eyler 2002). At the doors of the new millennium, some authors stated that service learning (SL) was a possible option to eliminate the distance between theory and practice, thanks to reflection processes that make it possible to connect the two dimensions (Eyler and Giles 1999). However, it was not until the beginning of the 21st century when SL began to extend considerably across the different university campuses (Butin 2006), and many disciplines currently adopt it enthusiastically (Warren 2012).For instance, in the field of PETE, previous research considers SL as a viable option to enhance authentic learning outcomes, critical reflection, and civic engagement in students (Galvan and Parker 2011; Gil-Gómez, Chiva-Bartoll, and Marti-Puig 2015; Konukman and Schneider 2012; Watson et al. 2002).

A widely accepted definition of SL to date defines it as(Bringle and Hatcher 1995):

> *"a course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of the course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility"* (p. 112).

One of the main pillars of today's SL is based on the experiential learning model (Kolb 1984). Kolb's premise is that learning occurs in situations that connect the students with their cultural and social context (Jacoby 2014). Thus, its application involves an educational praxis based on real problems, attempting to give significance and authenticity to the learning produced. This model proposes that learning takes place through the following stages: (1) *concrete experience*, which implies contacting and interacting with what is being learned, (2)

reflective observation, based on maintaining a certain distance from events and allowing time for observation and critical thinking, (3) *abstract conceptualization*, which requires cognitive involvement through theoretical knowledge, and (4) *active experimentation*, focused on applying the knowledge and testing the validity of the learning in different contexts (Kolb 1984).

Previous research in teacher training have addressed SL from a social approach, trying to understand the effects on concepts such as diversity, inclusion, social justice comprehension of concepts such as diversity, inclusion, social justice, and multiculturalism (Baldwin, Buchanan, and Rudisill 2007; Miller 2012; Delano-Oriaran 2014; Amaro-Jiménez 2012); fostering social aspects such as social commitment in university students (Domangue and Carson 2008); promoting healthy lifestyles in contexts with scant resources (Meaney et al. 2008; Meaney, Hart, and Griffin 2009); changing students' opinions about the people receiving the service, the link between theory and practice, and the benefits to future physical education (PE) teachers (Wilkinson et al. 2013; Barnes and Caprino 2016); and developing necessary social and professional skills in the area of PE and sports (Williams and Kovacs 2001).

However, as various studies focused on PETE have shown (Carson and Raguse 2014; Cervantes and Meaney 2013;Chiva, Capella, and Pallarès 2018), many works adopt overly technical approaches. In this context, we must not forget that critical thinking is essential and necessary in the training of the majority of the current professional careers (Samson 2015), although many university students do not seem to acquire it sufficiently (Abrami et al. 2015). In this vein, a recent literature review on socio-critical research on PE and PETE demands the need for more critical and reflective emphasis in this field (Felis-Anaya, Martos-Garcia, and Devís-Devís 2018).

Under no circumstances SL should rely on ethnocentric, paternalistic and depoliticized approaches (Andreotti 2012; Stewart and Webster 2011). There is an emerging body of literature arguing that the traditional SL approach is not enough (Butin 2005; Cipolle 2004). This literature advocates a "critical" approach to SL with an explicit aim toward social justice (Mitchell 2008). They warn that traditional SL carries risks by reinforcing stereotypes that help to perpetuate the *status quo*, such as the unequal relationship between students and the recipient collective (Jones and Kiser 2014). In this sense, it cannot be assumed that SL has an *a priori* critical attitude. To be critical, SL should affect the discourses, practices and relationships of the agents involved(Chiva, Capella and Pallarès, 2018). That is, the critical SL aims to go further and establish the bases for the reconstruction of power relations that generate social injustice (Deeley 2015).

Therefore, it is necessary to review the main theoretical foundations of SL and critically analyse its possible consequences and opportunities for action, trying to propose application routes that guarantee its highly transformative educational potential (Meidl and Sulentic 2018).

Hence, due to the need to have a critical vision that guides the application and investigation of SL in the university system, this article follows the line of previous reference works (Gil-Gómez, Chiva-Bartoll, and Marti-Puig 2015; Seban 2013; Saggers and Carrington 2008). We focus on analysing the impact of SL on teacher training through Butin's Conceptual Model. This model argues that SL promotes four learning perspectives or dimensions closely related to the critical approach needed: (1) the *technical dimension*, which refers to purely instrumental lessons; (2) the *cultural dimension*, which refers to learning related to comprehending the diversity of the collective they serve; (3) the *political dimension*, related to understanding and comprehending society based on the distribution of power (always from a critical point of view); and (4) the *post-structural dimension*, grounded

in the reconstruction of the students' identity, based on critical reflections and learning experiences that lead them to develop new values and life attitudes (Butin 2006). The use of this conceptual model as a framework for reflection and analysis will make it possible to help future teachers to learn about equity, diversity, global interdependence, and attitudes toward others (Carrington and Selva 2010).

Therefore, this study aims to respond to the following research questions related to how Pre-Service Teachers (PSTs) describe in a critical way the impact of a SL program:

- What impact did the program have on the necessary values to address PE from an inclusive perspective? (Technical dimension).

- What learnings are highlighted by the PSTs related to the comprehension of the diversity of the children they work with? (Cultural dimension).

- Based on the experience they had, how do the PSTs interpret the social distribution of power? (Political dimension).

- Has the SL experience caused the PSTs to question their scales of values, personal attitudes, and/or personal life plans? (Post-structural dimension).

Materials and Methods

Intervention Program

Participants and organization

One hundred sixty-nine PE PSTs completed one of the SL programs (direct service) carried out between the 2015 and 2018 school years in the subjects "Basic Motor Skills" and "Basic Corporal Expression. Motor Games in Pre-school". The table 1 summarises the main background characteristics of the participants in the study [Table 1 near here].

The purpose was to facilitate inclusion through the motor and social development of 116 children with SEN caused mainly by Autism Spectrum Disorder, Down Syndrome, Cerebral Palsy, Attention-Deficit/Hyperactivity Disorder, and Rett's Syndrome. The program

consisted of designing and leading motor game sessions following some guidelines related to organization and educational approach of the tasks used in similar experiences (Richards, Wilson, and Eubank 2012; Vickerman and Coates 2009). Because the program fosters promoting inclusion, each child receiving the service could invite siblings and friends to share the practical sessions and create authentic inclusive scenarios.

To ensure fidelity and responsibility of the investigation, the study followed established ethical considerations (American Psychological Association 2010). Before participating in the study, each student was informed of its purpose. Furthermore, written informed consent was obtained from all of them.

Phases of the program.

The structure of the present program was based on Kolb's learning stages (Kolb 1984). Initially, a stage of *concrete experience* was carried out, focused on establishing the PSTs' initial contact with the children with SEN. After this phase, there was a stage of *reflection and critical thinking* in which the students had to focus on observation and reflection in order to contrast opinions and propose an action plan based on the curriculum of the subject. The reflection would also extend throughout the program by means of two systems: (1) group reflection guided by the professor after the practical sessions; and (2) individual reflection by writing a personal follow-up journal. After making the first contact with the target group and defining the needs to be met, the project required theoretically examining the topics and concepts of the subject. This stage of *abstract conceptualization* allowed the students to design a specific intervention program based on sessions of inclusive motor skill games. The application of the program was the last stage, *active experimentation*, and after each session, new improvements and variations were proposed.

Instruments

Reflection is a widely used research practice in teacher training (Baldwin, Buchanan, and Rudisill 2007; Fendler 2003; Kugelmass 2000). Among others, one of the most frequent in SL consists of reflective journals (Baker and Shahid 2003; Nolan 2008; Schön 2016).We chose this technique as an information collection instrument because *"the act of writing facilitates deeper analysis of the experience through assessing and articulating it"* (Pavlovich 2007, 284).In addition, there is no doubt that reflective journals are one of the best strategies to encourage and analyse the development of critical thinking (Abrami et al. 2015; Schmidt and Brown 2016; Wium and Plessis 2016).

Students are not used to complete reflective journals; therefore, it is necessary to guide them to reach sufficiently in-depth analyses (Bain et al. 2002). Thus, following Butin's advice (Butin 2003) about the need for in-depth critical reflection to reach high enough levels of reasoning, the present study is supported by a reflective journal (Carrington and Selva 2010), [Table 2 near here].

Analysis

The information collected was analysed through a phenomenological approach based on a multiphase approach, based on an initial open-coding phase and a second axial coding phase (Flick 2014), assisted by the computer program NVivo (10). In the first phase, the research team identified the information related to all types of impressions of the participants. Thus, the coding process becomes combined with the process of analysis (Patton 2002). In the second phase, the axial coding, the analysis focused on using the previously coded information to identify anything related to the research questions, moving between inductive and deductive reasoning (Flick 2014). In addition, we carried out a *member checking* process, which consisted of granting the participants the opportunity to confirm their statements and make new contributions if they so desired.

Results

We present the results through the categories of Butin's Conceptual Model: *technical, cultural, political and post-structural perspectives* (Butin 2003). Below, we present the most representative quotes of each perspective using this structure to respond to the respective research questions.

Technical perspective

The conceptualization of the *technical perspective* focuses on the pedagogical effectiveness itself, that is, the capacity of the SL experience to reach the specific learning objectives (Butin 2003). In our case, the PSTs showed improvements in the curricular lessons, and in some cases, they connected them to the way the experience allowed them to construct a more inclusive vision in PE. To begin with, SL offered PSTs the opportunity to practice some skills related to promoting inclusion in PE. Moreover, the experience of leading sessions with such a diverse group of students led the PSTs to understand the many possibilities PE must foment inclusion.

> *"The practical session made us see the almost infinite possibilities of Physical Education in forming different groups, motivating the students, generating different alternatives and variations from generic games, etc. All of these possibilities have allowed us to adapt the sessions to the needs and characteristics of our children"* (37).

This activity shows that when academic knowledge is acquired through experiences that are systematically reflected upon, the learning can be quite significant and especially applicable in real contexts.

In addition, a new technical learning outcome acquired by the PSTs was to deal with the uncertainty of real educational situations.

"The fear and concern struck me whether I would know how to do this, if I might do harm to a child, or the millions of other things that went through my head for the simple fact that it was my first contact with children and also children with characteristics that I'm not used to dealing with" (12).

In this sense, the PSTs learned to cope with their fear of being wrong during their teaching practice.

Cultural perspective

The *cultural perspective* refers to the students' capacity to know about, be sensitive to, and empathize with the reality of certain collectives that are at a disadvantage in the educational context (Butin 2003), thus fomenting the establishment of a truly inclusive school. In this study, the SL program experience made it possible to increase PSTs' understanding and knowledge about the diversity they might find some day in their classes:

"I found that I had often had prejudices towards people with cerebral palsy and it was very nice for me to discover that my idea about this condition was wrong" (26).

The SL experience let the students to empathize with diversity, feeding certain attitudes related to social commitment to disadvantaged groups. In this vein, diversity was understood as a source of learning that enriched the educational process.

"The learning you experience after contact with these children is great, for me they are a great example of struggle and overcoming. With their example, you learn to surpass yourself and overcome adversity" (10).

Therefore, the SL program fostered understanding diversity and allowed the PSTs to better understand the social and cultural reality in which they live.

Political perspective

The political perspective implies questioning the hegemonic social norms that control, define, and limit the knowledge and power that certain social groups have over others (Butin 2006). In the case of this project, the PSTs had the opportunity to indirectly discover the treatment the children receive in school.

> *"When at the beginning the parents told us that their children in the school lived completely on the margin and that inclusion as such did not exist, I couldn't believe it. But little by little I realized that all of them made comments of this type. Many parents explained constant examples of situations where the schools and the administration do not support them enough"* (51).

Through SL, the PSTs discovered the existence of unconscious assimilation processes that cause certain social injustices, such as what is experienced by the group of children with SEN and their closest environments. They are surrounded by an attitude of social conformity, against which it is necessary to act energetically. In this regard, PSTs show attitudes that demonstrate willingness to continue contributing in the social and political environment:

> *"After this experience we are considering forming volunteer groups to help people who really need us"* (59).

According to these quotes, the SL program changed PSTs perceptions about the social and political context.

Post-structural perspective

The *post-structural* perspective affects our system of values, our way of understanding ourselves, and, in summary, our identity as human beings, making it possible to construct, deconstruct, and reconstruct our way of viewing education (Butin 2003). This category was less prolific in the follow-up journals of the PSTs. For example, as the following comment illustrates, the experience led some PSTs to vary their way of feeling and interacting with the collective receiving the service, understanding that everyone is different.

"We learned to treat the children without distinguishing them by their diagnoses. That is, having or not having ASD does not make you a better or worse person; it makes you different in the same way that you can be a boy or a girl, tall or short, and blonde or brunette" (60).

At the same time, it seems that some values that PSTs discovered in children became their own ones.

"After this experience I feel that the things that overwhelm me become insignificant or non-existent, I think I have learned from the children to relativize what is important and what is not" (34).

Despite this perspective appears less in the accounts analysed, in comparison with the three previous ones, it does emerge clearly in the sense described.

Discussion

According to previous research, our results show that reflexive journals are adequate to analyse the impact of SL(Abrami et al. 2015; Schmidt and Brown 2016; Wium and Plessis 2016). Specifically, the type of reflective journals used(Carrington and Selva 2010), allowed us to perform an analysis adjusted to the framework proposed by Butin's conceptual model (Butin 2003).

In relation to the research question "What impact did the program have on the necessary values to address PE from an inclusive perspective?" (*Technical perspective*), the content analysis shows that the PSTs have acquired useful skills and competences for their future in PE. In some passages from their journals, they refer to improvements in the capacity to resolve difficulties *in situ* and adapt activities to the students with SEN. These results are completely congruent with the effects of SL (Warren 2012), as well as with those meta-analysis in relation to overall improvements in the academic setting (Celio, Durlak, and Dymnicki 2011; Conway, Amel, and Gerwien 2009). Specifically, we have seen that PSTs

acquired technical lessons typical of the area of PE, such as adjusting spaces, materials, times, explanations, and the appropriateness of the feedback provided during and at the end of the tasks, groupings, etc. (Cervantes and Meaney 2013). This fact, in turn, leads us to point out that SL has helped the PSTs to apply in practice many of the theoretical lessons acquired previously, interweaving these two learning facets (Chambers and Lavery 2012; Galvan and Parker 2011). Finally, it is important to highlight the PSTs' capacity to propose a more inclusive approach in their sessions, understanding that *inclusion* in PE does not merely imply the need to adapt the sessions to the particularities of the children; instead, it requires diametrically changing the conception of diversity, moving it toward a more holistic and global proposal oriented toward social justice (Carrington et al. 2015).

Regarding the research question "What learnings are highlighted by the PSTs related to the comprehension of the diversity of the children they work with?" (*Cultural perspective*), the results reveal how SL has contributed to building an understanding of diversity fitting with the reality of children with SEN. The discourses analysed show that the interaction based on the need to resolve real situations has helped the PSTs to broaden their conception and awareness of the reality of these children, as well as the day-to-day difficulties experienced by the people in their close environment. In this regard, various studies related to SL represent an especially appropriate setting for acquiring greater cultural comprehension of socially vulnerable collectives (Cervantes and Meaney 2013; Galvan and Parker 2011; Gil-Gómez, Chiva-Bartoll, and Marti-Puig 2015; Konukman and Schneider 2012). Thus, in light of the results, we can highlight the importance of diversity as a modulating element of the cultural learning of PSTs (Carrington et al. 2015; Warren 2012; Delano-Oriaran 2014; Amaro-Jiménez 2012), acting as a catalyser to stimulate inclusion through SL (Baldwin, Buchanan, and Rudisill 2007; Miller 2012).

In the case of the research question related to the *political perspective*: "Based on the experience they had, how do the PSTs interpret the social distribution of power?", the study indicates that SL contributed to making the PSTs aware that inclusion, on the educational and social horizon, still represents an unmet goal. These results, which do not exactly irradiate optimism, do lead us toward a hopeful future by showing the possibilities of SL as an educational experience capable of raising consciousness, thus breaking the tendency of previous studies indicating that the *political perspective* had a low impact on the SL applications analysed (Butin 2003, 2006; Gil-Gómez, Chiva-Bartoll, and Marti-Puig 2015; Seban 2013). Therefore, taking into account the demands of previous works, applications such as the present one begin to overcome the reproduction of SL patterns that are excessively technical, hegemonic, ethnocentric, depoliticized, and paternalist (Andreotti 2012; Furco 2011). In this case, the evidence indicates that the reflection processes implemented might have played a crucial role (Abrami et al. 2015; Schmidt and Brown 2016; Wium and Plessis 2016). In this regard, our results are consistent with recent studies (Whitley et al. 2017), that report effects related to the development of a social conscience and the comprehension of community problems after the application of SL in the area of PE.In any case, it would be desirable to carry out new research following the critical line defended in the introduction section (Butin 2005; Cipolle 2004; Chiva, Capella and Pallarès 2018) in order to reinforce the results related to the *political perspective*.

Finally, the analyses carried out make it possible to assume that, although the *post-structural perspective* did not have the same influence on the PSTs as the other perspectives, there is clear evidence that in some cases it was developed. The analysis of the post-structural research question: "Has the SL experience caused the PSTs to question their scales of values, personal attitudes, and/or personal life plans?", reveals that, for certain participants, there was a reformulation of values and beliefs about their way of relating to others, coinciding with

what was described in previous analysis of narratives about experiential learning in PE (Whitley et al. 2017). Moreover, we also found coincidences in relation to the change in attitudes about oneself through SL (Celio, Durlak, and Dymnicki 2011). The interaction with children with SEN allowed the PSTs to gain confidence in themselves (Carrington and Saggers 2008). In other cases, this new way of understanding and putting into practice values related to diversity and inclusion led them to redefine their position as educational actors (Chambers and Lavery 2012) in the area of PE.

In sum, although the results reflect a clear influence of SL on the different categories analysed, the study suggests that to increase the impact of SL, it would be advisable to use firm and methodical reflection processes. Besides, in the approach to the reflections, the *post-structural category* should be emphasized, given that its impact continues to be the least recurrent in the students' references (Saggers and Carrington 2008). Thereof, the confluence between the critical SL (Deeley 2015; Mitchell 2008) and the critical perspective of research in PETE have a lot to say (Felis-Anaya, Martos-Garcia, and Devís-Devís 2018).

Conclusion

If we want to make sure that PE-PSTs are well-prepared to deal with the needs and diversity of their future students, it is important to introduce experiential inclusive educational praxis in their training with which to reflect, theorize, and experiment(Auhl and Daniel 2014). In the research presented here, SL has allowed the PSTs to experience diversity from a much more critical, authentic and holistic perspective than what they would have obtained by reading manuals or attending lecture classes. There is no doubt that PSTs need to learn in a more critical and active way about the realities that their students experience, especially when they are different from their own (Butcher et al. 2007; Ellis, Souto-Manning, and Turvey 2019). Thus, through the present study we can conclude that when PSTs have first-person experiences with social or cultural conceptions that are different from what they are used to,

they make an effort to understand them and to re-examine their own values and beliefs. Therefore, we can state that SL had a positive impact on their training, helping them to have a more inclusive and critical educational experience that allowed them to link theory and practice in a truly operative way. Finally, from the positive results obtained, we can also highlight the adequacy of proposing critical perspectives both in the research and in the application of SL programs.

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