Original Article

Service-learning as a new methodological teaching trend in physical education and sport sciences

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Abstract:
Abstract. The current university system needs a pedagogical revitalization to develop professional competences and prepare effective professionals while developing civic and democratic values. Service-learning (SL) is an innovative educative methodology that connects theoretical foundations and practice. Particularly, it is defined as a pedagogical proposal that combines learning and community service, based in the implementation of skills related to curriculum contents carried out in real contexts. As a pedagogical methodology, its main objective is to improve students' academic learning and critical capacity while offering a social benefit. The analysis of SL literature shows how its evolution is unquestionable in different fields and that it is a recurring topic in recent years. The present research suggests, from a theoretical approach, that SL is an appropriate methodology to develop programs focused on physical education and sport. It shows different possibilities to structure SL programs, potential groups receiving university SL programs related to Physical Education and Sport Sciences and possible effects on university students performing SL.
Key Words*: - physical education, higher education, service-learning, sport.*

Introduction

Nowadays, there is a need of pedagogical renewal in the current high education system with the objective of preparing competent and effective professionals committed with improving the society where we live (Calvo-Bernardino y Mingorance-Arnáiz, 2009; Filenko, Ashanin, Basenko, et al., 2017). University students should be concerned about their functions as future graduates with a mastery in knowledge regarding important areas which enable them to help others. In addition, they should be willing to leave their footprint in the world by applying their newly acquired learning, especially with those who need it the most. Students' growth cannot be related only to curricular contents, but with personal improvement too. Therefore, undergraduates should develop their civic and democratic values permitting them to become better citizens.

Service-Learning (SL) has its origins on Dewey's (1938) experiential learning, since it is an innovative educative methodology that connects theoretical foundations and practice. Implementing this methodology represents a unique occasion to provide students with opportunities to learn and, at the same time, to overcome the needs and disadvantages of the social community. Moreover, the aim of SL should be to innovate and give attention to the needs of current society, while responding to new models of learning. Therefore, SL is defined as a pedagogical proposal that combines learning and community service. It consists of implementing skills related to curriculum contents while carrying them out in real contexts, where the main aim is improving students' critical capacity while offering a social benefit (Domangue & Carson, 2008).

Although it can be applied at all educational levels, SL is one of the most accepted educative methodologies, particularly at university level (Butin, 2006; Zlokovic & Polic, 2013), because students improve their civic education competence and general learning thanks to their experiences.

SL can be understood from a range of perspectives and each scholar may define it from his or her own viewpoint and experience. However, several terms appear repeatedly in the majority of these definitions. Shared concepts shed light in the basic meaning and help to delimit more accurately SL methodology. In this sense, bearing in mind the aforementioned explanation, we may highlight the conjunction of two types of objectives: (1) curricular learnings and (2) social and community service.

At this point, a clear distinction must be made, since SL should not be mixed up with volunteering or social work, because these do not entail curricular learnings. In order to illuminate and distinguish those practices that might be blended together with SL, Stanford University established the following diagram (Figure 1)

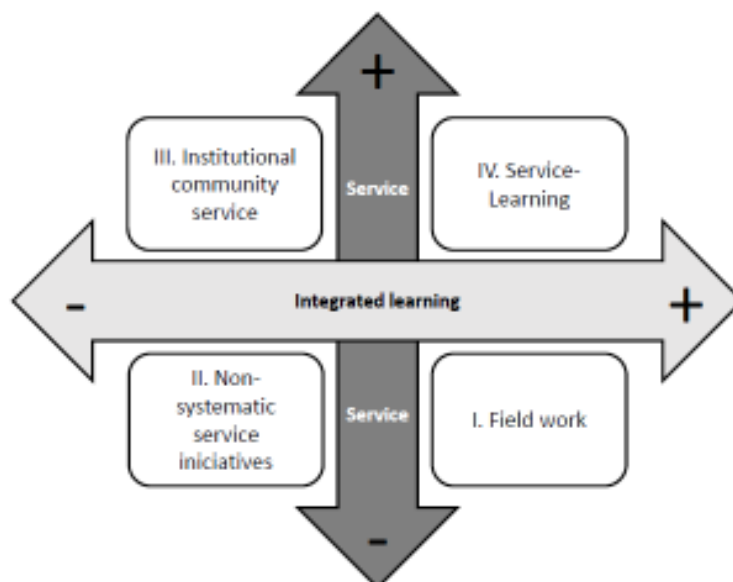Corresponding Author CHIVA-BARTOLL, ÓSCAR, E-mail: ochiva@uji.es

Figure 1. Service Quadrants. (Adapted from Service-Learning 2000 Center, 1996)

From the intersection of the service and integrated learning axis four quadrants displaying four types of experiences emerge. The vertical axis indicates the quality of the service. From this viewpoint, quality is related to satisfaction of the service receivers, the impact on the community's quality of life, the possibility of achieving a social change and the setting up of strong networks. On its part, the horizontal axis refers to the amount of integration of formal academic learning through the implementation of the service. It can vary from experiences in which the service provided is part of a subject's curriculum to implementations with no connection between the service provided and what is being studied.

Once made clear what is and what is not SL, Sigmon (1994) presents another well-known classification to differentiate SL implementations depending on the predominance of its two main factors: learning and service. This categorization exposes several possibilities with a wide variety among them. On the one side, there is a model in which learning is the most important issue to take into account, leaving service as a secondary element. On the other side, the opposite model can be found, which focuses the main attention on the service and gives less importance to the learning component. Between these two options there are a number of possibilities, for example one in which service and learning have exactly the same relevance. Generally speaking, according to Sigmon's classification, SL projects presenting a balance between service and learning have been shown more consideration because one element reinforces the other and vice versa. Bearing the aforementioned premises in mind, SL is conceived as a methodology that attempts to provide students with the learning of curricular contents while they offer a community service. Therefore, it is a methodology aligned with experiential learning since its implementation entails developing real practices providing students with the acquisition of significant learnings.

The increase and improvement of SL methodologies have generated great interest in educators in a range of levels and academic disciplines that have come with studies focused on its effects (Warren, 2012; Yorio & Ye, 2012). There are numerous studies examining the impact of SL, especially in higher education (Novak, Markey & Allen, 2007). Thus, given this increase, there is a need to gain insight and to better comprehend this methodology in the higher education scenario. In this vein, previous meta-analyses (Conway, Amel & Gerwien, 2009; Warren, 2012; Yorio & Ye, 2012) offer an extensive overview regarding research and implementation of SL. In accordance with their findings, SL is an optimal field for students to be able to acquire a number of resources to create a fairer and more egalitarian society with and for those with any type of social disadvantage. In other words, SL concerns those who are needed of more help to overcome complicated situations (Butin, 2006). Disadvantageous social circumstances may include a wide range of characteristics. This fact justifies and requires the promotion of SL in different settings and with different purposes. Therefore, at the present point of proliferation, it is necessary to carry out specific analyses focusing on different disciplines and educational levels to uncover deeply each particular area and how it can assist in the improvement of our society (Novak, Markey & Allen, 2007; Warren, 2012). This paper focuses on SL practices developed in the field of Physical Education (PE) because this area of knowledge is intimately linked with concerns to improve today's society (Myroslava, Olha, Iryna, & Victoria, 2017). In addition, this area is said to have a critical role to develop students' values (Aubert, Morales & Lajusticia, 2014). SL requires great deals of effort and attention in the field of PE and health. In fact, some authors and international associations such as the American College of Sports Medicine highlight the undeniable need to have some basic knowledge in working with different collectives in PE and physical activity area (Nelson et al., 2007). Therefore, to avoid unfortunate consequences, SL programs oriented towards vulnerable collectives from this field should allow an appropriate interaction between university students and the community that receives the service, and provide them with suitable practices in accordance with the social

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group's particular characteristics. For this reason, it is important to appreciate and recall the possibilities and insights of SL implemented toward different groups of people and through the analysis of previous applications.

Today, the application of SL programs is well based and documented, providing answers to a range of objectives related to SL implementations (Chiva-Bartoll, Capella-Peris & Pallarés-Piquer, 2018; Ruiz-Montero, Chiva-Bartoll & Rivera-García, 2016). The importance of a SL intervention determines the relevance of each project, transforming an educational experience in a link with community service (Carson & Raguse, 2014). In the case of PE, these links can vary greatly from purely promoting physical activity, now that sedentary lifestyle is one of the most important concerns (Tammelin, Ekelund, Remes, & Näyhä, 2007); to a perspective focused on health, for example. Thus, the studies and literature with the SL methodology for students in the field of Physical Education and health are closely related to current social concerns.

There has been an expansion in the interest that teachers at different levels and academic disciplines show toward SL methodology. Researchers have also showed interest on its effects (Iyer, Carrington, Mercer & Selva, 2016; Warren, 2012; Yorio & Ye, 2012). In addition, there are many studies examining its impact, particularly in higher education (Novak, Markey & Allen, 2007). This arousal has entailed its use through different fields involving, among many others, the PE arena. The rise of its implementation and analysis has come with a firm commitment to institutionalize SL in a range of universities (Butin, 2006). Another proof of the growing use of SL regarding concretely the PE area are reviews such as the one carried out by Cervantes and Meaney (2013), who focused on PE teachers at a university level. These authors explored the impact of SL and gave recommendations for its practice and future research. On their part, Carson and Raguse (2014) carried out a systematic review analyzing the type of research, program overview, and implementation strategy utilized by their sample. Therefore, with the main aim of promoting this novelty educational practice, the present paper attempts to show how SL has been applied in the PE field from different perspectives. Gaining insight regarding different viewpoints is critical to understand thoroughly this methodology and to be able to implement it adequately. Bearing in mind previous implementations and their characteristics may be of use to encourage, support, facilitate and promote an optimal application of SL in the PE field.

Service Learning in Physical Education and Sport Sciences: the state of the art

Firstly, we will focus on the countries where SL in the PE field has been applied. In this sense, United States of America (USA) shows an extensive contribution of SL programs, although closely followed by Canada. This is reasonable because the term SL was first used in the USA by Ramsay, Sigmon and Hart in 1967. Despite this fact, this model soon crossed borders, and arrived to different geographical areas of South America or Europe (Eberly & Sherraden, 1990). Currently, these practices are expanding in the rest of America and Europe as well. In fact, some countries such as Argentina or the Netherlands have formally incorporated SL into their educational systems. However, without including the USA, SL programs have not generated such a big quantity of high impact research papers, at least in the field of PE and health science. Therefore, despite the undeniable expansion and consolidation in terms of practical application, it is reasonable to think that research on SL is still on its first stages (Cervantes & Meaney, 2013). When it comes to the objectives of the applications, the contact of students with members of a social community must come out of the aims of the particular project, connecting both curriculum and the social need. In this sense, Figure 2 shows a synthesis of both kind of objectives in the PE and health field at the university level. SL programs must always entail learnings for university students as well as provide a service related to physical activity and health. Although these are general characteristics for every SL implementation in the PE field, this pedagogical method can be applied and integrated in a number of diverse designs.
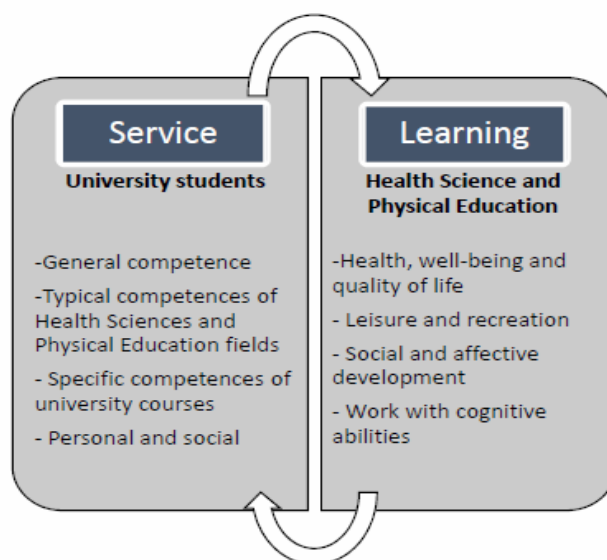

Figure 2: Synthesis of university SL based on health sciences and physical education fields.

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From an educational perspective, the SL programs can be integrated in general programs of the faculties, or in specific curricular areas. There is an enormous volume of SL projects included in university programs, which means that these are not part of the curriculum of any subject, but they are developed by the university as an institution. For instance, SL is one of the service opportunities among which University of South Carolina students' can choose in the "Leadership and service center". Another example lies in the Universitat de Valencia, where the CApSA program was created with the aim of showing and promoting SL methodology among the university community. With regard to the second option (SL as part of a subject), it is easy to find different examples (Chiva-Bartoll, Capella-Peris & Pallarés-Piquer, 2018; Chiva-Bartoll, Pallarés-Piquer & Gil-Gómez, 2018; Rivera, Sanchez & Giles, 2018), always linked to a subject connected to PE and Health but varying the degree that it is part of. In this sense, according to Carson and Raguse (2014), SL in scenarios of PE and healthy activity facilitates the establishment of SL as a successful educational practice.

Regarding the structure of a SL program focusing on the time variable, a classification is difficult to carry out and explain. This complexity of categorization and analysis is due to the wide varying information provided in each SL intervention paper, website or other ways to share the program. These documents do not always mention all these data or they just mention some part of it. This occurs since there is a wide range of factors that forms a SL intervention due to its several methodological approaches. The duration of the whole program or the number of sessions change depending upon location, aim of intervention, service learners or service receivers. This is the reason why in most cases neither duration, or frequency nor the number of hours per week are acutely defined (Gil-Gomez, Chiva-Bartoll & Marti-Puig, 2015).

Many scientific papers and studies related to SL projects and interventions clarify the experiences of SL programs, which often are integrated in a partnership between volunteer institution and SL receivers (Timmermans et al., 2015; Capella, Gil-Gomez & Marti-Puig, 2014). It is possible to observe short SL interventions of three hours, one day or 2 clinical days of interaction between volunteer students and a receiver group (Gazsi & Oriel, 2010; Kohlbry & Daugherty, 2015; Fusner & Staib, 2004). However, among SL articles and studies that mention the time of service given, the most usual duration is 20 hours (Augustin & Freshman, 2015; Gil-Gómez et al., 2015) or one semester (D'Abundo, Fugate-Whitlock & Fiala, 2011; Lapp & Caldwell, 2012).

Systematic analysis of SL practices is not an easy task since this innovative pedagogical method involves a complex organizational and learning process. A range of factors may condition it, and depending on the purpose of the study, insight can be gained through different methodological approaches. The research method utilized to study a SL intervention may be quantitative, qualitative or mixed methods. It is important to emphasize at this point that the research based on mixed methods that complements the quantitative vision with the qualitative one is greatly accepted in this field of study and, for some authors, it is considered to be the most appropriate option (Roodin, Brown & Shedlock, 2013). Some examples of mixed methods in the implementation of SL in PE are the works of Chiva-Bartoll, Pallarés-Piquer and Gil-Gómez (2018), Domangue and Carson (2008) or Miller (2012). However, other studies which opt for just one of the pure quantitative or qualitative possibilities can also be found. For instance, Gil-Gómez, Chiva-Bartoll and Martí-Puig (2015) opted for a pure qualitative study to uncover the personal and academic learnings of pre-service PE teachers, whereas Beling (2003) aligned his research with a genuine quantitative perspective. Each of these methodological approaches is more appropriate depending on the purposes of the concrete study. Just to mention a couple of examples, a study that attempts to generalize the effects of a SL over students' social skills requires a big sample, which concurs better with a quantitative methodology. On the opposite sense, a research whose aim is to uncover and understand a concrete SL program is better analyzed through a qualitative position.

Moving now to the instruments used to measure the effects and impact of SL, many possibilities have been utilized. Interviews, questionnaires and surveys have been frequently employed to better understand SL practices with university students (Roodin, Brown & Shedlock, 2013). SL is a complex methodology connected with intricate situations and human relations. Consequently, its analysis can opt among a range of perspectives, and different instruments may help to provide answers to different questions. In this sense, it is important to set clearly the research question and decide an instrument suitable and appropriate for it. For instance, interviews, focus groups or reflective logs can be used to deeply understand students' perceptions when participating in a SL program, as it is the case of Gil-Gómez, Chiva-Bartoll and Martí-Puig (2015) or Chiva-Bartoll, Pallarés-Piquer and Gil-Gómez (2018). On their part, quantitative instruments such as surveys or questionnaires may be utilized to gain a wider insight of these same perceptions, although in an external and less profound way, as it is the case of the studies carried out by Beling (2003) or Chiva-Bartoll, Capella-Peris and Pallarés-Piquer (2018).

According to SL definition, service receivers are in disadvantageous situations or belong to a social group in some kind of need. These social sectors may vary in age, gender, economic situation or state of health among many others. Particularly in the PE and health field, collectives that receive the service have been very diverse. Among others, SL receivers have been people with functional diversity or disability (Gil-Gómez, Moliner-García, Chiva-Bartoll, & García-López, 2016; Richards, Eberline, Padaruth & Templin, 2015), children with special educational needs such as motor disabilities or with attention deficit hyperactivity disorder (Corbatón-Martínez, Moliner-Miravet, Martí-Puig, Gil-Gómez & Chiva-Bartoll 2015; Wilkinson, Harvey, Bloom, Joober & Grizenko, 2013), and people at a disadvantage or undergoing social exclusion and curricular S-

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L (Rodríguez-Gallego, 2014), people over 50 (Heo, King, Lee, Kim & Ni, 2014), higher education students (Lleixà & Rios, 2015), children who were involved in the Katrina hurricane disaster (Domangue & Carson, 2008) or local groups who had some kind of health need (Huffman & Hillyer, 2014).

There is not a specific common pattern to select those groups of people that receive the service, it is just a matter of need. Depending on the place or the moment, a particular social group can be in need of a concrete type of program. The program itself and the curricular contents which have to be developed are those factors which set the bases to establish and plan the best ways to face and overcome the social necessity found.

SL methodology has the potential to benefit all agents involved. In this sense, students and service receivers have been those two groups of population more often studied. However, the effects on the ambit of physical activity and community education cannot be forgotten. Regarding the effects of participation in SL for the students, it can be mentioned that there is substantial literature about the beneficial impact of volunteering (Butin, 2006; Zlokovic & Polic, 2013; Zucchero, 2010). However, these results are all focused on volunteering and consequently do not describe in depth the helpers' learning experiences and other particularities of SL methodology. Thus, specific studies may be necessary to let researchers establish comparisons from study to study, and to clarify the meaning of participation in the SL in the PE scenario.

Literature suggests that SL has a positive effect on students' learning outcomes, an important factor when measuring pedagogical practices, since the benefits of university students are sufficient and well documented (Roodin, Brown & Shedlock, 2013). This is an inspiring result for educators who want to consider SL components into their courses, lessons or at their universities (Novak, Markey & Allen, 2007; Warren, 2012).

SL programs represent an optimal opportunity to develop essential and highly valuable skills for future teachers such as leadership and problem solving as well as promoting their critical thinking (Mumford & Kane, 2006). In addition, it encourages the training of PE pre-service teachers in addressing real concerns and common social challenges (Wilkinson, et al., 2013), better preparing them not only to what they will have to face at school, but also in life. Miller (2012) indicates that SL is an ideal pedagogical method for students to learn in an integral way and to discover if they really want to become teachers thanks to the possibility of practicing in real environments that is provided by the methodology (Huffman & Hillyer, 2014). SL programs are said to enhance the development of students' practical skills at the same time as PE and health academic contents are promoted. Furthermore, students develop their critical and reflective attitudes when thinking about the whole process undergone and the final results of their work (Capella, Gil & Puig., 2014).

There are four categories regarding the implementation of SL programs and its effects over participating students (Eyler, Giles, Stenson & Gray, 2001): (1) social issues, (2) academic results, (3) personal achievement, and (4) citizenship. Moreover, there are SL interventions and programs related to problem solving skills, attitudes toward learning or enhancing the possibility to connect learning with the world around the university (Corbatón, et al., 2015; Huffman & Hillyer, 2014; Richards, et al., 2015). The fourth category, citizenship, has not been analyzed so deeply as the others. In this sense, further attention might be paid to this effect because it brings together everything concerning generosity, loyalty, friendship, personal responsibility and active participation in actions involving improvements for the community. Therefore, promoting the development of future PE teachers' citizenship may be an option to gain more insight about SL from a less studied perspective.

There is another possibility of dividing the improvements of students' participating in SL programs. According to Butin (2006), there are four distinct conceptualizations that can be highlighted and are improved thanks to SL implementation, namely: technical, cultural, political, and poststructuralist. Seban (2013) used Butin's framework to analyze students' reflection logs and uncover their perception toward SL participation and usefulness. In addition, particularly in the PE field, Gil-Gómez, Chiva-Bartoll and Martí-Puig (2015) utilized these four perspectives to study students' personal and academic learnings.

The university students and the different groups involved in a SL intervention might have to overcome stereotypes. However, their participation in SL programs has been proved to be beneficial and help them to gain profound and critical viewpoints on different issues. There are alternatives through which this area of study might be improved not only by future researchers but also by the students involved. Although, SL methodology represents an optimal educational strategy which helps to achieve the development of skills related to professional progress while offering valuable local community services, this methodology is constantly under review, and this fact entails a need of continuous improvement.

Conclusions

SL research is advisable since there is a need to continue improving its practices and there are still many aspects that remain unclear. For instance, studying the effects on the students, satisfaction with the service received, the type of relationships established between receivers and students to reaffirm the social link between groups, visibility or the perception of the university as a socially responsible institution are just some options. SL programs focused on healthy themes such as physical education and sport, exercise or physiotherapy and rehabilitation (whether or not they include a research component) might be a useful step in promoting positive attitudes towards working with the receivers of SL programs. Nevertheless, it is necessary to promote further research to evaluate the outcomes of SL programs in order to facilitate its promotion, to improve its implementation and to find out more about its benefits.

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