

## Veterinary students' perceptions of participation in a service-learning activity

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### **Abstract**

*Citizens worldwide are increasingly concerned about the animal welfare of farm animals but lack knowledge about animal production systems, as fewer and fewer people have a direct connection to rural environment. Veterinary students these days present low motivation for teaching subjects related to agricultural species because they are more focused on companion animals. The aim of this work was to evaluate the perception of veterinary students about the degree of utility for learning achieve, satisfaction and acceptability of participation on an service-learning activity integrated in a teaching innovation project. We choose the service-learning activity because learner-centered methodologies could be appealing to students to stimulate external motivation and, simultaneously, provide benefits for society. The participants reported increases in the awareness of lack of knowledge about food animal production aspects and the importance of university involvement in activities that provide social benefits. Together with a 94 % of high or very high self-reported learning increase about the specific topics of the curricula of the subject and an 80% of high or very high self-reported global satisfaction with the participation in the SL activity, despite some technical difficulties, led us to conclude that service-learning methodologies could be successfully integrated in the veterinary curricula.*

**Keywords:** *Motivation; satisfaction; knowledge; social issues; service; innovation.*

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## **1. Introduction**

Over the last fifty years the livestock sector has been undergoing changes without precedents to deal with the increasing demand of food derived from animals in the world's most rapidly growing economies (FAO, 2019). To meet the 72 kg global meat consumption per head/per year expected by 2050 (Miele, 2016) intensification of livestock production systems seems inevitably (Buller *et al.*, 2018). In the current socioeconomic global situation, there is a strong evidence of public concern over the moral implications of intensive animal production systems on farm animal welfare (FAW) (Eurobarometer, 2016; Fernandes *et al.*, 2019). In the actual concept of sustainability poor welfare of animals could make a system or procedure unsustainable because members of the public consider them unacceptable (Broom, 2019). Nowadays a large part of our society lives in urban environment and during the last decades both the physical and the mental distance between producers and consumers have grown (Brom, 2000) and there are evidences of little or no knowledge about farming activities in the majority of citizens (Clark *et al.*, 2016; Malek *et al.*, 2018). On the other hand, the proportion of urban people that have pets has increased in affluent countries and the pets are considered as members of the family, increasing the emotional and social ties with animals during the twentieth and twenty-first centuries (Wilkie, 2005 Boogaard *et al.* 2010), rising the moral or ethical status of all the animals for extension. Likewise, farmers have serious difficulties in providing effective information to society, being, on occasion, victims of sensationalist media that produce great harm. Like Grandin (2014), we consider the existence of a gap between society and farmers a serious problem and we think that it is our duty, as veterinarians and responsible members of the University, to try to find the link between them.

During the last decade the number of students enrolled in veterinary medicine degree who came from urban environment is increasing. They have the aforementioned background of lack of links with farm animals and farming practical experience and are much more focused on companion and exotic animals. All this translates into a low motivation for the teaching subjects related to agricultural species and this phenomenon is observed worldwide (Alonso *et al.*, 2019). As motivation is one of the most important factors that should be considered in order to improve the processes of teaching and learning (Williams & Williams, 2011; Kusurkar *et al.*, 2013) we try to increase the external motivation of our students throughout the voluntary participation in a service-learning (SL) activity as learner-focused methodologies are considered more engaging than traditional teacher-focused activities (Garnjost & Lawter, 2019).

SL is a educational experience in which students participate in an organized service activity that meets identified societal needs (Bringle & Hatcher, 1995, p. 112 ) and is a student-centered methodology derived from experiential education (Furco, 1996). The societal needs identified for the present activity was information for citizens and consumers about

different aspect of housing, handling and welfare in the production systems of cattle and sheep. Despite the institutionalization and widespread use of SL methodologies in many Universities (Bringle & Hatcher, 2000) there are not commonly used in veterinary degrees.

The aim of this work was to evaluate the perception of veterinary students about the degree of utility for learning achieve, satisfaction and acceptability of participation on an SL activity integrated in the teaching innovation project financed by the University of León in the year 2018 call (PAGID-ULE 2018-19).

## **2. Material and Methods**

### **2.1. Students**

During the second semester of 2018-2019 academic year, third year students of Animal Production and Higiene (APH) subject were challenged to participate in a SL activity to improve knowledge of society about different aspect of housing, handling and welfare in the production systems of cattle and sheep.

The students, individually or in groups of two, visited different cattle or sheep farms to record a video. On the farm or after the visit they explained some of above mentioned aspect related to milk or meat production in a way that could be understood by non veterinary or farm environment people. Duration of videos should not exceed 10 minutes with the intention to be uploaded on a YouTube channel created to this purpose.

The participant students were asked to respond a voluntary and anonymous survey of 15 questions following the Likert scale, with a score of 1 to 5 (1 being very low and 5 very high), to gain knowledge about how the student perceived social disengagement from farming activities problem and about their self-perceived learning achievement and satisfaction level related to the SL activity.

## **3. Results and Discussion**

From a total of 124 student only 17 participate on the SL proposed activity. This is in accordance with the low level of initial students' motivation to farm species detected worldwide (Alonso *et al.*, 2019) and the self-reported interest in animal production prior to participate in APH subject (Figure 1). Comparing percentajes of self-reported interest before and after this subject (answers 1 and 2 of Figure 1), it is clear than knowledge and personal experience is a good way to increase motivation and the level of awareness about some social issues, in this case the existence of a physical and mental disconnection between urban and rural environment and existence of a knowledge/understanding gap between them (answer 4 of Figure 1). We can not distinguish between the influence of the

participation in APH subject or in the SL activity on the results in previously mentioned answers because we did not made the survey with students that do not participate in the SL activity. We planned to repeat the survey to participants and non participant in the 2019-2020 academic year when the activity will be repeated. To have diferenciate data will allow us to prove if our results are in accordance with some papers that reported civil and social skills benefits of participants in SL activities (Conway *et al.*, 2009; Celio *et al.*, 2011).

Considering the gender, 69 % were females and 31 % were males, and this result is not in accordance with other studies (Astin & Sax, 1998; Brail, 2016) that reported higher percentage of females involved in SL activities, because, even when in our experience the female porcentaje was double than the males one, it is lower than the average ratio females (82 %) *versus* males (18%) observed in the academic year.

The ratio urban 65 % *versus* rural 35 % in the origin of the participants could explain the result of very low or low knowledge about animal production prior to particitate in subject APH observed in Figure 2. Self-reported levels of very low or low knowledge about animal production aspect prior to APH subject participation of 60% are surprisingly high for veterinary students but are in accordance with reviewed literature (Clark *et al.*, 2016; Malek *et al.*, 2018) for citizens of Europe and Australia.

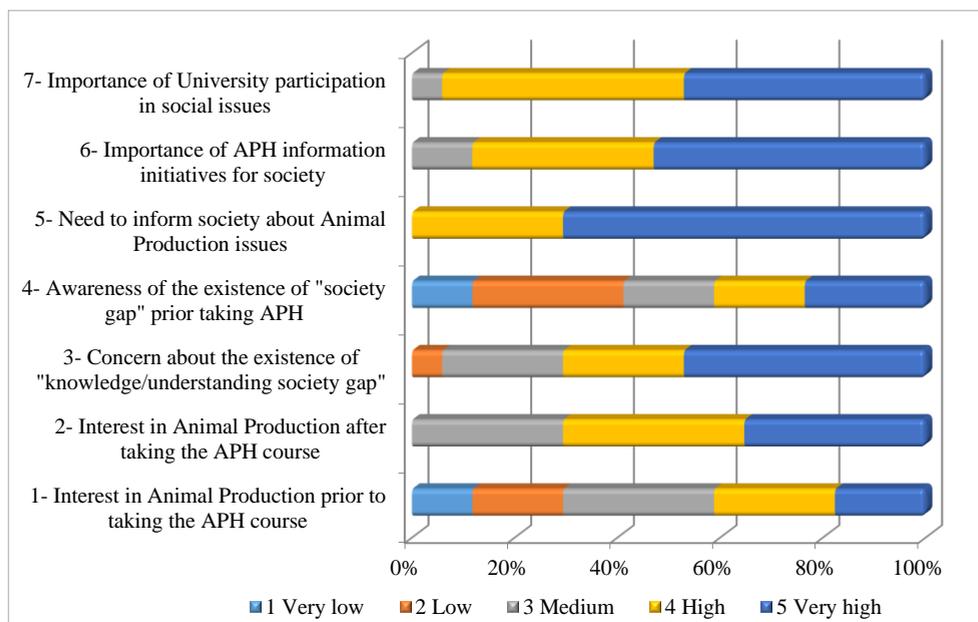


Figure 1. Results in % of the students' questionnaire answers regarding social and animal production issues.

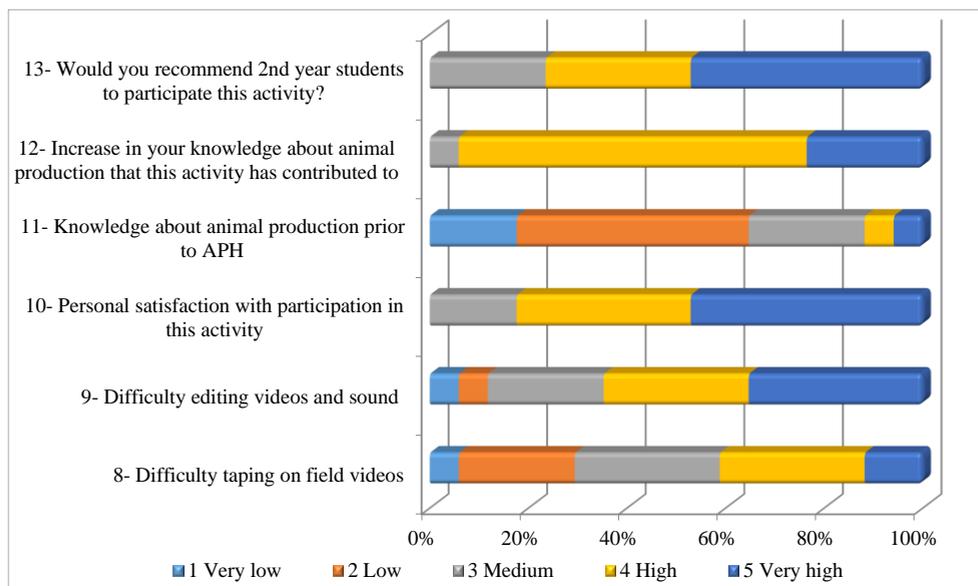


Figure 2. Results in % of the students' questionnaire answers regarding personal learning, satisfaction, and difficulties with the service-learning activity issues.

The difficulties reported by the students about the editing of videos and sound (answer 9 of Figure 2) was an unexpected outcome of the use of videos for YouTube that proved to be an efficient learning tool well received by students (Chintalapati & Venkata, 2016; Alonso *et al.*, 2017).

Self-reported learning benefit about the specific topics of the curricula of the subject by means of the participation in the SL activity, answer 12 of Figure 2, was high 71% or very high 23%. Together with the fact that 80% high or very highly recommend to participate in the activity to other students encourages us to continue with this initiative in the present academic year. In the explanation of the 94% knowledge's increase reported two factors could participate simultaneously. On one side, first-hand experience visiting farms could be a relevant constructive learning experience that also contribute to made people more conscious about farming issues (Boogard *et al.*, 2010). On the other side, better levels of learning achievement with SL activities were reported (Bringle & Hatcher, 2000; Celio *et al.*, 2011; Brail, 2016; Garnjost & Lawter, 2019). Garnjost and Lawter (2019) published a mean, in the Likert scale 1 to 5, of self-reported value of knowledge acquisition of 4.04, close to our 4.15 that represents an increase of almost 2 points over the 2.35 mean value of answer 11 of Figure 2 of prior knowledge.

Finally, a 45% of students very high and 35% high satisfied with the participation in the SL activity confirm previous studies that consider the SL learner-based activity greatly

satisficing for performers (Ciesielkiewicz & Nocito, 2018; Garnjost & Lawter, 2019). Our 4.29 mean value in the Likert scale was higher than the 4.00 reported by Garnjost and Lawter (2019) and this is a very valuable results because the students are satisfied despite the technical difficulties in editing the videografic material and the time and resources involved in the participation in the SL activity.

#### **4. Conclusion**

Veterinary degree students who participate in a SL activity perceived it as satisfactory and beneficial for increasing learning achievements and awareness of social issues and would recommend other students to participate in this activity. All this led us to conclude that service-learning methodologies could be successfully integrated in the veterinary curricula.

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