Civic Attitudes and Skills Development Through Service-Learning in Ecuador

Karla Díaz, Nascira Ramia, Daniela Bramwell, and Felipe Costales

Abstract
A mixed methods study was conducted to determine if a mandatory hybrid service-learning course had an effect on the civic attitudes and skills of college students attending a private university in Ecuador. The Civic Attitudes and Skills Questionnaire (CASQ) was used in a quasi-experimental design using MANOVA with follow up t tests. After this analysis, results showed that civic action was not significantly different while the other five factors of the CASQ had a significant difference. A case-study interview approach was used for the qualitative portion, and students reported feeling engaged with the community and perceived a positive impact in each of the CASQ six factors: civic action, interpersonal and problem-solving skills, political awareness, leadership skills, social justice attitudes, and diversity attitudes.

Keywords: CASQ, service-learning, civic attitudes, higher education in Ecuador, community engagement

A private liberal arts university in Ecuador began using the service-learning model in 2011 as part of its General Education Program (Universidad San Francisco de Quito, 2017). In the summer of 2014, an initial mixed methods study was conducted to determine if the civic attitudes of students changed after taking a mandatory service-learning hybrid course. The Civic Attitudes and Skills Questionnaire (CASQ) developed by Moely, Mercer, Ilustre, Miron, and McFarland (2002) was used with a sample of 188 students before and after taking the course. A Wilcoxon signed ranks test was used to compare the medians of the pre and post measures, with the finding that Factor 2: Interpersonal and Problem-Solving Skills and Factor 3: Political Awareness had significant changes between the pre and post measure. However, this effect was not controlled for test–retest reliability. In-depth interviews were conducted with 11 students, and the majority reported being aware of their role in society and the social and political issues occurring within the country (Díaz, Ramia, & Garlock, 2017).

After conducting this first study, the researchers realized that the instrument required a careful translation and factor analysis prior to conducting further studies. Consequently, the instrument was translated using the forward-backward methodology, and the authors received the CASQ authors’ approval to use the new translated version. A factor analysis was performed before starting the current study, and the results of this analysis confirmed that no changes needed to be performed on the original CASQ version.

Research Questions
Two questions guided the current study, performed during the summer of 2015: What is the impact of a mandatory service-learning course on Ecuadorian college students’ civic attitudes and skills? How does the service-learning course transform students’ thinking and civic attitudes?

The literature review section presents an overview of service-learning outcomes, the difference between mandatory and
course-based service-learning, a discussion of civic attitudes and skills, the theoretical framework that consists of an analysis of the connection of service-learning with transformational and experiential learning theories, and the context of service-learning in Latin America. In addition, the methodology section includes information about the setting and context, a description of the participants of this study, and an explanation of the data collection process. Finally, the results segment presents the quantitative and qualitative findings from the deductive and inductive analysis.

Review of the Literature

The concept of service-learning has evolved since the development of land-grant colleges and the tradition of volunteerism and activism in the United States. Organizations such as Campus Compact formed in order to embrace service-learning as a methodology that promotes active and experiential learning while advancing cross-cultural and global understanding (Crabtree, 2008). Service-learning is now seen as a way to link instructional content with real communities outside the classroom through a planned reflection process that allows students to assess their assumptions about poverty, justice, democracy, privilege, and ethics, while benefiting communities in a concrete manner (Donahue, 2011; Steinberg, Bringle, & McGuire, 2013).

The reflection component is critical to service-learning. As Eyler and Giles (1999) mentioned, the hyphen in service-learning symbolizes reflection and the central role it should play in service-learning courses. Another essential aspect of service-learning is reciprocity. This entails that both students and community partners should benefit from this experience by clarifying service expectations. Service-learning can be a way to transform mental schemes into different ones that lead students to take action when working within a community (Donahue, 2011).

Impact of Service-Learning on Students

Various studies, focused on both undergraduate and graduate students mainly from North America, have found positive outcomes for students when using service-learning. Students who participate in service-learning report that they were able to apply knowledge and skills, to reflect critically, and to challenge their previous stereotypes (Strait, Turk, & Nordyke, 2015). Other benefits include overall better academic performance, transfer of learning into real contexts, enhanced communication, development of leadership skills, and more cultural awareness than students who were not exposed to this methodology.

A group of researchers followed students who took service-learning courses as undergraduates and found that after graduating their participation in civic activities increased within their communities, they maintained their teamwork abilities from their first service-learning experience, and they were better able to solve problems than students who did not participate in service-learning opportunities (Knackmuhs, Farmer, & Reynolds, 2017; Morgan, 2016). Another study with students who took an environmental class and completed a restoration project in a forest within their community reported having developed environmental awareness, problem-solving skills, and even continued to be engaged within their communities after the service-learning class ended (Knackmuhs et al., 2017).

The impact of service-learning has been studied across various disciplines including health care, social work, and information systems, as well as in interdisciplinary contexts where students are exposed to different knowledge areas and work as teams in their service-learning experience. For example, a group of information systems students perceived positive results after engaging in web development activities at a local community, reporting that they were able to transfer their learning into a real-world context (Lee, 2012). In another study, students in the health profession worked with interdisciplinary teams and reported improvement in their communication skills, improved collaborative working skills, enhanced community ties, and an increase in their social capital (Craig, Phillips, & Hall, 2016). Social work students who took a social policy class were able to connect theory to practice more effectively during their service activities through coalition building, using social media to draw attention to their cause, and writing concrete proposals (Lim, Maccio, Bickham, & Dabney, 2017).

According to Jacques, Garger, and Vracheva (2016), faculty leadership styles can influence the quality of the perceived impact.
of the service-learning experience. When instructors were motivated and dynamic, students’ overall experience was regarded as more meaningful. One case study conducted by Leon, Pinkert, and Taylor (2017) analyzed the experience of three instructors who implemented service-learning as a new methodology in their courses. The results showed similarities in terms of the positive outcomes found in students who participated. For instance, faculty reported being more adept at teamwork, more reflective of their teaching practice, and more critical and active within their communities.

Mandatory and Course-Based Service-Learning

There are various higher education initiatives around the world that incorporate global service-learning as part of the curriculum. For example, a group of U.S. engineering students participated in a service-learning experience in El Salvador as part of their senior capstone course, working with the community on various projects such as potable water solutions and soil analysis. There are also some challenges identified by faculty that include course-based service-learning experiences, as sometimes first-year students are not adequately prepared to be part of such an experience. Another challenge is having the time and resources to maintain a working relationship with a community partner to develop a long-term commitment (Siniawski, Saez, Pal, & Luca, 2014).

There is evidence of positive learning outcomes when a service-learning component is mandatory in a course. Researchers conducting a quasi-experimental study with pharmacy students concluded that the experimental group was able to demonstrate the knowledge and skills proposed in the learning outcomes better than the control group (Kearney, 2013). Another study with occupational health students reported the benefits of having students take different courses involving service-learning to achieve learning objectives that could not be accomplished inside the classroom, such as empathy with children and their families, awareness of how a community interacts, and understanding socioeconomic topics (Waskiewicz, 2001).

Furthermore, there is evidence that mandatory course-based service-learning components have an effect on student motivation and connection. A study with gerontology students supported the difference in outcomes when comparing a traditional course and a service-learning course. Those that took the service-learning class reported having questioned their stereotypes on aging and felt more engaged in their learning process as opposed to the group of students in the traditional class (Blieszzer & Artale, 2001).

Civic Attitudes and Skills and Service-Learning

Erickson and Anderson (2005) reported that students have to develop problem-solving skills among other skills to be successful citizens in the 21st century. One outcome that may result from a service-learning experience is appreciating the value of citizenship, or learning about the role of being an integral citizen. Other outcomes include attaining higher order thinking skills and becoming active citizens (Erickson & Anderson, 2005).

Theoretical Foundation

Transformational Learning

Professors can have an active role in promoting transformational learning through service-learning by planning specific discussion questions that promote reflection while confronting previous mental paradigms, enabling transformational learning moments to occur (Donahue, 2011). Paradigm shifts are possible after service-learning courses, as students have the opportunity to reflect upon their personal mental schemes, challenge the status quo, and look for answers to inequality, social injustice, and poverty, among others (Yep, 2011). Jacoby (2015) pointed out that critical reflection is key within service-learning programs. This type of reflection has to be a consideration and reconsideration of one’s views, beliefs, and values, and can be performed through speaking, writing, class activities, online discussion forums, or media and artistic creation.

Experiential Learning

Jacoby (2015) stated that there are multiple definitions of service-learning used by researchers and practitioners today. She defined service-learning from an experiential education perspective where there are experiences integrated within the structure of a program or course that promote reflection.
and learning along with reciprocity between the recipients and the providers of service. Service-learning is one of the most explicit forms of experiential learning. Students complete service hours in a community setting where they are transferring classroom learning and at the same time challenging their own assumptions through planned reflection activities (Hale, 2005).

Jacoby (2015) explained Furco’s (1996) model where service-learning is seen as a distinct, blended form of community-based work and experiential learning together, placed in between these two types of learning programs respectively. Considering community-based work on one side, there is volunteerism, which is providing a service without any reflection or applied learning. Then there is community service, which is focused on the benefit of the organization or community in a more structured way, but does not necessarily include reflection. Within experiential learning, there is the internship, where the focus is on the student or provider of the service and the emphasis is on learning from practical experience. In this case, learning may not be connected to a course or may not include a reflection requirement. Another form of this learning is course-based, where the service is connected to the curriculum or profession that is being learned. In between these two types of learning is service-learning, where there is a balance between the benefit to the student and the benefit to the community. Reflection is significant to service-learning because the program has to emphasize different types of learning objectives. Also significant is the reciprocity between the students and the community (Jacoby, 2015).

Context of Study
This study focused on an aspect of experiential and transformational learning that influenced the development of college students. The main objective was to find the impact a hybrid mandatory service-learning course had on the civic attitudes and skills of Ecuadorian college students.

Service-Learning in Latin America
Service-learning in Latin America has particular connotations that distinguish it from other service-learning practices around the world. The word service is used interchangeably with the word solidarity, where the work is performed between partners involved in an egalitarian relationship to seek the greater good rather than for an altruistic purpose (Tapia, 2010).

One of the first forms of service-learning in Latin America occurred in Mexico in 1910, where service hours were mandated for higher education students. This initiative was not service-learning as we currently know it; however, it was the start of the current use of service-learning in a higher education context in the Western world. The current Mexican model implies that all higher education institutions include some form of social service. For instance, one Mexican university requires its students to conduct their final research project by studying a relevant issue in a local community and sharing results with them (Tapia, 2016). In Argentina, the first record of using service-learning dates to 1978, and in Chile it started in 2000 (Tapia, 2007). Professors in a university in Argentina decided to incorporate an experiential class project where students were required to go into a community and make videos about current social issues that would benefit a particular community organization.

Another way of using service-learning is to incorporate this methodology into a practicum or internship class where students use knowledge and skills from their majors to create concrete projects for community partners. For example, education students in Argentina created material for a group of public school students with learning disabilities to help them reach their potential (Tapia, 2016). In Chile, the Ministry of Education provides funding for service-learning initiatives within higher education and promoted the implementation of service-learning programs in secondary schools through the Solidarity Schools program from 2002 to 2010 (Tapia, 2016). In Brazil, there is a law requiring inclusion of environmental education at all education levels, and some universities are using the service-learning model to fulfill this requirement (Tapia, 2016). Other countries, such as Uruguay, work closely with the Centro Latinoamericano de Aprendizaje y Servicio Solidario (CLAYSS; Latin American Center for Service-Learning) to implement service-learning programs in elementary schools (Tapia, 2004).

In Ecuador, the Organic Law of Higher Education was passed in 2010 in order to regulate both public and private universities. One of the components of the law
included community engagement as mandatory for all undergraduate students. Students must fulfill a community engagement requirement through both practicum and internship hours related to their fields of study and community needs (CES, 2017). The service-learning model is not included in this Ecuadorian law; however, a private Ecuadorian university has been using the service-learning model since 2011 (referred to as PASEC, Programa de Aprendizaje y Servicio Comunitario or Community Service-Learning Program) as a requirement for all undergraduate students (USFQ, 2017).

Tapia (2004) suggests that one of the particular characteristics of service-learning in South America is inclusiveness, since the vulnerable population is going to be actively participating in the service-learning project and the students participating are also facing social problems of their own. Thus, service-learning activities in Latin America are usually targeted toward pressing problems such as poverty, hunger, and unemployment, where students work with a particular community group in order to find common ground and solutions to their particular issues. Universities in Latin America tend to organize service-learning opportunities through student unions or extracurricular departments that are not part of a particular school or a university program (Tapia, 2004). Both mandatory and voluntary service-learning options are found within higher education institutions in Latin America with no conclusive evidence concerning which has a more significant impact (Tapia, 2007).

Methodology

Participants

Demographic information about the sample can be found in Table 1. The total sample size was 396 students. There were 176 (44.40%) participants in the control group and 220 (55.60%) participants in the experimental group. In total, there were 218 (55.10%) female students and 171 (43.20%) male students. However, 7 students did not specify a gender (1.7%). The average age from both groups was 20 years old.

In the control group, the age range was 18 to 32 years old, with participants from a variety of majors. For example, 25% of the students in this group were studying medicine, 6% chemical engineering, 5% economics, 4.5% dentistry, 4% administration, and 40% architecture.

The age range in the experimental group was 18 to 44 years old. In the experimental group, 30% of the students did their service hours with children 0–5 years old, 11% worked only with ages 6–11, 8% worked only with ages 12–17, 7% performed their hours only with adolescents, and 8% worked only with adults (18 years of age or older). In addition, 43% of students worked with two or more age groups as shown in Table 2.

Data Collection

Before the data collection process, IRB approval was secured and each student signed informed consent to voluntarily participate in the study. The data was collected via both a survey and semistructured interviews. The survey instrument used was the Civic Attitudes and Skills Questionnaire (CASQ) developed by Moely et al. (2002). As the authors explained, this instrument was “designed to measure attitudes, skills, and behavioral intentions that might be affected by service-learning participation” (p. 15). The instrument began as an 84-item questionnaire, developed based on a review of literature that attempted to measure the
<table>
<thead>
<tr>
<th>Table 1. Demographic Characteristics of Each Sample</th>
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<tbody>
<tr>
<td><strong>Gender</strong></td>
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<tr>
<td>Control</td>
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<tr>
<td>Gender</td>
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<td>Major</td>
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<td>Medicine</td>
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<td>Chemical engineering</td>
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<td>Economics</td>
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<td>Dentistry</td>
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<td>Administration</td>
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<td>Architecture</td>
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<td>Civil engineering</td>
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<td>Industrial engineering</td>
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<tr>
<td>Law</td>
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<tr>
<td>Other</td>
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<tr>
<td>Undeclared</td>
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<tr>
<td>Year in college</td>
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<tr>
<td>Freshman</td>
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<tr>
<td>Sophomore</td>
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<td>Junior</td>
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<td>Senior</td>
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<td>Fifth year</td>
</tr>
<tr>
<td>Did not respond</td>
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<tr>
<td>Ethnicity</td>
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<tr>
<td>Mestizo</td>
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<tr>
<td>White</td>
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<tr>
<td>Indigenous</td>
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<tr>
<td>Asian</td>
</tr>
<tr>
<td>Did not respond</td>
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<tr>
<td>Age range (years)</td>
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<td>18–32</td>
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effect of service-learning. After various trial versions and analysis, they ended up with 45 items divided into 6 factors:

1. **Civic Action** (asks if students plan to engage in future civic action such as volunteering, being an active community member, or helping clean the environment)

2. **Interpersonal and Problem-Solving Skills** (asks about students' abilities to work with others and solve conflicts with them)

3. **Political Awareness** (asks about students' knowledge of current events facing their community, nation, and the world)

4. **Leadership Skills** (asks about students' identification as leaders)

5. **Social Justice Attitudes** (asks about students' attitudes toward poverty)

6. **Diversity Attitudes** (asks about students' attitudes toward people from different backgrounds)

The corresponding questions for each of the six factors can be found in Table 3.

Although CASQ is the most recent and comprehensive instrument to measure the outcomes of service-learning, it was designed in English. Therefore, the instrument was translated and in January 2015, a factor analysis was conducted with a revised translated version of the CASQ. Factors were extracted using a principal component analysis for the six fixed factors. Varimax rotation with Kaiser normalization was used, and the six factors represented 48.64% of the variance. There were no changes to the instrument suggested by this factor analysis.

In May 2015, this mixed methods case study was conducted using the new version of the CASQ. Approximately 220 learners took the required service-learning course. Their scores were compared to the scores of a control group of 176 learners who did not take the mandatory service-learning class but were taking other courses during this academic period.

We analyzed the impact of a redesigned mandatory service-learning hybrid course using a control group to rule out test-retest score variation. In addition, we conducted 10 in-depth interviews about transformational learning with students representing the five quintiles of scores on the pretest from the experimental group. These interviews were evaluated with both inductive and deductive procedures for qualitative data analysis.

In the redesigned service-learning course, a special emphasis was given to the reflection piece using technology. The content, readings, and activities of the eight modules of the course were updated with multimedia material to maximize the interactive com-

### Table 2. Service Experience Characteristics

<table>
<thead>
<tr>
<th>Age groups of service beneficiaries (years)</th>
<th>Percentage</th>
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<tr>
<td>0–5</td>
<td>30.5%</td>
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<tr>
<td>6–11</td>
<td>11%</td>
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<tr>
<td>12–17</td>
<td>8%</td>
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<tr>
<td>18+</td>
<td>8%</td>
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<tr>
<td>Multiple age groups</td>
<td>42.5%</td>
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</table>

<table>
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<tr>
<th>Students worked with:</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>One age group</td>
<td>57.5%</td>
</tr>
<tr>
<td>Two or more age groups</td>
<td>42.5%</td>
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</table>

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<tr>
<th>Service organization area</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Urban</td>
<td>82.3%</td>
</tr>
<tr>
<td>Rural</td>
<td>15.9%</td>
</tr>
<tr>
<td>Urban and rural</td>
<td>0.9%</td>
</tr>
<tr>
<td>Did not respond</td>
<td>0.9%</td>
</tr>
</tbody>
</table>
### Table 3. Civic Attitudes and Skills Questionnaire (CASQ) for Evaluation of Service-Learning Outcomes

**Factor One: Civic Action**
- I plan to do some volunteer work.
- I plan to become involved in my community.
- I plan to participate in a community action program.
- I plan to become an active member of my community.
- In the future, I plan to participate in a community service organization.
- I plan to help others who are in difficulty.
- I am committed to making a positive difference.
- I plan to become involved in programs to help clean up the environment.

**Factor Two: Interpersonal and Problem-Solving Skills**
- I can listen to other people’s opinions.
- I can work cooperatively with a group of people.
- I can think logically in solving problems.
- I can communicate well with others.
- I can successfully resolve conflicts with others.
- I can easily get along with people.
- I try to find effective ways of solving problems.
- When trying to understand the position of others, I try to place myself in their position.
- I find it easy to make friends.
- I can think analytically in solving problems.
- I try to place myself in the place of others in trying to assess their current situation.
- I tend to solve problems by talking them out.

**Factor Three: Political Awareness**
- I am aware of current events.
- I understand the issues facing this nation.
- I am knowledgeable of the issues facing the world.
- I am aware of the events happening in my local community.
- I plan to be involved in the political process.
- I understand the issues facing (my city’s) community.

**Factor Four: Leadership Skills**
- I am a better follower than a leader.
- I am a good leader.
- I have the ability to lead a group of people.
- I would rather have somebody else take the lead in formulating a solution.
- I feel that I can make a difference in the world.

Table 3 continued on next page
ponent in the online portion of the course. The redesigned hybrid course used a learning management system and discussion forums as one of the reflection strategies. According to Waldner (2015), the hybrid learning model used in this specific course corresponds to what she calls eService-learning Hybrid III, which is a blended class that uses some form of instruction and/or service online.

The quantitative part of this study followed an experimental design since the independent variable (group) was manipulated to determine if civic attitudes and skills (dependent variable) had any effect. Self-selection bias can be controlled by administering a pretest to determine how similar groups are at the beginning of the study (Steinberg et al., 2013). A multivariate analysis of variance (MANOVA) was used in the analysis to control for differences between control and experimental groups. Using multiple designs is recommended in order to understand more deeply what is being researched (Steinberg et al., 2013).

The sample for the qualitative section of the research was 10 students enrolled in the service-learning class. The reason for choosing 10 as the sample size was practical, as the summer course only lasted 8 weeks, and the researchers’ time was highly limited. All interviews were conducted with students from the service-learning course and not the control group, as the focus of the study was the service-learning course. Nine of the 10 students originally selected for the interviews agreed to participate and were interviewed. One was no longer taking the course, so another student was selected and agreed to participate. Thus, a total of 10 students were interviewed. As in most qualitative research, the 10 students were selected using “purposeful sampling”: selecting a sample from which the most can be learned (Merriam & Tisdell, 2015). More specifically, the participants were purposefully selected using a maximal variation sampling strategy, which involves the selection of individuals representing a wide range of characteristics (Creswell, 2012). This strategy was chosen because the variability in sample characteristics strengthens the arguments for potential generalizability of findings, when findings are recurrent despite all of the differences in the sample. The sample was varied in the following criteria: gender, ethnicity, age, major, year of

### Table 3. Civic Attitudes and Skills Questionnaire (CASQ) for Evaluation of Service-Learning Outcomes Continued

#### Factor Five: Social Justice Attitudes

- I don’t understand why some people are poor when there are boundless opportunities available to them.
- People are poor because they choose to be poor.
- Individuals are responsible for their own misfortunes.
- We need to look no further than the individual in assessing his/her problems.
- In order for problems to be solved, we need to change public policy.
- We need to institute reforms within the current system to change our communities.
- We need to change people’s attitudes in order to solve social problems.
- It is important that equal opportunity be available to all people.

#### Factor Six: Diversity Attitudes

- It is hard for a group to function effectively when the people involved come from very diverse backgrounds.
- I prefer the company of people who are very similar to me in background and expressions.
- I find it difficult to relate to people from a different race or culture.
- I enjoy meeting people who come from backgrounds very different from my own.
- Cultural diversity within a group makes the group more interesting and effective.
study, and service-learning group. The first criterion was the service-learning group, as the main goal was to select participants taking the course with different professors in diverse classrooms, since the focus of the study was to learn about the course and not the individual instructional approach.

Findings

Quantitative Analysis

The first steps in the quantitative analysis were multiple independent sample t-tests to compare the pretest and posttest total scores of each theme, as well as the total scores of the control and experimental groups. The results are shown in Table 4. There was a significant difference in the means for the control group and the experimental group on Factor 1: Civic Action; Factor 2: Interpersonal and Problem-Solving Skills; Factor 5: Social Justice Attitudes; and Factor 6: Diversity Attitudes. There was also a significant difference in the means of the total scores on the pretest between the control group and the experimental group. These results suggest that the two groups’ dependent variables were different from the start. Therefore, subsequent analyses were performed with the difference in scores instead of the total scores, in order to focus specifically on the variance that the intervention may account for.

Since the main objective of this study was to determine the impact the service-learning course had on students, participants took the CASQ questionnaire twice (once before and once after the intervention). The difference between the posttest and pretest scores was calculated for each of the six themes before comparing the averages of these differences between the two groups. For this purpose, a MANOVA was used to identify the possible effects of the different independent variables on various dependent variables (Hernández, Fernández, & Baptista, 2010). The MANOVA showed a significant difference between the control and the experimental groups. Follow-up independent sample t-tests revealed a nonsignificant difference between the control and the experimental group in Factor 1: Civic Action. However, significant differences were found in the rest of the CASQ factors as shown in Table 5.

The results of the multivariate analysis of variance (MANOVA), through Wilk’s index, suggest a significant effect between groups (control and experimental) and the averages of the differences (before and after taking the service-learning course) of the CASQ themes. Partial eta square identifies the proportion of the variance of the dependent variable that is explained by the independent variable (Field, Miles, & Field, 2012). In this study, the value of partial eta square was .07, which means that 7% of the experimental and control group differences can be considered an effect of the intervention. The results of subsequent independent t-tests showed an increase in the average postintervention (after taking the service-learning course). When the experimental

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<th>Table 4. Means and Standard Deviations</th>
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<td></td>
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<tr>
<td>Control</td>
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<tr>
<td>Experimental</td>
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<td></td>
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<tr>
<td>N = 176</td>
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<td>N = 220</td>
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<td>M</td>
</tr>
<tr>
<td>Civic Action*</td>
</tr>
<tr>
<td>33.48</td>
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<tr>
<td>Interpersonal and Problem-Solving Skills*</td>
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<tr>
<td>50.61</td>
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<tr>
<td>Social Justice Attitudes*</td>
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<tr>
<td>28.90</td>
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<tr>
<td>Diversity Attitudes*</td>
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<tr>
<td>18.12</td>
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<tr>
<td>Total Scores*</td>
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<tr>
<td>171.25</td>
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Note. Factor 5 and Factor 6 (Political Awareness and Leadership Skills) were not found to have significant differences.
*p < .05.
and control groups were compared, these differences were statistically significant in all cases except for Factor 1.

Cohen’s d was reported as an index of effect size, with their corresponding confidence intervals at 95% for all pairs. These indices provide descriptions of the size of the observed effects that are independent of any distortions related to the sample size (Fritz, Morris, & Richler, 2012). The range of Cohen’s d values varies from .17 to .39, and when compared to the levels proposed by Cohen (1988), it can be concluded that there is a small effect size, meaning there is a real effect but the difference between the control and the experimental group is not very large. In conclusion, the results suggest that after taking the service-learning course there is a statistically significant increase in the averages of Factors 2, 3, 4, 5, and 6, with a small effect size on the sample of students at this university.

**Qualitative Analysis**

In basic qualitative research, researchers are “interested in understanding the meaning a phenomenon has for those involved” (Merriam, 2009, p. 22) and “how people make sense of their lives and their experiences” (p. 23). For this study, a qualitative component was included to obtain more detailed information from the survey collected; for example, the reason why students selected certain answers on the questionnaire. Also, the interview attempted to explore to what degree students thought their views changed while taking the service-learning course, and its possible impact.

The interviews were approximately one hour long. Students were reminded of the purpose of the study and their rights as research participants, then asked to read and sign a consent form before beginning. Students consented to be audiotaped to facilitate transcription and data analysis and were assured only the research team would have access to their specific answers. The interview was semistructured with six open-ended questions that mirrored the six areas of the survey (civic action, interpersonal and problem-solving skills, political awareness, leadership skills, social justice attitudes, and diversity attitudes).

The qualitative data analysis was conducted in two different ways: deductive and inductive. For the inductive analysis, the transcribed interviews were analyzed to find patterns that emerged from the data. We followed open coding with exemplary quotes from the data and then merged certain categories, then analyzed it again with the merged categories. For the deductive analysis, participants’ answers to the questions about each theme on the CASQ test were analyzed separately to summarize their views for each factor.

**Identifying new categories.** Beginning with each theme, we identified “segments in [our] data set that is responsive to...” research questions” (Merriam, 2009, p. 176). The next step involved placing segments

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*Note. Five out of six factors were found to have significant differences. *p < .05.
into categories and subcategories. Reading through the transcripts one at a time, answers were synthesized by a word or phrase (open coding) and added to a spreadsheet. As needed, these categories were split or merged using axial or analytical coding (Merriam, 2009). Thus, a summary of the perspectives of the 10 participants was constructed for each of the six CASQ themes synthesized in the spreadsheet. We then scanned the transcripts again in search of illustrative quotes and added them to the text. From the inductive analysis of the data, additional new categories emerged that did not correspond to the CASQ. These categories are listed below.

Empathy. Some students reported feeling empathy after working with street children and trying to put themselves in their position. As one student stated:

Feeling empathy itself is super cool because they are children at risk . . . then it is beautiful to share time with them and also feel what it is to walk in their shoes because we often see them on the street and say “what a shame!”; but in the end, we never know what [story] is behind each one of them.

Everhart (2016) found that college students are more likely to develop their empathy through service-learning when they are able to observe emotional experiences of others, have more responsibility at their placements, and have opportunities to learn more about an individual’s background and personal life.

Intrinsically Motivated by Experience, Increased Commitment. Students described how they were intrinsically motivated to do the work. One student said he was motivated to research different techniques for working with the elderly and summarizes his reflection as follows:

For example, in this class of PASEC I was volunteering at the center, just going there. I helped in the kitchen, talking to the grandparents; but it forced me to search the Internet or some other sources: First, what are the elderly?; what is geriatrics?; some psychology for the elderly and also on YouTube for ways to plan activities for them who are the most in need.

Levesque-Bristol and Stanekthat (2009) found that service-learning courses with hands-on experiences, such as this one, support students’ autonomy, which in turn increases their levels of motivation (measured as a multidimensional construct), including intrinsic motivation.

The Connection Between Service and Theory. Some students articulated how they saw connections between their service placements and the topics discussed in class. One student realized the connection between theory and practice by commenting on the importance of analyzing the theoretical content in readings and videos and her experience in the community. She stated:

I think more is learned in practice and readings are a complement. In practice, it is like living the reality of how the situation is. For example, the theme of this week was health and we watched a video and read; but in the end, there are many things in the video I did know but I did not realize what was actually happening. The theory and practice are complements but I think the most important thing is to be with them, live what they live, the things you have and share time with them because, in the end, they are awesome.

Some universities offer course-based service-learning opportunities that allow students to connect their experience with course content. For instance, gerontology students directly related their understanding of the dynamics of social services being analyzed in the classroom while reflecting on their concrete experiences working with a specific group of elderly citizens (Blieszner & Artale, 2001). As Jacoby (2015) mentioned, the key to connecting the theory and practice is guided critical reflection.

Awareness of Ecuador’s Social Reality. Students talked about being more aware of Ecuador’s social reality. One student reflected on her awareness of Ecuador’s social reality after the class:

I think before the class I was a bit negligent about the situation and I think that’s what happens with a lot of young people that we do not stop to think about what is happening. I think this class kind of draws
us to reality and says “Hey! wake up, this happened”; It has forced me to think; to listen to the news; to be more conscientious about what happens.

This theme is very related to the more recent term “critical service–learning” (Carrington, Mercer, Iyer, & Selva, 2015). Critical service–learning is geared toward understanding the cause of injustices and encouraging students to see themselves as agents of social change. Although there was clearly an expanded awareness about their country’s reality, this awareness was not necessarily always linked to the students seeing themselves as agents of change.

**Transformational Learning.** Five students reported that they were reflective of their mental schemes about topics such as poverty and religious beliefs during the course. For example, one student stated:

> Then I realized that there are many reasons to have poverty, which is not just saying “people are lazy,” but there are people who suffer neglect and are abandoned; they are exploited and there are also people who are not mentally able and it is difficult for them to get jobs and that taboo exists.

As stated before, this course incorporated discussion questions to promote reflection. In the discussions both in class and online, students are confronting their previous mental paradigms and some of them may have transformational learning moments (Donahue, 2011).

**Analysis of CASQ themes.** For the analysis based on the CASQ themes, the deductive approach by Merriam (2009) was used. A table for each subquestion resulted, showing how many participants had alluded to each response category; in some cases only one; in others, seven or more. Thus, we were able to estimate the recurrence of certain answers as shown in the text that follows.

**Theme 1: Civic Action.** Eight of 10 interviewees participated in volunteer work before taking the PASEC class. Six of them volunteered because of high school requirements. In general, the participants showed great appreciation for volunteer work and the service hours they performed during the course. As one person said:

> I thought it was a really interesting activity. It’s really like seeing another world outside your bubble. It’s seeing how other people live, the problems, and how in other places life is more difficult. It’s also a good activity because it helps you help other people that most need it. It’s like it does open your mind, it makes you more grateful for what you have.

Most participants reflected these sentiments, saying how they enjoyed it. Four interviewees mentioned that they would want to be more active in the future, and two gave ideas of how they would do this.

A study conducted with undergraduate students participating as mentors with at-risk children facing mental health–related issues in a poverty situation demonstrated that a service–learning experience that promotes understanding a concrete reality and that fosters reflection, reciprocity with the community partner, and responsibility while performing the service hours, could increase civic action and engagement in its participants (Weiler et al., 2013).

**Theme 2: Interpersonal and Problem-Solving Skills.** Eight of the participants said they exercised the skill of listening, especially during their service hours. For example, many mentioned listening to children and older people they worked with. Seven mentioned working collaboratively, especially with other volunteers and adults at their service–learning site. Eight of the ten interviewees said they had made friends, especially with children and other volunteers. Four participants mentioned helping solve conflicts between children and communicating, especially with children. Only three participants mentioned having thought logically and analytically, as one said:

> In other classes, I must also be thinking logically. Actually, I think the whole university is very much focused on this. In the service–learning class, yes because we talk and debate about topics and analyze them, but I don’t know if above what is done in other classes.

In general, most participants mentioned that they exercised most of their skills during their service hours, and not in class.
One student mentioned learning something new about how to work with children from the “theoretical” part of the class, and another one spoke of the service hours:

So, in the organization, I really had to work with other people and I’ve always been a more individual person that works alone, not in a group. In the organization with the other volunteers, you have to work in a group and develop that skill because we all have to be there for them. So I think that yes, yes it has helped me with that.

Overall, students’ perceptions about improving their interpersonal skills support the findings of previous studies that show students who participate in service-learning report improvement in interpersonal skills such as verbal communication, leadership, and teamwork (Hébert & Hauf, 2015).

**Theme 3: Political Awareness.** Students taking college courses that involve a service requirement could be hesitant to work within a community, as they are not necessarily aware of what their communities are experiencing and might doubt whether their service hours can have a real impact. As suggested by Sylvester (2011), students’ concerns need to be addressed from an instructional approach and other students previously involved in service-learning could share their perspectives to help overcome resistance to perform service hours. Students’ political awareness as a theme is also related to the new category Awareness of Ecuador’s Social Reality.

Five participants mentioned that they do generally feel quite well informed. They spoke of reading newspapers, watching the news, and speaking with family and friends. In the words of one of them:

So, I think I have learned a lot with the class: I’ve read everything on the platform and it’s very interesting, very complicated, everything that is happening. Sometimes one says “poverty: poor lazy people that don’t work,” but in reality, there are many themes that contribute to the reality that a person is poor and there are various types of poverty and more. So, I think that this class has taught me a lot, has made me think, start listening to the news and be more aware of what is happening.

These realizations about how complex reality is have also been found by previous studies. For example, undergraduate students taking a sociology class were directly involved in a local community, able to analyze their internal organizational policies, dynamics, and budget constraints, and realize how politics work at a local level. They reflected upon their role as politically engaged citizens at that level, and the extent of influence they could have on issues such as social justice, poverty, and discrimination among others (Guenther, 2011). Similar experiences can be replicated to promote political awareness among undergraduate students.

**Theme 4: Leadership Skills.** Six participants mentioned exercising leadership skills during their service hours, when they were in charge of children and managed to supervise them. One person also said she exercises leadership skills by organizing her own work and making decisions. In the words of one of them:

I think so because the fact of standing in front of children and making them pay attention to what you’re doing, it’s a way to lead and not just pick up and say “sit, this is so.” You have to explain to them what to do and relate to them; so that they do not feel forced or pressured. It should be like “she is doing that; it’s good; looks good and fun, then I’ll do it too,” so I think that it is quite important. They are 12-year-old children and they are more difficult to handle and are not like little children to tell them “sit,” it is different, then I think I developed leadership a lot and ability to control a little.

Students who believed this experience helped them exercise their leadership skills might have said so because this particular course creates a space for students to choose and shape their experience. According to Wurr and Hamilton (2012), service-learning projects foster leadership skills because they encourage students to become coproducers of knowledge.

**Theme 5: Social Justice Attitudes.** Participants were asked why they thought there was poverty and/or inequity in Ecuador. Their
answers varied, with each participant mentioning one or more of the following reasons. All participants agreed that poverty and inequity should be reduced, although one clarified that he/she thought only poverty was a problem, not inequity. As one participant said:

Something that seems key to me is education because from my point of view if you have an education, the rest comes. So if you have an education, you can move ahead even if your family didn’t have the resources. You were able to get an education and move ahead, and now your children can move ahead. So, it can be that if you have more resources and you can help someone, you do it and you give them a job. But I think the most important thing is education.

Other ideas mentioned include raising awareness, ensuring equal opportunities, getting people who have a lot to realize how much could be accomplished with them having a little less, and ensuring basic services for all (health care, security). All respondents said that the service–learning class influenced their views on poverty in one way or another. Five said they now knew more, one specifying that she/he did not previously know the relationship between child malnutrition and poverty. One spoke of understanding the complexity better, and two spoke of feeling more aware and empathetic after seeing things firsthand. Three spoke of how they changed their views, and in the words of two of them:

Mostly, I thought like “they’re poor because they feel lazy,” but sometimes, on the other hand, it’s like a more cultural problem because it’s not like people who don’t have resources are lazy because they are hard–working people, and I hadn’t realized that. Now I see and it’s like these people do work, even small children want to work. But it seems it’s the opportunities.

So I remember that we were on the poverty unit and we saw videos and people spoke and it did make me change my views on that we don’t know the personal situation . . . we don’t know anything. Maybe some are lazy, but there are many people that for some reason have had a hard time moving ahead.

Thus, it seems some participants initially thought that people were poor because they did not want to work, but began to question this assumption and see a more complex assortment of possible reasons. A qualitative study with undergraduate Latino students taking a Spanish Language and Culture for Heritage Speakers service–learning course revealed that participants gained a deep sense of the inequality, lack of access to services, and discrimination the marginalized group they worked with experienced within their communities (Petrov, 2013). These findings suggest that service–learning courses can be connected with social justice education and undergraduate students.

**Theme 6: Diversity Attitudes.** Nine respondents said they had opportunities to meet people different from them. Six mentioned Indigenous peoples, five mentioned people of low socioeconomic status, and three mentioned people from other provinces. Others mentioned Europeans, Afro-Ecuadorians, people with disabilities, people with a different sexual orientation, and religious people. As one explained:

I think that as a preference, it’ll always be someone similar to you . . . but even so, I have no problem interacting with people who are not the same. But as people, I think we always prefer people who are more similar to us.

The last question of the interview asked participants whether they thought their views regarding people different from themselves changed after taking the service–learning class. Only five responded, and most spoke of becoming more sensible or reaffirming views they already had. One spoke of a change of view:

In the PASEC class it’s like we shared a ton of things that people had in their different places. For example, there’s a girl that is working with people from the LGBT community and the view of how she speaks and what she speaks about makes you feel really comfortable. And I, who do not belong to this community, can feel good with
them. So, yes it makes you question how you can get along with people that are different from you in certain things, but if you get to know them more, they can be similar to you in other things.

Students’ responses do not point toward a change in their beliefs about diversity. It could be that students already had a positive attitude about diversity, or it could be that this experience did not necessarily change their initial attitude. According to Bowman and Brandenberger (2012), to help promote student growth, faculty should facilitate diversity experiences that are contrary to students’ expectations. This could be a key to improving courses like this in the future, where specific experiences are planned within the course for students to interact with diverse groups in a positive way.

Conclusions

This mixed methods study was conducted to determine if a mandatory hybrid service-learning course had an effect on the civic attitudes and skills of college students attending a private university in Ecuador. A quasi-experimental design was followed in the quantitative part of the study, and interviews were used for the qualitative part.

In regard to the quantitative data analysis, MANOVA and follow up t-tests with the control and experimental groups’ difference of scores showed that Factor 1 (Civic Action) was not significantly different between the groups, whereas the other five factors showed a significant difference. Previous independent sample t-tests with the pretest scores showed that the two groups started significantly different in their civic attitudes and skills. This difference may be explained by the demographic differences between the groups, the most relevant being the year of study. The control group was formed by 6% juniors and 3% seniors, with the majority being freshmen and sophomores. On the other hand, the experimental group was 38% juniors and 33% seniors, with a minority of freshmen and sophomores.

Qualitative data analysis followed both an inductive and a deductive approach. As a result of an inductive analysis of the interviews, new themes emerged such as empathy, increased commitment due to experience in service-learning, the connection between theory and service hours, awareness of Ecuador’s social reality, and transformational learning. Students reported that they were able to put themselves in another person’s position while performing their service hours. Also, students described that once they were involved in their service hours, they felt motivated to continue to work with the group they started working with. During the interviews, students reported a clear understanding of the relationship between the theory reviewed in class through readings and assignments and the work performed in the community. Students felt they were more aware of their country’s social reality after their service hours and reflected on their personal mental schemas about poverty, working with the elderly, religious beliefs, working with unfamiliar groups, and challenging prejudice about certain groups. These results suggest that this may be a particularly effective intervention for students from privileged backgrounds, such as the participants in this study, to become sensitive to the living conditions that other groups in their country have.

The deductive approach was used to analyze the interviewees’ responses as they related to each of the six themes on the CASQ. In this analysis, the interviewees showed how the course had a positive impact in each of the six themes: civic action, interpersonal and problem-solving skills, political awareness, leadership skills, social justice attitudes, and diversity attitudes. These differences correspond to what was found in the quantitative analysis. Specifically, in the Civic action theme, most participants mentioned that they were somehow used to doing volunteer work. This affirmation corresponds to the fact that in this country there are mandatory community service hours for high school students and college students. Somehow, it is seen as a normal requirement and part of their academic and career preparation. For this reason, many interviewees mentioned they were already committed to volunteer work. The fact that they mostly had previous volunteering experience and were already committed to service may explain why there was not a significant difference found in the t-test of the pretest–posttest between the experimental and control groups. It seems that service hours are becoming a normal experience for Ecuadorian youth, and these experiences may positively influence their attitudes toward civic action.
The mixed methods approach was particularly useful in this study to explore the reasons behind the quantitative results. Finding positive impacts of a course intervention is not as informative as having students’ views on different aspects of the course’s impact. Through the qualitative analysis, a more detailed description of why each factor had a significant quantitative improvement was revealed. An inductive data analysis provided insight on the course’s impact on student learning and on motivational aspects that could be explored further in future studies. Important elements about the intervention were highlighted, like the importance of direct service that provides hands-on experience, high levels of autonomy, and emotional experiences. Also, the fact that this is a mandatory course but students talked about their intrinsic motivation to perform the service was a particularly interesting finding.

Implications and Recommendations

The results of this study contribute to a continued exploration of developing civic attitudes when taking a mandatory service-learning course in Ecuador. The use of the control group allowed us to determine the real impact of the course, which was positive and significant. These positive findings should persuade decision makers to implement similar service-learning models in other higher education institutions in Ecuador and Latin America. The results suggest that similar types of courses may lead to students’ increasing their inter-personal and problem-solving skills, political awareness and leadership skills, and becoming more sensitive toward issues of social justice and diversity. Therefore, higher education institutions may consider adopting similar hybrid courses.

Qualitative data shows that students’ service-learning experiences can trigger their internal motivation to learn more about a topic. For example, students working with elderly patients became interested in autonomously learning more about geriatrics. Thus, higher education institutions could harness service-learning to increase students’ motivation for their area of study. Qualitative data also suggests that hybrid service-learning models connecting theory and practice can lead to transformational learning, where students question their beliefs and change their perspectives. Thus, higher education institutions could use such models to foster transformational learning.

We recommend continued research through conducting similar studies, comparing Ecuador’s situation with that of other countries in Latin America in order to describe how service-learning in higher education is evolving in this region. The next steps include focusing on exploring relationships with service agencies and the impact these programs are having on the community at large. Also, a longitudinal study to analyze student effects over an extended period of time could clarify the real impact of this particular service-learning course.

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