

SERVICE-LEARNING WITH A GENDER PERSPECTIVE

Manuscript ID: ID TS-20-0019.R1

Service Learning with a Gender Perspective: Reconnecting Service-Learning with Feminist  
Research and Pedagogy in Sociology

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## Abstract

Service-Learning (S-L) is growing in our Universities and in Spain. However, still much action and research are needed with a gender perspective. This article aims to evaluate an S-L project that consisted of workshops in schools on gender and technology. We evaluated the experience with a mixed-methods approach and a gender perspective. This includes qualitative self-reports of 19 university students of Sociology of Gender, as well as quantitative surveys completed by the 284 school students and 13 of their teachers. Our results indicate a great satisfaction among university students as well as the schools. This S-L experience helped our university students to acquire specific knowledge regarding gender and social issues, as well as several skills, especially communication, organization, empathy, critical thinking and social and gender awareness and responsibility. Therefore, we conclude that such experiences show a great potential for learning, as well as for social and gender transformations.

## Keywords

Service Learning, gender, sociology, technology, feminism

Service-Learning (S-L) consists of a teaching and learning methodology that refers to learning, service and community. This involves the integration of course content and community service activities, with an emphasis on students' reflections in a single and well-articulated project (Palos and Puig 2006; Hochschild, Farley, and Chee 2014). S-L requires that the students involved learn and, in turn, contribute to the world outside the classroom (Batlle 2014; Garoutte 2018).

In the United States S-L started in the 1980s (Hochschild et al. 2014) and in the 1990s there was an emergence in university education and research (Bringle and Hatcher 1995; Jacoby 1996; Huisman 2010). In Spain S-L gained prominence much later, in the 2000's. The

first University network around S-L was recently created, in 2010 (Batlle 2014). Only recently has it been institutionalized and booming in Spanish universities, as a development of teaching and learning innovation together with an emphasis on social responsibility of the universities (Opazo, Aramburuzabala, and Cerillo 2016; Folgueiras et al. 2020). Even though there are 76 universities in Spain, only 24 Spanish universities implement S-L and only in 1 university is S-L compulsory (Opazo et al. 2016). Therefore, especially in comparison to the United States, there is still much to be done in Spain.

As a method of university teaching, S-L allows interdisciplinarity and is present in all areas and disciplines (Rondini 2015). Despite this, many authors argue that S-L has much to do with Sociology (Blouin and Perry 2009; Marullo, Moayedi, and Cooke 2009; Huisman 2010; Rondini 2015; Fletcher and Piemonte 2017; Garoutte 2018). As many authors already claimed (Novek 1999; Walker 2000; Dugger 2008), it is also related to feminisms and implemented in Women's Studies. Even if feminist research and pedagogy goals are strongly aligned with S-L purposes (Novek 1999; Williams and Ferber 2008), in comparison with other areas of Sociology there is not much research yet in the area of Sociology of Gender. In Spain, even if S-L experiences implemented from and for Social Sciences and Sociology are growing, there are still too few S-L experiences implemented and published highlighting a gender perspective.

The aim of this article is to evaluate our S-L project developed in the course of Sociology of Gender within a Sociology Degree. Specifically, our S-L experience consisted of accompanying our university students to carry out a lecture-workshop on the topic of gender and technology at high schools. In our context and internationally, women are still a minority and excluded from technology and previous literature urges to better include them in greater numbers (Vergés Bosch 2012; Oakes, Ming-Chien, and Zoltowski 2015; González Ramos, Vergés Bosch, and Martínez García 2017). Our S-L experience was carried out over 4 years

(2016-17, 2017-18, 2018-19, 2019-20) through which we gathered qualitative data from our university students' self-reports, as well as quantitative data from surveys to high school teachers and students.

In this article we ask, first, what knowledge and skills our university students gained. Second, we ask to what extent the S-L became a satisfactory experience for them and for the community, constituted by both high school students and their teachers. Finally, we ask what we can learn when gender becomes central in S-L implementation and analysis. Our results show what S-L together with feminist insights can bring to motivating and powerful teaching and learning experiences, as well as potential for social and gender transformations. With this, our university students acquired new knowledge and skills, especially those emphasized by gender related subjects, as well as expressing great motivation and satisfaction with the experience. The schools, both students and teachers, showed a high degree of satisfaction with the workshops and gave us very valuable feedback for our future teaching and research. Therefore, our contribution is threefold. First, we evaluate and bring empirical results of an S-L experience of 4 years, which brings new quantitative and qualitative information, both from the point of view of universities and the community. Second, we contribute to the growing body of research in Spain from a leading institution and S-L project, which can be replicated in the following years and in other fields and universities articulating productively feminist research and teaching. Finally, and most importantly, we contribute to the little research that specifically relates gender with S-L, especially including gender and a feminist perspective in the implementation and analysis of S-L experiences within Sociology.

#### FEMINISM AND THE STRENGTHS AND CHALLENGES OF SERVICE LEARNING

Most of the positive results of S-L focus on the effects on students, especially their academic performance. Within academic performance, (Garoutte 2018) student enthusiasm and participation (Hochschild et al. 2014:105) can be highlighted. S-L facilitates a better

understanding of complex sociological problems such as the structure-agency debate (Mobley 2007; Marullo et al. 2009; Garoutte 2018), increases empathy with others (Hochschild et al. 2014), and helps self-understanding and awareness (Huisman 2010). The constant dialogue with the other, mentoring and co-learning, allows the assessment of various forms of expertise, from grounded and experiential, to practical and applied, as well as abstract and theoretical (Marullo et al. 2009; Bach and Weinzimmer 2011). At a methodological level, the observation-action-analysis-reflection circle of S-L is valued as a powerful epistemological process (Marullo et al. 2009). Apart from academic performance, S-L projects can also contribute to reducing stereotypes (Mobley 2007), as well as encouraging more involvement in civil society and engaging social transformation (Huisman 2010; Hochschild et al. 2014). Finally, S-L projects enable students to explore careers inside non-profit organizations, social service agencies, and the public sector more generally (Rooks and Winkler 2012).

The challenges within S-L are mainly related to the benefits for the community. The idea that it is a “win-win-win” situation for the university, students and community is in question (Blouin and Perry 2009:120). Short-term S-L experiences do not always meet the long term needs and commitment of the community (Tryon et al. 2008). Moreover, if there are complaints from the community, they are attributed to students’ unreliability and lack of motivation and commitment, lack of professionalism, work ethic, inability to take the initiative or unprofessional communication, as well as the lack of pedagogical tools (Hochschild et al. 2014).

Other criticisms regarding S-L point to its emphasis on charity and volunteering, rather than citizenship and advocacy, and for the subsequent lack of attention to promoting social change (Mobley 2007). Some argue that despite the aspiration of mutual learning, S-L privileges university knowledge and learning (Garoutte 2018; Marullo et al. 2009). Authors also admit that it is difficult to create a mutual exchange relationship (Huisman 2010).

Finally, reproductions of neoliberalism have been detected when implementing S-L. Some authors (Fletcher and Piemonte 2017) alert us to the fact that as S-L increasingly becomes integrated into undergraduate education, it can all-too-easily turn into “McService, I” or what John Eby (1998) deems service bites, quick fix service, happy meal community service or service in box (Fletcher and Piemonte 2017).

Walker (2000) argues that to bring service and transformative politics back together, S-L needs to further engage with Feminism. Feminist scholars are fully dedicated to the exploration of liberatory theories and methods for research and teaching from a clear egalitarian perspective (Novek 1999; Martín 2016). Gender and women’s studies scholars have already pointed to the appropriateness of S-L in gender related studies and courses (Novek 1999; Evans, Ozer, and Hill 2006; Huisman 2010; Bach and Weinzimmer 2011). Feminist research and pedagogy shares most of the goals and methodologies of S-L and both view experience as an important source of learning, value its situatedness, as well as stress the need of reflection and analysis around it (Dugger 2008; Eudey 2012; Biglia and Vergés Bosch 2016). Both highlight collectivism rather than individualism, while connecting theory with practice (Bach and Weinzimmer 2011). Both acknowledge students’ agency, foster collaboration and create a foundation for personal commitment to social responsibility and care for the others (Novek 1999). Both believe students and their learning should be closely connected to the community (Dugger 2008). Finally, both promote informed action in pursuit of social justice and challenge power relations as a form of advocacy and activism rather than simply charity (Bubriski and Semaan 2009; Seethaler 2014; Martin and Beese 2016; Hauver and Iverson 2018).

Despite that, there are still few pieces of literature and research that explore the relationship between S-L, Gender, Feminisms and its potential. So far, we know that there are gender differences in attitudes towards S-L. Women seem to be more interested in engaging

in S-L projects than men (Parker-Gwin and Mabry 1998; Chesler and Scalera 2000; Shukla and Shukla 2014) and this might be a good strategy to retain them in certain fields, such as engineering (Oakes et al. 2015; Manning-Ouellette, Friesen, and Parrot 2018). Moreover, some previous research (Seethaler 2014; Martin and Beese 2016; Vergés Bosch, Freude, and Camps Calvet 2019) shows that once women enroll in feminist S-L experiences, they can develop feminist consciousness and get empowered to stand up for themselves and others, even in cases of violence against women (Stahly 2007; Martin and Beese 2016; Hauver and Iverson 2018). Regarding LGTBIQ\* people, there is even less research, especially about and by LGTBIQ\* participants. Mitchell, Schneider, and Soria (2019) suggest that LGTBIQ\* people might even engage less in S-L. There is still too much marginalization and fear, individual and institutional, which creates a gap even within the S-L literature (Donahue 2018). Still, most research concentrates on S-L communities from a heteronormative ideal, which privileges heterosexuality and sex/gender binary frameworks (Donahue 2018). Moreover, the lack of voices of LGTBIQ\* should urge us for more inclusion in further practice and research (Donahue 2018; Mitchell et al. 2019).

#### THE S-L PROJECT ABOUT GENDER AND TECHNOLOGY

Our S-L project offered a workshop called “Gender and technology: promoting new technological vocations” to high schools. High schools in Spain generally comprise seventh to twelfth grade of the U.S. system. From seventh to ninth grade is called “ESO” (compulsory secondary education). Students in Spain generally start secondary school at the age of 12 and finish at the age of 16. From eleventh to twelfth grade is called “Bachillerato” and it is not compulsory. We aimed to respond to the need of high schools to increase the number of girls interested in technology fields, as well as to foster gender equality. We also sought to encourage our university students to learn about topics included in the Sociology of Gender course. In this course, we covered gender and feminist concepts, theories, research and

pedagogies; gender, work and care; family and sexuality; violence against women and discrimination, as well as gender policies, inequalities and the welfare state. Gender and ICT was one of the topics covered in the part of Gender and Work.

Moreover, as an innovative element, we related our teaching to one of our research projects called Gentalent that aimed at improving the incorporation, retention and promotion of women in Information and Communication Technologies (ICT). We provided our students with current public research data on the participation of women in ICT, as well as other audiovisual materials, such as the Gentalent video to be used in the workshops<sup>1</sup>. With our S-L project, we sought to help our students to reflect on the relationship between gender and technology. In this regard, we aimed to cover gendered content such as the importance of including women in ICT, the digital gender gap and intersecting gender inequalities, but also ways to overcome and question them, help to understand the gender socialization process, as well as the structure-agency debate based on the problematization of preferences and sex-based decisions. Finally, we aimed to disseminate scientific based results and looked for other and new ways to overcome some of the challenges involved, as well as allowing dialogue among students. In this sense, we insisted on working in pairs or trios and implementing interventions as workshops instead of just conferences or talks.

The University of Barcelona is a leading university in the Spanish context with around 60,000 students in all fields, 63 percent of them being women. In our university, each year around 500 students are enrolled in the 4-year Sociology degree. Sociology of Gender is an optional last year course worth three ECTS (European credit transfer system), which is generally equivalent to 1.5 credits in the US. The number of students varies per year, with an average of 28 students per year and never over 39. On average, women represent around 65 percent of the total students enrolled in this course, about 10 percent higher than in the Sociology Degree. Only between five and 20 percent of our students participated in the S-L



experiences each year and in total 79 percent of the participants in the S-L project were women. This S-L project demanded time and availability to carry out the workshops outside the university schedule and was noncompulsory. We never had to deny the participation to any student and, only once, did we not have sufficient students to cover all schools' demands. Consequently, the S-L project was never compulsory, but still accounted for 40 percent of the final grade, with a self-report together with the presentation in class, another 50 percent was a final exam and 10 percent participation in class activities. The students not engaging in this S-L experience carried out a written research project on a chosen/given topic. This also represented 40 percent of the final grade and had to be presented to the rest of the class. All projects were assessed under the same rubric. This rubric assessed the quality of the project, the presentation and to what extent they were wearing a gender lens. Our S-L students received the same introductory content on Sociology of Gender and on the specific topic of Gender and ICT. However, only our S-L students were offered a free and noncompulsory course on communication skills given within the Sharing Ideas program. Moreover, they independently and creatively looked for extra information on the topic, as well as for teaching and communication methodologies to give the workshop to schools.

As shown in Figure 1, in total 19 of our Sociology of Gender students have performed thirteen workshops over four consecutive academic courses, 2016/17, 2017/18, 2018/19 and 2019/20. Each year, our university students were asked to develop a very participatory session between 45 minutes and one hour and a half. They usually prepared a PowerPoint presentation with some content and graphs on the gender gap in technology, in education and in the labor market. They also included interactive activities. For example, high school students had to introduce themselves in relation to a technology, draw a technological object, and/or conduct an internet search on a technological object, its utility and their inventors looking for gender gaps and share it with the rest of the class. Most of them finished the

activity with a reflection on personal choices in terms of education and profession, understanding the gender gap on very personal levels. Our university students also incorporated a video designed in our former research project in order to promote girls to do and study technology. Finally, they had to give an oral/video presentation of the experience to the rest of the Sociology of Gender class, as well as submit a self-report at the end of the semester about the S-L experience.

This S-L project was developed within the *Sharing Ideas. University goes to high schools* program of the University of Barcelona. The Sharing Ideas program was designed by the S-L group of experts (ApSUB) and disseminated to other interested members of the university (Pons and Sarrasí, 2019). ApSUB provides common communication skills training for the university students involved, as well as the surveys to be answered by schools. The Sharing Ideas program includes the majority of disciplines and represents a leading S-L project in Spain. We offer workshop sessions to high schools in Barcelona that the university students plan and implement. Professors propose the title and the agenda of the sessions and the action is prepared within the framework of their subjects. In this sense, the university offers a catalogue of workshops, and the high schools formulate a demand if they are interested in one of the offered topics. The high schools where our workshops took place were mainly public high schools in Barcelona. Only teachers of the equivalent U.S. high school system were interested in our workshops. Our sample of high school students includes ESO3 (ninth grade), ESO4 (tenth grade) and Bachillerato1 (eleventh grade) students. Our participant high schools were all in Barcelona city, but differed in terms of neighborhood. Therefore, their students' composition differed in terms of class, national origin and ethnicity. However, we did not gather quantitative data in this regard to delve in its analysis.

## METHODOLOGICAL STRATEGIES

We based the design, implementation and evaluation of the project on a mixed-methods approach and a gender perspective (Luxán Serrano and Biglia 2011; González Ramos et al. 2017; Vergés Bosch 2012, 2019). This involved, on the one hand, considering the feminist research and agenda. On the other hand, our experience specifically introduced gender issues and reflection in the Sharing Ideas program. Finally, this allowed us to evaluate both the impact of this S-L experience on our students' learning process and the impact on the community in a gender perspective. Our research has been developed within the project "Sharing Ideas" which fulfils with the ethical standards of our institution<sup>2</sup>.

We used a multi-method approach relying on qualitative and quantitative techniques in order to answer the three central research questions of this article: what our students have learned, to what extent this S-L experience was satisfactory for our students and the community and, finally, what we can learn from making gender a central category of analysis. This combination of quantitative and qualitative techniques, subjective and objective indicators, the different perspectives, the varying nature of data and important number of results from over the years increases the validity and reliability of research results (Verd, Barranco, and Moreno 2007) and adheres to a mixed-method approach (Domínguez Amorós and Simó Solsona 2003; López Roldán and Fachelli 2015).

*Insert Table 1 here*

#### *University Students' Self-Assessment Reports*

The self-assessment reports of our university students helped us to understand to what extent this resulted in a positive learning experience. We presented them with an open battery of questions and tasks to orient their reflection of no more than 3000 words. We asked, first, for a description of the experience, which included motivations as well as emotions during the experience and relation to their professional expectations. Second, we asked for a reflection on what they learned regarding both content and skills. Finally, we asked for a reflection on

what could be improved. Some of the self-reports answered those questions separately; other reports included an articulated reflection. The majority of the reports were written individually, while others addressed their collective reflections in a shared report. This is why we analyzed 16 reports but worked with 19 students.

#### *Surveys for High School Students And Teachers*

On the other hand, we also distributed and analyzed the quantitative survey given by the Sharing Ideas program, answered by teachers and high school students immediately after the workshop. This information allowed us to have an idea about how the project was received by the community (Appendix A). In this regard, on a scale of 0-10, we could find out if the workshop responded to the needs of the community. Students were asked about their interest in the topic, the novelty of the content and the usefulness of the workshop. Teachers were asked if the workshop corresponded to the needs of the high school students, if it was adapted to the annual planning and if it was useful for the high school students. The evaluation of pedagogical tools was measured based on three questions answered by the high school students: understanding the content, content transmission and way of explaining workshop. Teachers also assessed the transmission of the content, the comprehensibility of the vocabulary and a motivating methodology workshop. Regarding a dialogic environment and the creation of horizontal knowledge, high school students assessed to what extent the dynamics were participatory, as well as the receptive attitude of the speakers' workshop. Teachers also indicated if participatory dynamics were implemented and if the doubts were resolved in a flexible manner during the workshop. Apart from the global assessment that high school students and teachers were asked for, teachers also assessed whether the information and management prior to the intervention was adequate. Both questionnaires included the opportunity to add qualitative comments at the end on what was the best, what could be improved or future workshops they would like to have.

We could also delve into sex-gender differences in their responses, since the survey asked for their sex in an open question, which allowed nonbinary answers. In the analysis, we controlled first differences between men (0) and women (1) through correlations and many resulted in statistically significant relationships (Figure 2); we also controlled for differences between binary identified (0) and non-binary identified (1) responses, with unclear results of significance due to a low N. Afterwards, we confirmed the results with mean comparisons (Figure 3).

#### UNIVERSITY STUDENTS LEARNING KNOWLEDGE AND SKILLS

From the design of the experience to its implementation, we observed the students as exceptionally self-sufficient, goal-orientated and motivated. In their self-reports we also observed consensus regarding the effect of service learning on students' enthusiasm, satisfaction and motivation. All students reported that this was a very satisfactory learning experience and that they clearly preferred such coursework, as it was more practical, participatory, experience-based and much more enriching than other class activities. *“During the degree we get tired of doing theoretical work, but experiences like these are very few, and I think this is a different and more participatory way of learning”* (participant 3, 18/19). Some students even argued that the burden of explaining social injustice and gender inequalities to third parties outside the university additionally motivated them to study harder and that they were happy to invest their time in the project. In this sense, our participants clearly confirmed that S-L enhances students' enthusiasm and motivation (Hochschild et al. 2014).

#### *Social Transformation Through S-L*

Through this permanent reality check of theory, our S-L project clearly boosted the critical thinking of our students. A central claim of S-L is its commitment for social transformation (Huisman 2010; Hochschild et al. 2014). Many of our students underscored that they appreciated engaging in a project with a broader horizon of social and gender change in line

with the following reasoning: *“to contribute to what we initially thought of the subject: to transform the world for the better”* (participant 5, 18/19).

Our university students also commented on the transformative impact of their workshops among the students of the schools. They saw how they engaged in discussions around gender, as well as how some changed their opinions regarding gender equality, freedom of choice and even their future professional vocations. At the same time, though, they were quite clear that there is a need to put much effort into structural changes on a micro and macro level in order to achieve more inclusion of women in technologies, as well as to advance in social and gender transformations. As one student claimed, *“To carry out specific activities in a feminist way within the educational institutions is insufficient, a structural transformation of the educational system is needed that implements gender-transformative policies, transversal in all levels of learning”* (participant 2, 19/20)

#### *Content Learned*

Concerning the knowledge they learned, our university students involved in the S-L experience went far beyond the curriculum as they reached a deep understanding of the multiple dimensions on the topics of gender and technology – which is difficult to transmit in a one-session class lecture. They compared theory on the gender digital divide with reality. They learned about gender inequalities at work and in education. Some of them, after the experience in schools with a great diversity of social backgrounds, even reflected on other intersectionalities such as origin or class, indicating ICT jobs as a possible tool for social mobility to overcome or at least mitigate inequality. Actually, their project grades, presentation grades, and, consequently, final grades were considerably higher than the class average.

The following quotation shows that our students were able to link the high school students' debate on (gendered) choice and preference to broader theoretical debates on

structure and agency, present in both sociological and feminist theory: “[the S-L workshop] helped me to rethink issues such as: do we really choose things because we want to? Or, how much influence does tradition, culture or the environment that surrounds us have when deciding what we are going to do?” (participant 3, 18/19) Some of our university students were surprised about the remaining force of gender socialization and the biases in preferences for future jobs, others were surprised how accurately theory has foreseen reality at school and others were shocked about openly anti-feminist positions among mainly, but not only, male students. A group of students said that thanks to their intervention and the students’ reaction they became aware of epistemological risks of research. In their opinion, they departed from an androcentric point of view – analyzing the lack of women in technologies – instead of centering the debate on the inclusion of women in technology. Some even questioned binary gender and the lack of available data to work on in schools. In this sense, our students affirm that through S-L they entered into dialogue with others as well as with themselves, engaging by this in a powerful epistemological process as it is also described by Marullo et al. (2009). In this sense, the forgoing research can be clearly confirmed, as it states that S-L helps to better comprehend and learn sociological and gender issues (Mobley 2007; Marullo et al. 2009; Martin and Beese 2016; Garoutte 2018).

#### *Acquired Competences*

Another constant in our students’ reflections was the abundance of references to different skills, especially communication skills. All of our students articulated that they improved their communication skills, such as speaking in front of a group fluently, were able to moderate and to stimulate debate or to present clear and precise results on a complex and controversial topic. All of them developed strategies empowering the participants to express their opinion. They showed a strong commitment to generating debate and reflection, as well as to

transmitting content. A reflection by one of our students strongly engages with her aim to create dialogue and deal with conflict:

One of the points that personally caused me certain hesitation, is the fact of thinking about how to introduce the concepts without anyone feeling attacked, without anyone getting defensive. I think that to build a space for debate it is necessary for people to feel included in it and we kept in mind all the time that it was not only important to put the arguments on the table but to do so in such a way that at least they were heard. The resistances that appear in the face of any discourse that breaks with the rules are inherent in power structures. In a hyper individualized model it is complex to point out to people that their opinions are not just their own, that they come from a context and a story (or stories, the one that is told and the ones that have not been wanted to be told). That's why I think the question is a great tool for fighting these resistances (participant 6, 19/20).

Though a lot of them revealed a wish to have a broader pallet of pedagogical techniques, which may confirm the theory that students often lack pedagogical techniques (Blouin and Perry 2009), we were actually very impressed with the wide range of pedagogical methodologies they displayed with confidence (e.g., using games, giving the whole workshop a coherent and adequate structure for a class, managing discussions by maintaining equal participation and dealing with resistances).

On a more personal level, S-L helped our students to put into practice their empathy and many of them took the chance to enter into dialogue with themselves as well. Our students tried hard to put themselves in the place of others. In this sense, they constantly referred to the school students' situation in their self-reports, exposing a process of willingness to understand them. For example, one student claimed:

To capture the moments when young people are thinking, conflicted. Being by their side during the process of reflection because I feel that accompanying people in their reflective development on an issue that necessarily unbalances their own thoughts, their ideas and, finally, their whole life, is almost as important as the development of the activity itself (participant 2, 17/18).

Their reflections moved on to a very personal level, expressing what the S-L experience meant to them and what they thought it meant for the school students. Some even considered themselves ideal moderators because they were closer to the students than



ordinary teachers were. Therefore, it is clear that our students acquired and improved empathy competences in engaging with a process of cooperative learning (Marullo et al. 2009).

Finally, they argued that S-L tested them, and they were able to overcome shyness, become empowered and manage situations of stress and exposure like stage fright. Being a reference to others, being responsible for a small learning unit or for a class made them feel more secure in themselves and boosted their self-esteem, once they had completed the activity. One student claimed that, *“having contributed to something useful to the students we interacted with increases self-esteem”* (participant 1, 19/20). In this sense, theory is confirmed when S-L is presented as a tool that enhances self-awareness (Huisman 2010) as well as empathy and empowerment (Hochschild et al. 2014; Martin and Beese 2016).

#### *Professional Orientation*

Some students referred to this S-L experience as one that helped them to decide their professional future. Some of our students mentioned that after this S-L they knew they did not want to become teachers. However, the majority saw in this a possible future job as the following quotes shows. *“I had always said that I could not work as a teacher, but I have to admit that this experience has shown me the gratitude of training the young women of the future and how through trust with the group, a very favorable environment for learning has been created”* (participant 5, 18-19). In this sense, our S-L projects can help them in terms of professionalization as already shown by other authors (Moblely 2007).

#### *Final Remarks Through Pink and Purple Lenses*

Finally, regarding these experiences by sex of the students, we would like to highlight three aspects. Firstly, the majority of the university students who engaged in this S-L experience were women. Only four out of 19 students were men, therefore 21 percent were men and less than the percentage of men in class, confirming a greater interest in S-L among women (Chesler and Scalera 2000). Even if we did not specifically ask for sexual orientation and/or

gender expression, some of them considered themselves LGTBIQ\*. Secondly, we observed a similar acquisition of knowledge and skills among genders. However, more women expressed the unfairness of the inequalities against women and stressed the need for an urgent and specific change regarding feminism. Finally, even if men were a minority, they realized they took or were given more space and authority when giving the talks. However, with so few men participating, we need further research to be conclusive in this regard.

Summing up, S-L experiences proved to be very useful for the learning of our students, both in terms of content, as well as skills. Our students went far beyond the curriculum and easily integrated the course content. Additionally, they acquired key competences in communication, critical thinking and professionalization as well as self-reflexivity and empowerment, which can be more difficult to promote in a traditional teaching environment at our universities. Even if some gender differences persist, the experience base of S-L clearly makes a difference and encourages students' motivation, making them enthusiastic participants of a project embedded in a broader vision of social and gender change.

#### S-L EXPERIENCE FROM THE POINT OF VIEW OF THE HIGH SCHOOLS

The community evaluation fulfills multiple functions. On the one hand, this helps us to understand to what extent our S-L became an enriching experience for both, university and community, in this case schools. On the other hand, it also gives us some hints about the accomplishment of the learning goals we marked for our students, especially in terms of skills.

Considering the community impact, according to the teachers the results were very good on a scale of 0-10 (0 I do not agree at all – 10 I totally agree). In any S-L project, meeting the needs of the demanding entity is central. In this regard, from our previous communications before the workshops with the teachers, we know they were worried about

the low numbers of girls choosing technology studies, as well as about gender inequalities in general. The teachers' scores for the adequateness and the utility of the workshop were over 8 and they also considered that the workshops correctly adapted to the annual curriculum with similar high scores. The general evaluation of the workshop was again high according to the teachers and we observe no clear gender differences. Only the management and general organization of the workshop were evaluated as only adequate for the last year. The political situation during that semester might explain the organizational difficulties encountered that year<sup>3</sup>.

If we take into account teachers' evaluations of our university students' workshops, their communication skills were always evaluated over 7 (on a 0-10 scale), between very good and excellent, in terms of adequate language, good transmission and flexible resolution of doubts. The pedagogical aspect of motivating methodologies and participatory dynamics received quite good ratings as well, except for the last year where they were evaluated as only adequate. This might be related to the discomfort encountered, by both university and school students, when tensions appeared with some antifeminist claims. Surprisingly, the flexible resolution of doubts is unaffected by this incidence and remains well evaluated for all four years.

If we consider students' assessments, they evaluated the workshop high as well. In all years, the general evaluation was over 7, which still can be considered a very good result on a scale of 0 to 10. The topic was considered interesting and the general evaluation was good throughout all four years. Only the utility and the novelty of the content was just adequate in some cases. These results are good enough to consider the project successful and the community satisfied, but they leave space for improvements considering the utility and novelty of the content.

We also examined if there was a differentiated evaluation by gender and we observed no relationship between sex-gender, considering the whole group. However, once we disaggregate by year, we can observe that sex-gender made a difference in the evaluation of the workshop.

In the first two years, girls assigned lower scores to various items in the workshop, while in the last years boys assigned lower scores to the workshop. In the first year, boys evaluated the workshop and our students' explanatory skills much higher than girls did. In addition, they evaluated the content as more comprehensible and newer. The dynamics were considered more participatory, as well. However, we did not encounter any solid explanations for that through the qualitative comments. In the second year, boys still evaluated the content more comprehensible, as well as the participatory dynamics and transmission of content. In the third year, we could not observe any correlation between sex-gender and scores. In the fourth year, though, the tendency of the first two years flipped around. This last year girls evaluated the workshop slightly higher. They considered the topic more interesting, the content more comprehensible, and the workshop more useful and made a more positive general evaluation. If we take into account their qualitative comments at the end of the survey, as well as our university students' self-reports we can find some possible explanations to this. Some of our students outlined the difficulty of dealing with antifeminist arguments in the last course, at the same time as some school students complained of a discourse of female superiority. There might be different ways to understand what happened. One could relate to the gender of the person who gave the workshop. In the first three years, there was always at least one male university student giving the workshop. This could have had a calming effect on some of the boys. The other explanation might be more macro and related to the current Spanish context. As a reaction to gender advancements in recent years in Spain, new extreme

right political parties and media embraced the antifeminist agenda and just recently gained institutional and discourse power (Carreras 2019; Chávez Molina and Vergés Bosch 2019).

*Insert Table 2 here*

In spite of the limitations to introduce a greater gender diversity approach in our analysis, we wanted to include the very few answers by the participants who refused to fill out the sex-gender questions or wrote trans\*, question marks or non-binary categories on it. We detected 14 responses over all four years, which corresponds to a 4,9 percent of all the responses. Non-binary identified students are present in all four years varying from 2,1 to 7,7 percent in every year. In comparison with the rest of the students, those who avoided a binary answer were associated with less interest in the topic and lower scores in the general evaluation. In the rest of the answers we could not detect any statistically relevant difference. From the information contained in the survey we cannot give a solid explanation to this. However, it is still relevant to highlight these differences that might be related to rejection of binarisms, but also to marginalization or fear (Donahue 2018). Following Donahue (2018) and Mitchell and Soria's (2019) claims, we need to integrate them better in the future.

## DISCUSSION

In Spain, S-L is just starting to become an innovative teaching and learning methodology that has recently been growing in our universities. Therefore, our results provide new information on the topic for a context rarely covered in international journals and can inform future S-L projects. Our results confirm the benefits of S-L for the learning of our university students, as well as for the community. Our results especially stress the need to strengthen the alliance between S-L and feminist research and teaching methodologies. We introduced the gender perspective in the implementation and assessment of S-L experiences. In this evaluation, we used a mixed-method analysis of quantitative and qualitative data. Even if the analysis was limited to our case and therefore cannot be generalized, our results still hold general interest

(Flyvbjerg 2004; Verd, Barranco, and Moreno 2007) and contribute to the body of research into S-L and Sociology, as well as the incipient research regarding feminist S-L.

This S-L experience proved to be a motivating and powerful tool to learn Sociology, specifically sociology of gender content. Similarly, S-L has been useful in improving skills such as communication, reflexivity, empathy, social responsibility, self-efficacy and critical thinking. In addition, S-L served as a professional orientation for our students. Therefore, our research confirms previous literature regarding the benefits of S-L for learning in the fields of Sociology (Mobley 2007; Marullo et al. 2009; Garoutte 2018) and Gender and Women Studies (Novek 1999; Evans, Ozer, and Hill 2006; Dugger 2008; Huisman 2010). However, S-L is not just about benefits for university students and, therefore, community matters (Blouin and Perry 2009). Our data and analysis show that S-L is useful and responds to community needs. Moreover, our results make clear that future research on the community impact and learning impact should be attentive to the gender transformations to maintain the S-L commitment to social responsibility and feminist advocacy (Novek 1999; Walker 2000). This situates S-L as a piece of a broader process of social and gender transformation in which, in this case especially, university and school students were the main subjects of such transformations.

We implemented the S-L with a gender perspective, but we especially innovated in evaluating it through gender lenses as well. In all, gender became a crucial variable, from the design of the S-L experience to its implementation and its evaluation.

Our results confirm that women engage in greater numbers in S-L experiences, but both women and men can improve their knowledge regarding Sociology of Gender topics. Our results also show that one of the limitations in the implementation of S-L in a gender perspective is the growing resistance influenced by antifeminist agendas. Finally, our results show the limitations we still encounter in including and understanding minoritized sexual and

gender identities and therefore, we urge to find ways to integrate that in future actions and research. In this sense, not only future S-L projects with a gender perspective along the process are needed, but it becomes necessary to include LGTBIQ\* perspectives, as well as gender intersectionality in the design and analysis. This means, on the one hand, to stress gender and diversity in technology apart from just women in technology. On the other, we ought to give tools to our students to allow students who identify as gender non-binary to express themselves and fully participate in our S-L experiences.

#### ACKNOWLEDGEMENTS

We want to thank all the students involved in this S-L experience, as well as the teachers and professors involved in the Compartir Idees Program.

This article was elaborated in the context of the teaching innovation project Compartir idees (Sharing ideas) of the University of Barcelona (2015PID-UB/150).

#### NOTES

1. GENTALENT: Women's talent to create the technologies of the future (in Catalan).

Available at: <https://www.youtube.com/watch?v=DrYU8ciaB78>

2. The teaching innovation project "Sharing Ideas" (2015PID-UB/150) has been officially recognized and financed by the University of Barcelona. The project implies research for monitoring and evaluating the project. It fulfills with the ethical standards of the University of Barcelona (Ethic Code). Participants have been informed about the use of their data and anonymization has been guaranteed. The project respects the confidentiality of the participant's data and the use of this data is restricted to academic purposes.

3. In October 2019, the main Catalan political leaders, including the president of the Catalan parliament, were sentenced to prison on the grounds of sedition. With the consequent political fights, educational activities in high schools and universities were affected for some weeks.

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END MATTER

**Table 1**

*Workshops and Assessment Materials used for the Analysis*

	2016 / 2017	2017 / 2018	2018 / 2019	2019 / 2020
N. Workshops	1	2	4	6
N. High schools	1	2	1	2
N. University Students	3	5	5	6
Self-Reports	1	5	5	5
Surveys (High school teachers)	-	2	1	5
Surveys (High school students)	26	47	87	123

Source: Author's Elaboration

**Table 2***Mean of the High School Students' Evaluation by Sex/gender and Year*

Year	Item	Mean Boys (0)	Mean Girls (1)	Mean Binary (0)	Mean non- binary (1)	Mean total
2016	Interesting Topic	7.7	6.6	7.3	6.0	7.2
-2017	Comprehensive content	8.4*	7.0*	8.0	9.0	8.0
	New content	7.2*	4.8*	6.4	4.5	6.2
	Workshop utility	7.2	6.0	6.8	4.5	6.6
	Transmission of content	8.6	7.5	8.2	9.0	8.3
	Participatory dynamics	9.1*	7.8*	8.6	8.5	8.6
	Receptive attitude of speakers	9.0	9.1	9.0	9.5	9.1
	Good explanation skills	9.1**	7.5**	8.5	8.5	8.5
	General Evaluation	8.6**	6.9**	8.0	6.5	7.9
	2017	Interesting Topic	8.4	7.5	8.0	7.0
-2018	Comprehensive content	9.0**	7.4**	8.3	8.0	8.3
	New contents	7.2	6.2	6.8	3.0	6.7
	Workshop utility	7.7	6.5	7.2	6.0	7.2
	Transmission of content	9.1*	7.6*	8.5	7.0	8.5
	Participatory dynamics	8.4*	6.9*	7.8	6.0	7.8
	Receptive attitude of speakers	9.1	8.1	8.7	7.0	8.6
	Good explanation skills	8.8	7.6	8.3	5.0	8.2
	General Evaluation	8.4	7.5	8.0	7.0	8.0
	2018	Interesting Topic	7.5	7.5	7.5*	5.6*
-2019	Comprehensive content	8.2	8.5	8.4	8.0	8.4
	New contents	7.3	7.7	7.5	6.0	7.4

	Workshop utility	6.9	7.5	7.2	6.9	7.2
	Transmission of content	7.8	8.7	8.3	8.1	8.3
	Participatory dynamics	7.6	8.4	8.1*	6.0*	7.9
	Receptive attitude of speakers	8.5	8.9	8.7	7.5	8.6
	Good explanation skills	8.3	8.8	8.6	8.1	8.6
	General Evaluation	8.2	8.7	8.5*	7.1*	8.4
2019 -2020	Interesting Topic	6.5**	7.9**	7.3	6.0	7.2
	Comprehensive content	7.2**	8.6**	8.0	8.3	8.0
	New content	7.1	7.4	7.3	8.8	7.3
	Workshop utility	6.4*	7.3*	6.9	7.0	6.9
	Transmission of content	7.9	8.3	8.1	9.8	8.2
	Participatory dynamics	7.1	7.5	7.3	8.3	7.4
	Receptive attitude of speakers	8.0	8.6	8.3	8.0	8.3
	Good explanation skills	7.8	8.2	8.0	8.8	8.1
	General Evaluation	7.6	8.3	8.0	7.8	8.0

Scale: 0 = I do not agree at all; 10 = I totally agree

\*  $p > 0.05$  (bilateral) significance.

\*\*  $p > 0.01$  (bilateral) significance.



## APPENDIX A: HIGH SCHOOL QUESTIONNAIRES

### Figure 1

#### *Questionnaire High School Students*

Title of the workshop \_\_\_\_\_ [open-ended response]

Name of the institute / school \_\_\_\_\_ [open-ended response]

Course and group \_\_\_\_\_ [open-ended response]

Date \_\_\_\_\_ [open-ended response]

Sex \_\_\_\_\_ [open-ended response]

Please indicate on a scale from zero to ten the degree of (dis-)agreement with the following items (*0 = I do not agree at all – 10= I totally agree*)

1. The topic was interesting. [scale from 0-10]
2. I understood the content developed in class. [scale from 0-10]
3. I learned new content. [scale from 0-10]
4. The workshop resulted useful for me. [scale from 0-10]
5. The monitors know how to transmit the content. [scale from 0-10]
6. Participatory dynamics were implemented. [scale from 0-10]
7. The monitors had a receptive attitude and responded to the questions we asked them.  
[scale from 0-10]
8. I liked the way they explained. [scale from 0-10]
9. General evaluation of the workshop. [scale from 0-10]

Please respond the following questions briefly

- What did you like the most? [open-ended response]

- What needs to be improved? [open-ended response]
- What other workshops would you like to have? [open-ended response]

## Figure 2

### *Questionnaire High School Teachers*

Title of the workshop \_\_\_\_\_ [open-ended response]

Name of the institute / school \_\_\_\_\_ [open-ended response]

Course and group \_\_\_\_\_ [open-ended response]

Date \_\_\_\_\_ [open-ended response]

Sex \_\_\_\_\_ [open-ended response]

Please indicate on a scale from zero to ten the degree of (dis-)agreement with the following items (*0 = I do not agree at all – 10= I totally agree*)

1. The previous information and management of the project has been adequate. [scale from 0-10]
2. The workshop responds to the students' needs. [scale from 0-10]
3. The content developed in class corresponds to the curriculum. [scale from 0-10]
4. Monitors were able to transmit the content. [scale from 0-10]
5. The vocabulary they used was comprehensible. [scale from 0-10]
6. The methodology they used was motivating. [scale from 0-10]
7. Monitors implemented participatory dynamics. [scale from 0-10]
8. Monitors resolved doubts flexibly. [scale from 0-10]
9. The workshop is useful for the students. [scale from 0-10]

Please respond the following questions briefly

- What did you like the most? [open-ended response]
- What needs to be improved? [open-ended response]
- What other workshops would you like to have? [open-ended response]