

# BENEFITS AND IMPLICATIONS OF A HYBRID SERVICE-LEARNING MODEL

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## Abstract

Service-learning (S-L) is an innovative pedagogical approach that integrates meaningful community service or engagement into the curriculum with the intention to ensure equal benefits for the provider and the recipient of the service and equal focus on both the service and the learning process and outcomes. Though the impact of traditional (face-to-face) S-L on student social, civic, personal, and academic outcomes is well studied, the area of e-service-learning (full-online or hybrid model) is still under-researched. Since online learning has significantly grown within the last two decades (and demonstrated exponential growth within most countries in the last 2 years due to corona pandemic) the following question arises: does e-service-learning lead to the same beneficial outcomes as the face-to-face S-L, or does physical contact with the community (i.e. lack of it) significantly effects obtained outcomes? The opportunity to further investigate this issue presented itself when an elective course Service-learning and social interventions, designed for the first-year social work students, piloted a hybrid model as a response to corona pandemic conditions. This work aims to explore the benefits of introducing the S-L method to first-year university students and to investigate possible moderation effects related to the modality of students' engagement in the community.

In accordance with the quasi-experimental design, 22 students (11 in a full online S-L model group and 11 in a hybrid model group) voluntarily participated in 2 measurements – one at the beginning and the other at the end of the S-L course. In both measurements, participants provided anonymous self-assessment of general self-efficacy, civic efficacy, social responsibility personal beliefs and values, participation skills and teamwork therefore mixed factorial ANOVAs were conducted to provide an answer regarding the problem of the study. Analysis of the main effects revealed that S-L experience did not significantly affect general self-efficacy and social responsibility personal beliefs, but it did enhance civic efficacy ( $F(1, 20) = 10.69; \eta^2_p = 0.35$ ), social responsibility personal values ( $F(1, 20) = 6.56; \eta^2_p = 0.25$ ), participation skills ( $F(1, 20) = 18.12; \eta^2_p = 0.48$ ) and teamwork ( $F(1, 20) = 12.28; \eta^2_p = 0.38$ ). The only statistically significant interaction was found related to civic efficacy ( $F(1, 20) = 7.43; \eta^2_p = 0.27$ ), suggesting greater improvement in civic efficacy in the case of hybrid S-L.

Findings of the present study demonstrate that implementation of S-L (in both hybrid and full-online model) in the first-year study leads to enhancement in generic skills and civic beliefs and values, implicating desirable positive effects of this method - not just for social work students, but for students in other disciplines too. Additionally, results suggest that modality of S-L experience plays an important role in some areas (e.g., civic-efficacy) – indicating the need for further discloser of S-L modality-dependent variables and a requirement for consideration of an e-course-modifications related to desired course goals and outcomes.

Keywords: e-service-learning, civic-efficacy, moderator effect, participation skills, social responsibility personal values, teamwork.

## 1 INTRODUCTION

Service-learning (S-L) originates from America; rooted in the work of John Dewey and the concept of experience-based learning [1], this pedagogy (re)gain popularity at the end of the 20<sup>th</sup> century when one-way university service to the community started to shift towards a two-way interaction [2]. According to Jacoby, *service-learning* is “a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities intentionally designed to promote student learning and development. Reflection and reciprocity are key concepts of service-learning” [3, pp. 5]. Since it implies connection between the higher education institutions (HEI) and the community, S-L is considered as a powerful tool for developing the third (civic) mission of the university [4]. Contrasting US-based universities, academics in European universities traditionally tended to diminish the role of the HEI's third mission [5], hence embracing S-L pedagogy came at somewhat slower pace, with great variability across countries. This brought out the need for (international)

networking of scholars aiming to promote and support service-learning within European higher education institutions [6]. For Croatia, participation in the network gathered around the project Europe Engage [7] meant more scholars and community partners got informed and interested in S-L, resulted in over 150 eligible project proposals applied in HEI-CSO partnerships for the ESF call opened by the Government Office for Cooperation with NGOs of the Republic of Croatia in 2017, with aim to support partnerships between civil society organizations (CSO) and higher education institutions (HEI) for the implementation of sustainable service-learning programs [8]. Observed heightened HEI and CSO interest in S-L, along with students' lack of satisfaction with the outcomes of higher education [9] and expressed interest in S-L [10], [11] triggered the institutionalization process of S-L in Croatia (i.e. establishment of an Office for Service-Learning in University of Zagreb and the Center for Service-learning in the University of Split) in line with the Strategy of Education, Science and Technology adopted in 2014 [12].

Successful educational reform requires all actors to internalize the value of improved teaching and learning, along with all the elements this process implies – and this is more likely to occur when they experience it is related with their basic psychological needs being satisfied [13]. According to *self-determination theory*, when learning environment is focused on supporting autonomy (e.g. allowing self-regulated learning), competence (e.g. giving constructive feedback) and relatedness (e.g. supporting collaborative learning) this will facilitate students' academic performance, persistence and general well-being [14], [15], [16]. Characteristics of the S-L are in line with the self-determination theory hence, when S-L is conducted with respect to the key components of effective S-L programs [17], S-L is found to enhance learning climate [18] and produce numerous outcomes for the students included, not only academic, but also social, civic and personal ones [19], [20], [21].

With significant growth of online learning within the last two decades (and exponential growth in the last 2 years within most countries, due to corona pandemic) new typology of S-L emerged so, besides traditional (face-to-face) service-learning, literature search indicates several forms of e-service-learning, including several types of hybrid S-L models and so-called extreme e-service-learning model [22]. Though the impact of traditional S-L on student outcomes is well studied, the area of e-service-learning is still under-researched [23]. The following question arises: does e-service-learning lead to the same beneficial outcomes as the face-to-face S-L, or does physical contact with the community (i.e. lack of it) significantly effects certain outcomes – particularly ones related to social, civic and personal development? Though some authors found no difference between traditional and e-service learning in practical and interpersonal skills, citizenship and personal responsibility [24], more (quasi)-experimental research is needed in order to further investigate this issue. The opportunity for this presented itself when an elective course *Service-learning and social interventions*, designed for the first-year social work students, piloted simultaneously full online and hybrid model as a response to corona pandemic conditions. This work aims to explore the benefits of introducing (e-)service-learning to first-year university students and to investigate possible moderation effects related to the modality of students' engagement in the community. More specifically, we wanted to investigate:

- 1 Did experience with the S-L course effect students' general self-efficacy, and did this effect differ between full online- and hybrid model group? *We expected students' general self-efficacy would improve after attending the S-L course, and that this effect would not differ between full online- and hybrid model group.*
- 2 Did experience with the S-L course effect students' generic skills (participation skills and teamwork), and did this effect differ between full online- and hybrid model group? *We expected students' generic skills (participation skills and teamwork) would improve after attending the S-L course, and that this effect would not differ between full online- and hybrid model group.*
- 3 Did experience with the S-L course effect students' civic beliefs and values (civic efficacy, social responsibility personal beliefs, and social responsibility personal values) and did this effect differ between full online- and hybrid model group? *We expected students' civic beliefs and values (civic efficacy, social responsibility personal beliefs, and social responsibility personal values) would be more pronounced after attending the S-L course. Since direct involvement was found to be related to higher civic skills [18], we expected the S-L experience to have greater positive effect on the civic beliefs and values of the hybrid model group.*

## 2 METHODOLOGY

The course *Service-Learning and Social Interventions* was developed based on the model of “pure” service-learning [25] aiming to develop knowledge, skills and competences for providing service to community. Course content and literature were related to the subject of engagement with the

community, beneficiaries to whom the service was provided and the project management. The course was organized in partnership with four different organizations (three NGO's and a home for elderly people) that mutually differed in type of service they provide and in characteristics of their beneficiaries. Students were instructed to first choose the community partner who they want to do S-L project for/with, then to interview its representatives (co-mentors in each organization) in order to detect a need/problem in the community that needs to be tackled, next to propose a S-L project designed to help with identified need/problem, then to carry out and evaluate the S-L project, and finally to present the results of the S-L project to a broader audience. Students were required to work in teams, to reflect and critically think about each phase of their S-L experience (by means of work diaries and online group discussions) and to provide minimum 25 hours of service (each). During the S-L course students were applying knowledge and skills attained in courses *Introduction to psychology* and *Interpersonal communication*. Due to corona pandemic students attended classes in full online format instead face-to-face. In agreement with community partners - and with respect to current epidemiological measures, students who resided close to community partners and who expressed desire to provide service face-to-face were allowed to do so, while others provided service online. Total of 5 student teams (consisted of min 4 and max 7 members) conducted 5 S-L projects for/with 4 community partners.

## 2.1 Procedure

Data presented within this paper was gathered as a part of the larger project aiming to evaluate process of implementation and longitudinal outcomes of introducing service-learning to social work students. Only the part of evaluation procedure related to the aim of this paper will be described in the following section. All students who enrolled the S-L course *Service-Learning and Social Interventions* in the summer semester of the academic year 2020/2021 were sent an e-mail with an invitation to voluntarily participate in the evaluation process. If they decided to participate, they were directed to the online version of the questionnaire they were to fill in anonymously during the first week of the semester. Since data from two measurements were supposed to be matched, during first measurement participants were asked to create a code that would allow such matching. The second measurement occurred after the S-L experience i.e. upon completion of S-L course at the end of the summer semester, but before the examination period - to avoid possible interference of grades with evaluation process. Only students who were involved with S-L activities i.e. participated in the S-L course were sent a second e-mail with an invitation to participate in the second part of the evaluation, under the same conditions as previously. If they decided to participate, they were directed to the online version of the questionnaire, much alike the first one – only without the questions designed to obtain general information about the participant.

## 2.2 Instruments

The questionnaire used to collect the data presented in this paper was designed by the authors as a part of the greater S-L evaluation project; only the part of questionnaire related to the aim of this paper will be described in this section. The first part included questions designed to obtain general information about the participant (e.g. socio-demographic variables, average grades, volunteering experience), and the second part included several subscales intended to measure variables that were expected to change due to S-L experience. For the measurement of *general self-efficacy*, we used a 10-item scale constructed and validated by Schwarzer and Jerusalem [26], with internal consistency generally reaching between  $\alpha = 0.76$  and  $\alpha = 0.90$  and in the present study between  $\alpha = 0.72$  and  $\alpha = 0.75$ . The participant's task was to use a 4-point scale (1 – not at all true, to 4 – exactly true) for self-assessment of the level in which he/she relates to each statement; total score was calculated as a sum of all 10-item assessments, with higher score indicating higher general self-efficacy. To measure other five variables (participation skills, teamwork, civic efficacy, social responsibility personal beliefs and values) we used subscales constructed and validated by Syvertsen et al. [27].

*Participation skills* were measured by a 6-item scale, with original internal consistency  $\alpha = 0.90$  and in the present study between  $\alpha = 0.72$  and  $\alpha = 0.82$ . The participant's task was to rate how well he/she can do each skill using a 5-point scale (1 – I definitely can't to 5 – I definitely can); total score was calculated as an average assessment, with higher score indicating more developed civic skills. *Teamwork* was measured by a 3-item scale, with original internal consistency  $\alpha = 0.70$  and in the present study between  $\alpha = 0.61$  and  $\alpha = 0.68$ . The participant's task was to assess how much do following statements apply to him/her using a 5-point scale (1 – not at all like me to 5 – very much like me); total score was calculated as an average assessment, with higher score indicating more developed level of teamwork. *Social responsibility personal beliefs* were measured by a 4-item scale, with original internal consistency  $\alpha = 0.83$  and in the present study between  $\alpha = 0.65$  and  $\alpha = 0.84$ . The participant's task was to express how

much does he/she (dis)agree with each statement using a 5-point scale (1 – strongly disagree to 5 – strongly agree); total score was calculated as an average assessment, with higher score indicating more developed social responsibility personal beliefs. *Social responsibility personal values* were measured by a 4-item scale, with original internal consistency  $\alpha = 0.80$  and in the present study between  $\alpha = 0.82$  and  $\alpha = 0.85$ . The participant's task was to express how important are following issues to he/she using a 5-point scale (1 – not at all important to 5 – extremely important); total score was calculated as an average assessment, with higher score indicating more developed social responsibility personal values. *Civic efficacy* was measured by a 3-item scale, with original internal consistency  $\alpha = 0.84$  and in the present study between  $\alpha = 0.82$  and  $\alpha = 0.84$ . The participant's task was to express how much does he/she (dis)agree with each statement using a 5-point scale (1 – strongly disagree to 5 – strongly agree); total score was calculated as an average assessment, with higher score indicating higher civic efficacy.

### 2.3 Participants

Total of 34 first-year social work students enrolled in the S-L course received an invitation to fill in the questionnaire before the S-L experience, but only 26 of them decided to continue with participation in the S-L course during the semester and have accepted the invitation to fill in the questionnaire at the beginning of the semester. Most of the S-L course participants also accepted the invitation to fill in the questionnaire at the end of the semester, making the total of 22 students (one male) who participated in both measurements and were therefore included in the data analysis. Half of those 22 students participated in the S-L course *fully online* (both classes and service), and the other half took classes online but did the service face-to-face (i.e. *hybrid model*). Participants were between 19 and 24 years old ( $M = 20.00$ ;  $SD = 1.48$ ), half of them coming from smaller communities (1 000 – 10, three from even smaller ones (under 1 000 residents) and the rest coming from larger cities (above 10 000 residents). The same ratio was observed related to participants' self-assessment of the socio-economic status – with 11 participants declared average, 3 slightly beyond average, and the rest of them slightly above average socio-economic status. During their first year of study, participants scored average grades ranging from 2.5 to 4.0, 13 of them declared to have any volunteering experience – between 0 and 79 ( $M = 19.23$ ) volunteer hours reached during the last year.

## 3 RESULTS & DISCUSSION

Data was analyzed using the IBM SPSS Statistics 25 software. Since each student participated in two sequential measurements, and we were interested in possible moderation effect of modality, several mixed factorial ANOVAs (measurement period x modality) were conducted to provide an answer to the problems set in the present study.

### 3.1 General self-efficacy

To determine whether expected change in general self-efficacy occurred due to S-L experience, and if some differences in this effect emerged between full online- and hybrid model group (Table 1) a single mixed factorial ANOVA was conducted. Analysis revealed that S-L experience did not significantly affect general self-efficacy ( $F(1, 20) = 2.93$ ;  $p > 0.05$ ), nor was detected a significant difference related to the group modality ( $F(1, 20) = 0.06$ ;  $p > 0.05$ ).

Table 1. Descriptive statistics related to general self-efficacy before and after S-L experience in full online and hybrid group

	<i>modality</i>	<i>Before S-L M (SD)</i>	<i>After S-L M (SD)</i>
General self-efficacy	Full online s-l	19.73 (4.29)	20.05 (4.53)
	Hybrid S-L	17.82 (4.51)	19.27 (4.96)

Observed findings could be the result of the specificity related to both our sample and the context. Namely, when total scores are taken into consideration, relatively low levels of general self-efficacy are detected – this could relate to the characteristics of the adolescent sample with limited college experience (reduced exclusively to online courses) that spent more than a year in highly stressed and uncontrollable conditions related to epidemiological restrictions due to corona pandemics. Since the combination of all those elements is more likely to be related to learnt helplessness than high levels of

general self-efficacy perhaps the presence of other factors in the measurement suppressed the expected S-L effect on general self-efficacy. Also, although literature review suggest S-L enhances self-efficacy [20], [21] it is possible that those outcomes relate to different forms of *specific* self-efficacy more than *general* self-efficacy - which can be “conceptualized as being stable across time and situations” [28, pp. 26]. There are some findings that support such consideration – in which training interventions resulted in only slight improvement in general self-efficacy, while simultaneously resulted in large improvement related to specific self-efficacy [29].

### 3.2 Generic skills

Related to expected change in generic skills (i.e. participation skills and teamwork) due to S-L experience, and possible differences in this effect between full online- and hybrid model group (Table 2) two mixed factorial ANOVAs were conducted. Analysis has proven that S-L experience enhanced both participation skills ( $F(1, 20) = 18.12; \eta^2_p = 0.48$ ) and teamwork ( $F(1, 20) = 12.28; \eta^2_p = 0.38$ ), and it is worth mentioning that the size of this S-L effect is large. Interaction effects revealed that observed S-L effect was not moderated by the group modality – both in participation skills ( $F(1, 20) = 0.55; p > 0.05$ ), and in teamwork ( $F(1, 20) = 0.10; p > 0.05$ ).

Table 2. Descriptive statistics related to generic skills before and after S-L experience in full online and hybrid group

	<i>modality</i>	<i>Before S-L M (SD)</i>	<i>After S-L M (SD)</i>
Participation skills	Full online s-l	4.14 (0.43)	4.53 (0.37)
	Hybrid S-L	3.91 (0.72)	4.47 (0.46)
Teamwork	Full online s-l	4.52 (0.54)	4.88 (0.17)
	Hybrid S-L	4.36 (0.60)	4.67 (0.47)

Our findings are in line with the those obtained in the literature review, providing evidence that S-L experience in general leads to the improvement in soft skills [30], and pointing out that “e-service learning is able to influence students learning outcomes – especially their generic skills” [23, pp. 10]. These results are also an indicator that S-L course succeeded in organizing and performing activities that maximized positive effects on first-year students during corona pandemic. When regarded in the context of the self-determination theory, our results indicate that S-L course succeeded in supporting students’ autonomy (they were allowed a certain level of self-regulation during the S-L project implementation), competence (they were given constructive feedback related to S-L project implementation from both mentors and teachers) and relatedness (they were encouraged to work in a team and to maintain continuous contact with teachers, mentors and beneficiaries) [13].

### 3.3 Civic beliefs and values

To investigate whether S-L experience induced expected change in civic beliefs and values, and to determine whether expected differences in this effect occurred between full online- and hybrid model group (Table 3) three mixed factorial ANOVAs was conducted. Considering the fact that students in the full online group experienced no real (i.e. face-to-face) contact with the beneficiaries, we expected them to demonstrate milder (but still statistically significant) progress in social responsibility personal beliefs and values, together with civic efficacy in regards to students in the hybrid model group. Analysis revealed that though S-L experience did not affect social responsibility personal beliefs ( $F(1, 20) = 2.01; p > 0.05$ ), it did enhance social responsibility personal values ( $F(1, 20) = 6.56; \eta^2_p = 0.25$ ) and civic efficacy ( $F(1, 20) = 10.69; \eta^2_p = 0.35$ ) – with both effects being large. Contrary to our hypothesis, interaction revealed no moderation effect of the group modality in social responsibility personal beliefs ( $F(1, 20) = 0.89; p > 0.05$ ) and values ( $F(1, 20) = 0.87; p > 0.05$ ), but it did discover that S-L experience affected civic efficacy of the full online group differently than hybrid model group ( $F(1, 20) = 7.43; \eta^2_p = 0.27$ ). However, though we did expect this interaction to be significant due to little or no progress in the full online group – we expected both groups to have similar initial civic efficacy, which was not the case (Fig. 1). Therefore, results of the current study do not allow clear conclusions – it is possible that our hypothesis is correct and that S-L does not affect civic efficacy in full online group, but it is also likely

that such change was not possible due to unusually large initial civic efficacy (and therefore not much room for progress).

Table 3. Descriptive statistics related to civic beliefs and values before and after S-L experience in full online and hybrid group

	<i>modality</i>	<i>Before S-L M (SD)</i>	<i>After S-L M (SD)</i>
Social responsibility personal beliefs	Full online s-l	4.50 (0.51)	4.57 (0.48)
	Hybrid S-L	3.59 (0.79)	3.93 (0.92)
Social responsibility personal values	Full online s-l	4.77 (0.36)	4.93 (0.16)
	Hybrid S-L	4.16 (0.78)	4.50 (0.49)
Civic efficacy	Full online s-l	4.55 (0.43)	4.64 (0.46)
	Hybrid S-L	3.52 (0.94)	4.52 (0.60)

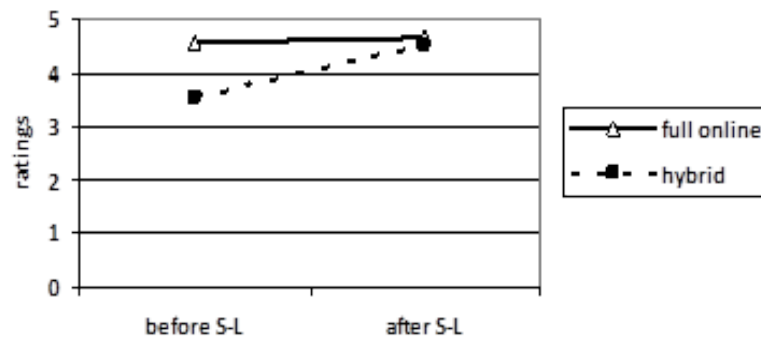


Figure 1. Percentage of students assessing the extent to which participation in the S-L course contributed to their sense of preparedness for working on projects, working with beneficiaries, and entering the labor market

It is possible that S-L did not affect social responsibility personal beliefs in this particular sample since social work students initially indicate high levels of social responsibility personal beliefs – which is related to their future carrier choice. In the context of the contribution to the third mission of the university it would be beneficial to conduct a research using same design and measures, but including cohorts of students with different characteristics to explore whether this variable remains unaffected by the S-L experience, or this effect depends on the characteristics of the sample in question. However, observed large effect sizes associated with change in the social responsibility personal values and civic efficacy suggest that (any type of) e-service-learning is a valuable tool that allows (even social work) students' internalization of community wellbeing goals. Namely, students engage in the community, making a difference by conducting a S-L project not only *for* the community but *with* the community, which both empowers and encourages them to tackle with the community problems and needs. Results of this study provide evidence that S-L pedagogy supports and promotes the third mission of the university, and facilitates students' civic role – to become active and engaged citizens.

### 3.4 Limiting conditions of the study

Several features of this study limit the conclusions about the benefits of service-learning in full online and hybrid format. First, though ANOVA is proven to be rather robust in similar/equal size conditions, and effect sizes we found are in fact large, the conclusions would be stronger if results were obtained on a larger, more heterogenous sample. Next, study included only treatment group i.e. students with the service-learning experience; though authors of this study do not believe it is likely that some other factor from student environment made such a profound effect on students' generic skills and civic beliefs and values – this cannot be proven without the control group. And finally, present study design limits conclusions only to immediate effects of S-L experience; to enable conclusions related to long-term effects of implementing S-L to social work studies and beyond, one should conduct a longitudinal study.

## 4 CONCLUSIONS

Findings of the present study demonstrate that implementation of S-L (in both hybrid and full-online model) in the first-year study leads to enhancement in generic skills and civic beliefs and values, implicating desirable positive effects of this method - not just for social work students, but for students in other disciplines too. Additionally, results suggest that modality of S-L experience could in some cases (e.g., civic-efficacy) play an important role – indicating the need for further disclosure of S-L modality-dependent variables and a requirement for consideration of an e-course-modifications related to desired course goals and outcomes.

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