Exploring the Effects of Semester-Long Service-Learning: A Study on Psychosocial Variables and Quality of Participation Experiences

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Abstract

Background: Service-learning is a widely adopted approach in higher education institutions globally, integrating civic engagement experiences into academic curricula while being responsive to the development of local communities. **Purpose:** This study aimed to assess the impact on students in participating in voluntary semester-long service-learning labs and courses in comparison to traditional labs and courses. **Methodology/Approach**: A quantitative online survey was administered to 110 students at the beginning and end of the lectures, investigating four psychosocial variables of citizenship: social justice attitude, cognitive empowerment, sense of community responsibility, and civic engagement. The post-survey also collected data on the participants' quality of participation experiences. **Findings/Conclusions:** Analyses performed on data revealed no statistically significant group differences over time in all examined variables, except for the quality of participation experiences, where service-learning students scored significantly higher than other students. Factors potentially influencing these results include the students' perception of their competence, the duration of the service-learning program, and relying on self-reported measures. **Implications:** This study contributes to the advancement of experiential learning knowledge emphasizing the significance of methodological rigor, underpinning a narrative that leverages failure to foster understanding. Future research could further explore the role of quality of participation experiences in service-learning experiences.

Keywords: Community psychology; European service-learning; Quality of participation experiences; Third mission.

Exploring the Effects of Semester-Long Service-Learning: A Study on Psychosocial Variables and Quality of Participation Experiences

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In the last decades, there has been a paradigm shift in the way higher education institutions (HEIs) are being positioned in relation to their regions or local community development (van Eeden, Eloff & Dippenaar, 2021). As a result, renewed interest in social actions as policy-oriented exercises for higher education institutions (HEIs) and community development arose, falling under the umbrella term "third mission" – knowledge exchange, the generation of public value, and the pursuit of societal impact (Fini et al., 2018). HEIs are currently recognized as active social actors in priming social innovation and sustaining community development (Knudsen et al., 2021). In this context, HEIs serve as knowledge repositories for students' future professions and careers while also advancing their citizenship, critical awareness, and agency through civically engaged activities (Mtawa & Nkhoma, 2020).

Service-learning (SL) is a strategy employed by HEIs globally to integrate civic engagement experiences into academic fields and address the needs of local communities (Chenneville, Toler & Gaskin-Butler, 2012; Folgueiras et al., 2020). It is recognized for fostering responsive knowledge, enhancing civic engagement, and linking the curriculum to community-identified needs (Conway et al., 2009). SL is also recognized as an effective pedagogical tool for psychology educators aiming to cultivate psychologically literate

citizens—students who, in addition to achieving fluency in their field, demonstrate compassion, engagement, and efficacy (Bringle et al., 2016).

Over the decades, many definitions of SL have emerged. However, an accurate and widely accepted definition identifies SL as a course-based, credit-bearing experiential learning strategy that enables students to participate in organized, civically engaging activities meeting identified community needs. They reflect on these experiences to enhance their academic, civic, and democratic understanding and develop an enhanced sense of civic responsibility (Bringle & Hatcher, 1995).

As emphasized in its definition, SL is not just about doing; it primarily occurs not solely through experience but through the reflection process (Jacoby, 2014). The reflective process involves regular and ongoing guided activities in which students examine their experiences (Butin, 2010). Reflection is one of the five pillars of the SL experience – together with relevance, respect, reciprocity, and relatedness (Compare et al., 2023; Butin, 2003).

Research findings regarding the impact of SL on students can be categorized into (a) personal outcomes, such as the improvement of self-efficacy, critical thinking, analytical skills, and the ability to create innovative solutions and problem-solving skills; (b) social outcomes, such as the ability to work independently and collaboratively, teamwork, and attitudes towards the communities they serve; (c) citizenship outcomes, such as social awareness, a sense of civic responsibility, civic engagement, and beliefs in social justice, attitudes, and critical understanding; and (d) academic outcomes, such as positive attitudes towards schools, increased motivation to learn, and the ability to apply knowledge in real-world contexts (Celio, Durlak, & Dymnicki, 2011; Compare & Albanesi, 2023; Faulconer, 2021; Salam et al., 2019; Yorio & Ye, 2012). Thanks to its reflective component, SL has been shown to contribute to a deeper understanding of structural social inequalities and sustain students' commitment to addressing injustice (Einfeld & Collins, 2008). Specifically, SL has been found to foster

students' awareness of social justice and civic responsibilities, providing them with first-hand experiences of how communities are affected by inequalities and helping them cope with the emotional toll of these issues (Grapin, Cunningham & Sital, 2021; Hamby & Brinberg, 2016; Ruiz-Montero, 2020). However, poorly structured experiences and reflections have been found to undermine students' learning and impede their commitment to justice (Compare & Albanesi, 2023). The variability of the effectiveness of service-learning experiences can be attributed to two principal aspects: the quality of participation experience and the relevance of the experience.

The first is connected to the idea that participation is not inherently beneficial; only high-quality experiences can yield positive effects. This concept extends beyond the scope of the SL experience. While most existing research highlights the benefits of participation (e.g., Ardoin, Bowers & Gaillard, 2023; González, 2021), other studies have suggested that participation can also lead to negative results (e.g., Menezes, 2003; Vieno et al., 2007). In youth participation research, Ferreira, Azevedo, and Menezes (2012) have identified criteria that can inform the developmental quality of participation experiences (QPE) in different contexts, namely the action and reflection dimensions. While the former is connected to the implementation of community actions and their continuity and duration over time, the latter is linked to the frequency of active engagement and the presence (or absence) of elements that facilitate reflection on the actions. Within this framework, it is only when participation provides experiences of reflexivity and personal construction and reconstruction of meaningful positions and commitments that benefits arise (e.g., better civically engaged attitudes; Ferreira, Azevedo, and Menezes, 2012).

The second aspect deals with connecting the deployed activities to the academic curriculum. Transformations cannot be a side effect of the activities; they must be intentionally guided. Ensuring the relevance of the experience involves accurate reflections made by

instructors, possibly engaging community partners while designing the activities to meet the objectives of the course (Butin, 2003).

Without the quality of participation and the relevance of the experience, learning outcomes are harder to achieve, and experiences can produce negative effects, including discouraging civic engagement or reinforcing stereotypes about underprivileged communities (Compare & Albanesi, 2023; Menezes, 2003).

In this study, we decided to focus on the citizenship outcomes of the service-learning experience. The UNESCO model of global citizenship education (UNESCO, 2015) was adopted to delineate the dimensions to focus on in assessing the service-learning effects on students concerning citizenship outcomes. The model identifies three learning domains:

1. Cognitive domain, which refers to knowledge, understanding, and critical thinking about global, regional, national, and local issues and the interconnectedness and interdependency of different countries and populations;

2. Socio-emotional domain, which refers to a sense of belonging to common humanity, sharing values and responsibilities, empathy, solidarity, and respect for differences and diversity; and

3. Behavioral domain, which refers to the capacity to act effectively and responsibly at local, national, and global levels for a more peaceful and sustainable world.

This paper builds on the literature in social and community psychology that has extensively studied the components of citizenship education outlined by the UNESCO model, as well as their associations with the well-being of individuals and positive youth development. Thus, for each domain, different operationalizations of the specific citizenship learning outcomes are proposed.

Service-learning and the psychosocial variables of citizenship

In this paragraph, we will describe the psychosocial variables of citizenship as they have been defined and operationalized within the framework of social and community psychology. The paragraph offers explicit connections between the selected variables and service-learning characteristics and prior studies. Regarding the cognitive domain, social justice attitudes and cognitive empowerment were selected, given their connection with critical thinking about the structures of injustice and the power dynamics within society. For the socio-emotional domain, the selected variable was the sense of community responsibility, connected to the sense of belonging and the responsibility dimensions. Lastly, for the behavioral domain, the selected variable was civic engagement, measuring behaviors of active engagement within the community.

Social justice

Social justice, according to Prilleltensky (2001), encompasses the fair distribution of burdens, power, resources, and rights according to individuals' needs, power, and their ability to articulate those needs. The purpose of social justice is to address and combat oppression and social inequality related to various social group identities, including race, ethnicity, gender identity, sexual orientation, and social class. Social justice aims to create an inclusive community where all individuals have access to equal opportunities to participate and access the necessary social and material resources while also fostering a critical understanding of the societal structures that shape their reality (Li et al., 2019).

Service-learning proved to be effective in supporting students' reflection and understanding of social justice (Butin, 2008), having the potential to change students' perspectives on marginalized groups through direct engagement with underserved and oppressed communities (Lee, Chang & Haegele, 2020). A recent systematic review outlined that service-learning contributes to (a) significant improvement in students' social justice beliefs, (b) initiation of changes in students' attitudes, development of altruistic behaviors, and commitment to social

justice, and (c) fostering students' critical understanding by prompting them to question their personal assumptions about inequalities (Compare & Albanesi, 2023).

Cognitive empowerment

Empowerment is a process that involves both external changes in power dynamics and internal psychological shifts. In this process, individuals or communities identify power-related goals, take actions to achieve these goals and reflect on the impact of these actions in relation to goal achievement (Brodsky & Cattaneo, 2013). Empowerment involves socio-emotional, cognitive, and behavioral dimensions. At the individual level, the intrapersonal socio-emotional dimension builds on socio-political control and self-efficacy; the interactional cognitive dimension entails critically comprehending social environments and sources of power, and the behavioral aspects include participatory and coping behaviors for social change (Zimmerman, 1995).

Thanks to its reflective component, service-learning is suggested to support students' empowerment as catalysts for change within local communities and to provide them with a greater degree of voice and ownership (Compare & Albanesi, 2022; Huda et al., 2018). Despite the connection between empowerment and other extensively studied concepts in the field of service-learning, such as self-efficacy (e.g., Gutzweiler, Pfeiffer & In-Albon, 2022) and critical understanding (e.g., Arinze et al., 2022), only a limited number of studies have explicitly explored the dimension of empowerment. In existing studies, empowerment has been recognized as significant in fostering high levels of commitment to future civic involvement (Knapp, Fisher & Levesque-Bristol, 2010). Furthermore, a qualitative study demonstrated how service-learning can serve as a means for students to learn about and experience empowerment concurrently, fostering a sense of mastery in serving recipients and facilitating community involvement and participation (Chan, Ng & Chan, 2016). The study emphasized the need for

further research on individual empowerment using experimental and quasi-experimental designs to understand better the impact of service-learning on this construct.

Psychological sense of community

The psychological sense of community construct includes belonging, group identification, interdependence, and mutual commitment (McMillan & Chavis, 1986). According to the community experience framework (Boyd & Nowell, 2017), community experience can be perceived through two dimensions: resource and responsibility. The resource dimension focuses on meeting psychological needs, while the responsibility dimension entails a personal commitment to community well-being unrelated to personal gain. Studies on these dimensions highlight the importance of community experiences in predicting well-being, civic participation, prosocial behaviors, leadership, and congruence within a social context (Compare et al., 2021; Boyd, 2015; Boyd & Nowell, 2020).

Fostering a sense of community among youth is a key driver of service-learning pedagogy (Speck & Hoppe, 2004). Existing studies show that active participation helps students learn about and develop civic engagement while fostering a sense of belonging to the local community and understanding their civic duty in addressing social issues (e.g., Furco & Root, 2012). However, only a few studies directly examined the service-learning impact on the sense of community (responsibility) construct (e.g., Compare & Albanesi, 2022). More often, research has focused primarily on the sense of belonging and responsibility dimensions, examining how service-learning can positively influence students' sense of community belonging by increasing community knowledge, forming connections with community members involved in the service-learning projects, especially for students with marginalized identities (e.g., experiencing discrimination and exclusion because of socio-economic and cultural background; He, 2019; Soria et al., 2019), and developing a sense of social responsibility (Coelho & Menezes, 2021).

Civic engagement

Civic engagement involves active participation in decision-making processes at institutional and community levels (Alam et al., 2022). In addition to fostering responsibility and social responsiveness in students, youth civic engagement has been associated with (a) a higher level of social and emotional development (Albanesi, Cicognani & Zani, 2007), (b) an increased likelihood of future civic engagement (Li & Frieze, 2016), (c) improved educational achievement (Ludden, 2011), and (d) an enhanced sense of social responsibility (Le, Johnson & Lerner, 2023).

Service-learning aims to develop students' civic attitudes, beliefs, knowledge, and skills so that they can effectively initiate positive social changes (Billig, Root & Jesse, 2005). Indeed, research indicates that service-learning has a significant impact on various aspects of civic engagement, such as attitudes and behaviors (Rimm-Kaufman et al., 2021). Moreover, service-learning has been shown to facilitate a greater understanding of community problems (Camus, Lam & Chan, 2021). Students also exhibit a higher appreciation for and commitment to future community engagement (Richard et al., 2016) and develop civic competencies through service-learning courses (Liu & Hsiung, 2019; Langhout & Gordon, 2019).

Purpose of the Present Study

The current paper aims to understand the effects of service-learning on four different psychosocial variables of citizenship, following a rigorous methodological approach. The variables under inspection are sense of community responsibility (SOCR), social justice attitudes (SJA), civic engagement (CE), and cognitive empowerment (CgE). While SJA and CE are constructs that have already been investigated, SOCR and CgE are completely new to SL literature. However, proxies of these dimensions can be found in existing literature (e.g., sense of civic responsibility and community belonging for SOCR, self-efficacy, critical thinking, and empowerment for CgE).

To pursue this aim, two groups were recruited: one group of SL students and one group of non-SL students enrolled in traditional labs and courses. The quality of participation experiences (QPE) was also collected to assess the perceived quality of the activities by the two groups. Relying on the presented literature, five hypotheses are posited:

H1. The experience will increase the QPE mean, resulting in higher scores for SL students compared to non-SL students.

H2. The experience will increase the SOCR mean, resulting in higher scores for SL students compared to non-SL students.

H3. The experience will increase the SJA mean, resulting in higher scores for SL students compared to non-SL students.

H4. The experience will increase the CE mean, resulting in higher scores for SL students compared to non-SL students.

H5. The experience will increase the CgE mean, resulting in higher scores for SL students compared to non-SL students.

The Context: Service-Learning in Practice

The Community Psychology team of the Department of Psychology, University of Bologna, supervises three 4-credit community psychology labs and two 3-credit transferrable competencies courses that offer service-learning experiences. While the labs are open to psychology students only, the transferrable competencies courses are open to all students enrolled in the university. Students can voluntarily sign up for these activities. Activities are generally structured so that ten hours are spent in class and at least twenty hours in the field. The in-class activities introduce students to the SL methodology and foundational concepts, including professional, democratic, and civic competencies. The importance of reciprocity in the university-community partnership is emphasized. Moreover, the relevance of civic engagement and responsibility is underscored, highlighting the agentic role students can adopt

during the SL experience to recognize and challenge systems of injustice and inequity that characterize the contexts they encounter. These dimensions of responsibility, engagement, and social justice are reprised during the group monitoring sessions, which students attend at least twice during the semester to reflect on their SL activities. The group sessions are guided by the faculty and follow the structure of the DEAL model proposed by Ash and Clayton (2009): describing, examining, and articulating the learning experiences. In addition to the group reflexive sessions, students are required to maintain a field reflexive journal throughout the experience. The aim is to encourage reflection on the deeper meaning of their actions within the community settings, the competencies they train and develop through service-learning, and how the academic theory can be translated into practice.

The field activities usually involve interacting with the members of the organizations and, in most cases, the beneficiaries of the SL projects (i.e., organizations' users and community members). However, there are also experiences where students exclusively engage with the local community organizations practitioners, aiming to enhance the organizations' practices and strategies to better meet users' needs. While the instructors define the learning outcomes of SL courses, the specific activities and the community/organizations' needs to which they (should) respond are determined by the local community organizations. When organizations design the field part(s) of the SL course, they are asked to reflect on and clarify how the proposed activities are relevant to students' learning and to what extent they contribute to the acquisition of specific competencies. The organizations identify one or more site supervisors who can provide ongoing reflexive sessions for students. These sessions help students develop a critical understanding of the community settings in which they are placed, fostering deeper reflection on their experiences and learning process.

Finally, to close the SL experience, there is a dedicated moment for students to share, discuss, and celebrate their experiences with the broader SL community, including other students

involved in different SL projects, organizations hosting the projects, various stakeholders collaborating with the local community organizations, and local and academic authorities. During this celebratory event, students can interact with individuals from diverse backgrounds and perspectives, fostering a rich exchange of ideas and insights. They can discuss their SL activities, the impact of their work on the community, and the lessons they have learned throughout the process. Importantly, the format and content of this event are co-constructed collaboratively by the students, site supervisors, and faculty members. This collaborative approach ensures that the event reflects the diverse experiences and perspectives of all involved parties, making it a meaningful and inclusive celebration of the student's achievements and contributions to the community.

While many local community organizations established long-term partnerships with the university, projects are implemented yearly based on the number of students and their preferences. Students are asked to select the organization they wish to engage with, considering their interests, personal and professional competencies, and attitudes.

During the academic year 2021/2022 (i.e., when data was collected), 21 projects were implemented, encompassing a diverse range of target communities. These communities included donor associations, older adults, children, teenagers within and outside school contexts, underserved communities, and migrants. The projects covered a wide spectrum of activities:

1. Preparing and executing sensitization campaigns for cancer and bone marrow donors.
2. Conducting interviews and structured observations about the housing needs of vulnerable populations.
3. Addressing socially vulnerable youth groups and their specific challenges.
4. Creating and administering surveys related to youth health and risk behaviors.

5. Implementing primary and secondary school interventions focusing on social media use and environmental education.

6. Organizing recreational and supportive activities for the community, such as film clubs and reading groups.

Throughout these service-learning activities, psychology students could apply their academic knowledge in community psychology, incorporating concepts like empowerment, sense of community, and critical awareness. These theoretical frameworks served as a foundation for understanding and engaging with the communities they worked with. Moreover, concepts of community profiling and community-based interventions and research guided students in their approach to understanding the specific needs and strengths of the target communities. Finally, all students, including those enrolled in the transferable competencies course, could reflect on and strengthen their civic and democratic competencies (e.g., perspective-taking, cultural background respect, civic-mindedness).

Method

Procedures

The study was conducted between November 2021 and June 2022. Two data collections were performed at the beginning and the end of the lectures of each course of the academic semesters (November-January for the first semester and March-May for the second semester). An anonymous online survey was proposed to university students enrolled in SL labs or courses (i.e., transferrable competencies course) and to university students enrolled in non-SL courses but attending other labs offered within the same master's degree or transferrable competencies courses within the same university. The online quantitative survey was designed with the help of the Qualtrics platform and administered at the beginning and the end of the labs or courses via email. Ethical clearance for the research was obtained by the Ethics Committee of the University of Bologna, and informed consent was collected from participants at the beginning

of the survey. To ensure the participants' anonymity while allowing the match between time 1 and time 2, students were asked to generate an alphanumeric code at the beginning of each survey (the first letter of their name, plus the second letter of their surname, plus the day and the last two digits of the year of birth). Considering both data collection, 305 participants completed the Time 1 survey, and 110 participants also completed the Time 2 survey, resulting in a retention rate of 36%. Therefore, the other 195 participants were excluded from the study. The a-priori power analysis performed on G*power 3.1 statistical software with a medium effect size of $f = 0.25$, indicated a sample size of 98 participants to achieve a statistical power of 80% to conduct repeated measures ANOVA. Therefore, the data collection satisfied the a-priori requirement.

Participants

The participants were 110 university students, of which 39.1% (n = 43) participated in SL activities. Respondents were mainly enrolled in master's degrees ($n = 84$, 77.8%), with the rest enrolled in bachelor's degrees (n = 24, 22.2%). Participants' main academic field was social science (e.g., clinical and community psychology, sociology; n = 63, 57.3%), followed by applied science (e.g., business, education, engineering; n = 33, 30%) and humanities (e.g., history, foreign languages, media; n = 14, 12.7%). Most participants were cisgender women (n = 87, 79.1%), and the rest were cisgender men (n = 23, 20.9%). Age ranged between 20 and 59 years ($M_{age} = 24.3$; SD = 5). Participants' nationality was mainly Italian (n = 105, 95.5%), with few exceptions (i.e., n = 5, 4.5%; Chinese, Egyptian, Polish, Romanian, and Sammarinese). A minority of students (n = 29, 26.4%) stated to belong to groups affected by one or more sources of systemic oppression (e.g., gender identity or sexual/romantic orientation discrimination, ableism, racism). The majority of respondents were full-time students (n = 81, 73.6%), followed by part-time workers (n = 22, 20%) and a minority of full-time workers (n = 7, 6.4%). Only a minority of students lived with their partners (n = 13, 11.8%) and had children (n = 2, 1.8%).

Measures

Aside from a section on socio-demographic information, the survey included measures of sense of community responsibility, social justice attitudes, civic engagement, cognitive empowerment, and quality of participation experiences.

Sense of Community Responsibility. To evaluate the sense of responsibility towards the community, we used the Italian version of the Sense of Community Responsibility scale (Prati et al., 2020). The scale consists of six items (e.g., "It is easy for me to put aside my own agenda in favor of the greater good of my community"). Answers were scored on a 5-point Likert scale, ranging from 1 (Completely disagree) to 5 (Completely agree). (α_{t1} = .78; α_{t2} = .77).

Social Justice Attitudes. To evaluate the attitudes toward social justice and systemic oppression, we used the Social Justice Attitudes subscale of the CASQ questionnaire (Moely et al., 2002). The scale consists of eight items (e.g., "We need to change people's attitudes in order to solve social problems"). Answers were scored on a 5-point Likert scale, ranging from 1 (Completely disagree) to 5 (Completely agree). (α_{t1} = .70; α_{t2} = .83).

Civic Engagement. To evaluate the behavioral component of civic engagement, we used the Behavior subscale of the Civic Engagement Scale (Doolittle & Faul, 2013). The scale consists of six items (e.g., "I help members of my community"). Answers were scored on a 5-point Likert scale, ranging from 1 (Completely disagree) to 5 (Completely agree). (α_{t1} = .76; α_{t2} = .75).

Cognitive Empowerment. To evaluate the perception of how social power functions, we used the Source of Power subscale of the Youth Cognitive Empowerment Scale (Speer et al., 2019). The scale consists of four items (e.g., "The only way I can improve my community is by working with other students and community members"). Answers were scored on a 5-point Likert scale, ranging from 1 (Completely disagree) to 5 (Completely agree). (α_{t1} = .70; α_{t2} = .70).

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Quality of Participation Experiences. To evaluate the students' perceived quality of participation upon completion of the activities, we used the Quality of Participation Experiences Questionnaire (Ferreira & Menezes, 2001). The scale consists of ten items (e.g., "During your experience, how frequently you felt that…divergent opinions generated new ways to look at issues"). Answers were scored on a 5-point Likert scale, ranging from 1 (Never) to 5 (Very frequently). ($\alpha = .84$).

Results

The descriptive statistics and correlations for the variables included in our study are displayed in Table 1. Low standard deviation values showed how the data are overall clustered around the mean. Mean values showed a general tendency of self-reported higher scores in the post-test in most of the considered variables –except for civic engagement in SL students. Bivariate correlations showed a tendency of fan-spread correlation change, that is, when a positive correlation is observed between initial status (i.e., precondition) and change (i.e., postcondition) (Petscher & Schatschneider, 2011). To test H1, independent t-test was performed for the quality of participation experiences, showing that the 43 SL students ($M = 3.39$, SD = .67) compared to the 67 non-SL students ($M = 2.91$, SD = .79) significantly scored higher in the dimension related to the quality of their experience, $t(108) = 3.25$, p < .01, confirming the first hypothesis. Other independent t-test analyses were performed on the other variables and showed no statistically significant difference between the two groups or comparing t1 with t2 in both groups. To test H2, we conducted a 2 (before versus after the courses) X 2 (SL students vs. non-SL students) repeated measures ANCOVA on SPSS 27 on sense of community responsibility, with the mean scores of the quality of participation experiences as a covariate. Results showed no significant interaction, $F(1,105) = 1.25, p = .26$, $\eta^2 = .012$. Therefore, H2 was not supported. We conducted a similar repeated measure ANCOVA on social justice attitudes to test H3. Results showed no significant interaction,

$F(1,105) = .38$, $p = .54$, $\eta^2 = .004$. Therefore, H3 was not supported. We conducted a similar repeated measure ANCOVA on civic engagement to test H4. Results showed no significant interaction, $F(1,105) = 2.39$, $p = .12$, $\eta^2 = .022$. Therefore, H4 was not supported. Finally, we conducted a similar repeated measure ANCOVA on cognitive empowerment to test H5. Results showed no significant interaction, $F(1,105) = .10$, $p = .75$, $\eta^2 = .001$. Therefore, H5 was not supported. Our results remain statistically non-significant even when we do not control for the quality of participation experiences.

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Discussion

Service-learning has been adopted by many higher education institutions worldwide to promote students' civic and democratic competencies while reinforcing connections with local communities and addressing higher education institutions' third mission (Folgueiras et al., 2020; Jacoby, 2014). While the literature extensively reports how SL influences students' democratic competencies and capabilities to think about themselves as active citizens (Geier & Hasager, 2020), this study offers a tempered perspective.

We found that the dimension of participation experiences differentiates the two groups, suggesting a generally higher quality of service-learning experiences than other learning activities. This result confirms our first hypothesis and is likely attributed to the ongoing reflexivity inherent in service-learning, as well as the students' involvement in working groups with practitioners. In these groups, significant attention is given to students' insights and suggestions to meet the needs of the communities. Service-learning differs from traditional teaching and learning methods due to its unique components. These components potentially support SL students in outperforming non-SL students in this dimension.

However, regarding the psychosocial variables of citizenship under inspection, the findings do not support H2, H3, H4, and H5, as we found no statistically significant differences

between students who experience SL and a comparison group of students not involved in structured civically engaged activities offered within academic curricula such as SL. These findings dissonate with previous findings on the SL positive impact on community belonging and sense of responsibility (Coelho & Menezes, 2021), social justice attitudes (Compare & Albanesi, 2023), civic engagement (Rimm-Kaufman et al., 2021), and empowerment (Chan, Ng, & Chan, 2016). It should be noted that these studies largely adopted qualitative design. Moreover, when quantitative research was conducted, it rarely included longitudinal data or comparison groups, and validated psychometric measures were not always included in testing the constructs under inspection. Given that our research adopted a more rigorous (quasi-experimental) design, should we conclude that service-learning does not influence the psychosocial variables of citizenship under inspection? We do not have a definite answer, and it is necessary to consider potential noise sources and areas for further research to clarify the data.

The timing of data collection could be one of the sources of noise. Indeed, existing studies suggest that SL effects require time to settle down and be recognized, such as personal development and the sense of civic responsibility (Hok-ka, Wing-fung & Cheung-ming, 2016). The duration of the SL experience might also have played a role. Studies identified engaging in shorter SL experiences that required fewer hours on the field as contributing to similar unexpected results (Knapp et al., 2010; Zucchero & Gibson, 2019).

If we examine the content, we should also question whether the reflection activities adequately emphasized concepts such as empowerment or social justice. It is possible that the constructs were not thoroughly articulated throughout these activities or that not all constructs received equal attention across all projects. If these aspects were not adequately addressed, students may not have fully understood how SL impacted them. Additionally, we should consider how the different groups approached the psychosocial variables of citizenship under

inspection, including the methods and approaches employed. It might also be that other courses and labs have included elements that resonate with the same constructs, and therefore the difference between the two groups was downsized. On this, it should be noted that the current study opted for control labs and courses as a comparison group that was hardly a control as we might traditionally think of it (i.e., lacking treatment). The control labs and courses were described as traditionally taught; however, we cannot exclude that the course content did not partially overlap with those introduced in the SL labs and course, as hypothesized in previous studies (see Fleck et al., 2017).

Answering these questions would require collecting different data to provide meaningful answers. In addition, we can consider other possible reasons that are entirely distinct. SL might have sufficiently addressed the constructs under inspection and sustained students in developing a more realistic evaluation of their behavior, beliefs, and attitudes at post-test, as hypothesized in other studies (see Osborne, Hammerich & Hensley, 1998). This might have fostered SL students to be more critical of their competencies and, therefore, moderated their t2 scores compared to inflated t1 scores (Kruger & Dunning, 1999). Still focusing on numbers, the high mean scores of t1 in the variables under inspection for both groups may have resulted in a ceiling effect that left little room for improvement, being it solely investigated through the quantitative scores of the psychometric scales. This may be especially true considering that we measured these variables with most students from helping professions who may identify as prosocial and community-oriented. In this sense, the inflated t1 scores could be coherent with this expectation.

By raising questions on what to consider when researching service-learning, this study made clear that to evaluate the impact on students, numbers are not enough.

This poses an interesting dilemma: on one hand, there may be doubts about the robustness of qualitative evidence, as other scholars have expressed. On the other hand, based

on our data, one may question the relevance of relying solely on quantitative data, especially when involving a restricted sample. It could be the case that to address this dilemma, we need to change our approach in terms of methodological rigor, methods, and perspectives. Perhaps we should not solely rely on students' perspectives, regardless of the method of data collection used, but also value the perspective of community site supervisors and instructors, who are trained to assess learning outcomes. It would be beneficial to delve deeper into the analysis of processes and their development in service-learning, as we need to also focus on understanding how these processes work and how they can be improved if we aim to maximize the benefits of service-learning. Adopting a participatory action research (PAR) process for evaluation could be a way to triangulate different perspectives, providing a broader and more nuanced understanding of the nature of change and how it occurs. Through PAR, the participants could also guide the identification of dimensions to be addressed and the methods to be adopted to maximize the understanding of the processes activated by the experience (see Lykes, 2017). While a PAR approach to evaluation may be costly, time-consuming, and require additional effort from scholars, it aligns more consistently with the idea of engaged scholarship that underlies the adoption of SL as a transformative pedagogy (where change is not solely students' responsibility). PAR would offer a clearer understanding of the impact of SL on students by collecting more diverse data, including qualitative accounts from different sources (e.g., students, instructors, and site supervisors), to complement quantitative measures.

Conclusion

The current paper aimed to understand the effects of civically engaged experiences such as service-learning in strengthening cognitive, socio-emotional, and behavioral citizenship outcomes as defined by the UNESCO model (2015). Four psychosocial variables of citizenship were investigated, namely sense of community responsibility, social justice attitudes, civic

engagement, and cognitive empowerment. Therefore, two groups were recruited: one group of SL students and one group of non-SL students as a comparison group. Moreover, building on the proposed literature, the quality of participation experiences was collected to assess the perceived quality of the activities by the two groups. Nonetheless, the study showed no statistically significant differences between the two groups on the variables under inspection, except for the quality of participation experiences where SL students outperformed non-SL students.

These findings differ from those in the existing literature, indicating that the experience does not lead to significant changes in students. It is important to note that previous studies have not specifically quantitatively tested the effects of service-learning experiences on complex psychological constructs, such as the sense of community responsibility and cognitive empowerment, between different groups.

The current methodology addresses previous research's weaknesses in methodological rigor and statistical power, but several limitations must still be acknowledged. The quasi-experimental design and the small sample size of each group limit our ability to infer causation and generalize the results. Although students from multiple courses participated, only one university was represented. All instruments were self-report measures, which could have resulted in response bias and only reflected the students' perception of their experiences. Moreover, given the small numerosity, service-learning courses were considered as a homogeneous sample. However, students engaged in 21 different projects that have helped them to reflect on various issues and topics in the field. Heterogeneity could have contributed to noise in the data analysis, potentially leveling the specific effects of experiences and resulting in tempered mean scores. No retrospective versions of the scales were included in the post-survey. This might have been problematic since the confounding factor of response shift bias has not been considered. Response shift bias occurs when the students' internal frame of

reference for the measured construct changes between the pre-survey and the post-survey due to the influence of the educational program or experience (Drennan & Hyde, 2008).

Future research should include larger samples and a time 3 data collection to control for long-term effects and measure multiple aspects of the sense of community and psychological empowerment. Moreover, researchers could gather information regarding students' civic engagement activities and explore their potential impact on the psychosocial variables of citizenship. A mixed-method design with qualitative components, informed by a PAR approach, might be more suitable for accurately interpreting the data. Finally, future researchers should consider employing retrospective and non-self-report measures, including assessing student outcomes on the same constructs from other perspectives (e.g., faculty members and community partners).

To conclude, is it possible for non-significant findings to hold any value?

We believe that this is indeed a possibility. This study formally acknowledges the potential variability in the outcomes of service-learning, but it also highlights the importance of recognizing both successful and unsuccessful experiences in the field. Although the findings might seem to have limited immediate implications for advancing the understanding of SL, the study provides a comprehensive examination of the various aspects that warrant consideration when conducting SL research rigorously, such as including retrospective scales, adding qualitative supplemental components for mixed-method research, and data triangulation by collecting perspectives from multiple actors. Emphasizing the significance of acknowledging unsuccessful or non-significant experiences in the literature, the study contributes to creating a new narrative that leverages failure to foster understanding. This approach supports a more holistic understanding of the complexities inherent in SL research, encouraging researchers to adopt a more thorough and critical lens, identifying potential pitfalls and limitations, rather than

adhering to a simplistic narrative that suggests SL always leads to expected and desirable change and that participation is always good.

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Table 1. *Descriptive statistics and correlations divided for groups*

	Group	Mean *(SD)* range 1-5	1	2	3	4	5	6	7	8
1. SOCR t1	SL	3.35 *(.70)*	—							
	non-SL	3.24 *(.65)*	—							
2. SJA t1	SL	4.26 *(.38)*	0.10	—						
	non-SL	4.27 *(.42)*	0.13	—						
3. CE t1	SL	3.34 *(.76)*	0.64***	-0.04	—					
	non-SL	3.20 *(.80)*	0.57***	0.28**	—					
4. CgE t1	SL	3.92 *(.70)*	0.34*	0.22	0.27	—				
	non-SL	3.74 *(.72)*	0.43***	0.17	0.16	—				
5. SOCR t2	SL	3.41 *(.67)*	0.63***	- 0.10	0.53***	0.23	—			
	non-SL	3.32 *(.59)*	0.63***	0.18	0.43***	0.40***	—			
6. SJA t2	SL	4.30 *(.67)*	0.19	0.41**	0.08	- 0.03	0.18	—		
	non-SL	4.36 *(.40)*	0.10	0.71***	0.19	0.17	0.10	—		
7. CE t2	SL	3.29 *(.74)*	0.42**	-0.05	0.68***	0.44**	0.66***	0.09	—	
	non-SL	3.25 *(.73)*	0.48***	0.41***	0.69***	0.18	0.60***	0.22	—	
8. CgE t2	SL	3.99 *(.64)*	0.27	- 0.13	0.23	0.45**	0.51***	0.09	0.45**	—
	non-SL	3.88 *(.59)*	0.21	0.26*	0.17	0.41***	0.24	0.45***	0.29**	—
9. QPE t2	SL	3.39 *(.67)*	0.23	- 0.14	0.26	0.15	0.48**	0.11	0.54***	0.36*
	non-SL	2.91 *(.79)*	0.09	0.25*	0.19	0.14	0.38**	0.14	0.43***	- 0.01

Notes. n_{SL} = 43; n_{non-SL} = 67. SOCR = sense of community responsibility; SJA = social justice attitude;

CE = civic engagement; CgE = cognitive empowerment; QPE = quality of participation experiences. (t1

= pre-survey; t2 = post-survey). * $p < .05$, ** $p < .01$, *** $p < .001$