Service-Learning: Findings From a 14-Nation Study
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Service-Learning: Findings From a 14-Nation Study

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Service-learning literature has been dominated by studies from North America with little cross-national comparative work. This article reports on a survey of university students conducted across 14 different countries. The study examines the relationships between service-learning programs (both compulsory and optional) at high school and university, along with current volunteering, study subject, and sociodemographic variables. The survey found variation in service-learning across the different countries along with relationships between service-learning participation and gender, family income, and study subject. By contrast to previous research, however, both mandatory and optional service-learning at high school and university led to higher participation in general volunteering.

KEYWORDS volunteering, service-learning, students, university, high school, mandatory

INTRODUCTION

The importance of volunteering to society, voluntary organizations, and individuals has been acknowledged in the last few decades (Salamon et al., 1999; Salamon et al., 2004; Wilson & Musick, 2000). Volunteering is especially important among students in universities and colleges as they are perceived as the future backbone of civil society. Astin and Sax (1998) found that participation in voluntary work during the undergraduate years enhances university students’ academic development, life-skills development, and sense of civic responsibility. In addition, volunteering can enhance university students’ job experience, help them choose the right vocation, and improve students’ resumes and opportunities as they leave the university and seek jobs.

Volunteering by university students has rarely been the focus of inquiry, and no studies have examined it from a cross-cultural perspective. As Winniford, Carpenter, and Grider noticed in 1997, minimal attention has been paid to volunteering in colleges and universities. In the past decade,
only a handful of studies on volunteering by university students have been conducted, with the exception of the longitudinal work by Astin and Sax in the past two decades (Astin, 1993; Astin, 1998; Astin & Sax, 1998; Sax, 2004). However, as many students in universities and high schools participate in service-learning initiatives (courses that combine learning and volunteering), we need to gain knowledge of the possible relationships between service-learning courses and their impact on volunteering in the longer term.

Recent studies have shown a decline in volunteering rates among university students, and negative perceptions of volunteering among young people in some countries (Davis Smith, 1999; Commission on the Future of Volunteering, 2008). The negative perceptions of young people about volunteering have led to the establishment of programs designed to encourage volunteerism, which are frequently based around educational institutions including schools and universities. These programs are often called “service-learning” courses which combine (individual) development, learning, reflection, and volunteering. The service component adds value as Eyler and Giles (1999) put it: “The thing that separates service-learning from other field-based and experiential forms of learning is the service, the giving to others, and students seem aware of this particular value” (p.37).

As these programs become more popular globally, further research on the benefits and challenges of service-learning in different settings is needed. In this article we examine service-learning programs and courses in 14 countries. Based on a cross-national survey on volunteering by university students, we study the connection between background variables and service-learning participation to detect cross-cultural patterns. We examine the relationship between optional or compulsory participation in service-learning in the past (during high school) and at present (in university and college), as well as the level of volunteering in general (outside service-learning courses) and giving among university students in the 14 studied countries.

Volunteering by University Students

Volunteering is defined as giving time freely and without any financial reward to help people or cause (Cnaan, Handy, & Wadsworth, 1996; Wilson, 2000). The national rate of volunteering for college-age adults (19–24 year olds) in the United States was 20% in 2003, up from 18% the previous year (Helms, 2004). Sax (2004) claimed that data from the Freshman Survey conducted by the Cooperative Institutional Research Program (CIRP) show that in 2002, 82% of college freshmen in the United States volunteered for their community during their last year in high school (although some of them volunteered only episodically).

The most important factor related to volunteering in college was whether the student volunteered during high school (Astin & Sax, 1998). Former volunteering experience was also found to be a predictor of further
volunteering among university students (Fitch, 1987; Wilson, 2000). Sax (2004) found that attending a college where other students are highly committed to social activism tends to encourage students’ own involvement in their community.

The benefits of volunteering for young people are considered to be personal development, career opportunities, increased confidence, and prosocial behavior. Volunteering also has benefits for the community, since it is perceived as a central part of civic engagement and a means of promoting trust and cohesion in communities, as well as promoting a psychological sense of community (Eley, 2003; Haski-Leventhal, Ben-Arie, & Melton, 2008). Because evidence suggests that young people are most likely to be socialized into prosocial behavior (Hooghe & Stolle, 2003), they are typically targeted by government volunteering programs.

From a more organizational perspective, service-learning creates an opportunity structure for university students to participate that is in many cases hard to avoid and in some cases, such as compulsory forms of service-learning, even impossible to avoid. According to Janoski, Musick, and Wilson (1998), there are two explanations to why people volunteer: either due to socialization to prosocial attitudes (the “normativist” perspective) or due to practical experiences and social participation (the “social practice” perspective). Service-learning is based on the latter explanation. Further, in service-learning it is the third party, a high school or university, which makes certain that students are being asked as well as organized to volunteer (Haski-Leventhal, Meijs, & Hustinx, 2009).

Service-Learning

The benefits of volunteering for young people have led to a growing number of voluntary and compulsory volunteerism programs as part of school or university education, usually called service-learning or “community service.” Although service-learning and community service are used to describe similar activities, the terms do refer to different frames. In community service, volunteering is used as a way to develop general values of belonging, giving and volunteering among university students (Sherrod, Flanagan, & Youniss, 2002). Service-learning uses volunteer participation as a form of experiential learning, as they combine learning and volunteering in university courses (Eley, 2003). Service-learning programs have become a common trend around the world since the 1990s: a survey conducted by Berry and Chisholm (1999) found such programs in 23 nations, including the United States, Canada, Australia, and the United Kingdom.

Service-learning is different than “general” volunteering in three aspects. First, while volunteering has to involve the free will of the volunteer, it is quite common to have compulsory or mandatory service-learning. Second, while volunteering is usually initiated by the volunteer, service-learning is
initiated by a third party, such as a school or university, which connects the volunteers (the students) to the clients (volunteer organizations and other targets). Finally, while volunteering and service-learning are usually undertaken with no monetary rewards, the latter may have other benefits to the volunteers, such as academic credits.

Mandatory service-learning, which does not fall under the narrow definition of volunteering (see Cnaan et al., 1996), is more common in North America, with 69% of 15–19-year-old volunteers and 61% of 20–24-year-old volunteers in Canada stating that volunteering was a school or college requirement (Hall, Hall, Cameron, & Green, 2004). Service-learning programs are, however, growing in other countries in this study. For example, a compulsory community service component was introduced for all high school students in Western Australia between 2006 and 2009 and in The Netherlands in 2008 (effective 2011). The boundaries are vague as Eyler and Giles (1999) explained that every service-based course, whether they are inside a formal program or not, could be called service-learning as long as learning goals are defined and reflection takes place.

Reports on the success of service-learning programs are mixed. Most research, albeit not all, shows service-learning to have positive impacts. Participation in service-learning has enhanced a sense of civic responsibility, life skill development, as well as academic development (Astin & Sax, 1998). It can foster civic values and responsibility among university students and contribute to community welfare in addition to learning and cognitive development in social issues (Harward & Albert, 1994; Parker-Gwin, 1996; Raskoff & Sundeen, 1999). Students state service-learning has, for instance, increased their confidence and self-esteem, and made them feel proud of their achievements, thus adding to their personal development and citizenship. The benefits of enhancing different skills, such as communication and leadership, have also been detected (e.g. Eley, 2003). Skills related to the specific field of study with which service-learning is integrated can also develop through applying theory to practice. University students gain work experience, social contacts and, in some cases, even an opportunity to earn money (Van der Voort, Meijs, & Whiteman, 2005; Winniford et al., 1997).

Although OSLservice-learning programs have yielded the above positive impacts, compulsory programs have received significant criticism. Stukas, Snyder, and Clary (1999) have suggested that external control can eliminate an otherwise positive relationship between prior volunteering experience and future intentions to volunteer. In their study of American students, mandatory volunteering was found to reduce intentions to volunteer in the future for those students who were less inclined to volunteer of their free will. Nevertheless, this unfortunate results did not ensue when volunteering was optional (chosen) rather than required. Similarly, an Australian study by Warburton and Davis Smith (2003) demonstrated that mandatory service-learning programs failed to develop positive community attitudes.
and active social behavior. Instead, they may even weaken the citizenship identities of individuals. Other studies (e.g. Hollis, 2002; Miller, 1997; Musick & Wilson 2008; Niehaus, 2005) also showed that service-learning—both mandatory and optional—can have other negative impacts, especially if not organized and structured competently. Students may become frustrated, feel unable to make a difference, and even start to blame those they are helping for their own problems. However, it should be noted that Janoski et al. (1998) did find a correlation between mandatory community service in high school and volunteering in later stages in life.

Cross-National Studies

Because much of the data on volunteering are based on government statistics and governments are primarily concerned with the actions of their own citizens, research on volunteering is dominated by national studies; international comparative studies of volunteerism are rare. This lacuna is also partly explained by the difficulties of conducting cross-national studies (Anheier & Salamon, 1999; Dekker & Halman, 2003; Musick & Wilson, 2008). For example, definitional variations mean that data collected in different studies are not directly comparable. Adding to this complexity, definitions of volunteering vary by culture and nationality (Handy et al., 2000; Meijs et al., 2003).

Most of the literature on volunteering by university students is American-based, and a cross-cultural perspective is sorely missing despite its importance to understanding the environmental context of volunteering in general and that of university students in particular. As Anheier and Salamon (1999) explained, volunteering is a cultural and economic phenomenon, and it is part of the way societies are organized and allocate social responsibilities, and how much participation they expect from citizens. Those researchers showed that in different countries and different political regimes people volunteer at different rates and for different causes.

HYPOTHESES

From the literature review we can conclude that cross-cultural studies on volunteering by university students are scarce, and cross-cultural studies on service-learning are almost nonexistent. According to the literature previously reviewed, we expect volunteering and participation in service-learning programs by university students to vary across countries, to have a different impact depending on level of choice, and on tendency to volunteer in general. Therefore, we hypothesize:

H1: There will be differences between the participating countries regarding both the levels of engagement of university students in general
as well as levels of participation rates in service-learning courses (in high school and in university).

H2: There will be a correlation between participation in service-learning programs (both optional and compulsory) and background variables, such as gender, income, and academic discipline.

H3: Optional service-learning (OSL) programs will be correlated with higher rates of volunteering than compulsory service-learning (CSL), for both service-learning programs in high school as well as in university.

H4: In some countries CSL may have a stronger negative impact on volunteering than in others.

METHODOLOGY

Procedure

Since the aim of the research was to study voluntary action engagement and perceptions among university students in a cross-cultural context, data were collected in 14 countries: Australia, Belgium, Canada, China, Croatia, England, Finland, India, Israel, Japan, Korea, the Netherlands, New Zealand, and the United States. These countries were chosen to represent developed and developing countries. Data were collected in the years 2006–2008. In each country at least 600 questionnaires were collected, with sampling of university students from different disciplines: social sciences, natural sciences, business, humanities, engineering, and other. The surveys were distributed in different courses, mostly by entering a class and requesting university students to answer printed questionnaires, but in some cases online surveys were used. Due to this method, it is difficult to determine the response rate in each country, and we can only say that in total, 10,698 university students completed surveys. Although surveys were not distributed completely randomly, the very high number of respondents can support the validity of the data.

Instrument

A 21-item survey was designed for the purpose of the current study. It combined known questionnaires such as the motivation to volunteer questionnaire (Cnaan & Goldberg-Glen, 1991) and benefits and rewards of volunteering (Gidron, 1978). Seven items were related to voluntary action engagement (e.g. to which kinds of organizations, frequency of volunteering, and donation of money) and five items to participation in service-learning programs in high school (in the past) or in university,
including being in a class in which the professor required students to volunteer and, if not, would they find such a requirement useful. Values and sociodemographic factors (age, gender, year of education, family income, and program attended in the university) were also collected.

The questionnaire was translated and culturally adapted to the different languages and cultures, while striving to keep it as consistent as possible. The English version of the questionnaire was used in Australia, Canada, England, India, New Zealand, and the United States. In all other countries the questionnaire was translated, piloted, and reviewed by a panel of experts before it was being administered to university students.

Participants
There were more females than males in our sample (55.8% vs. 44.2%), but the gender distribution varied by country, from 62.5% males in India, to 71.3% females in Finland ($\chi^2 = 425.7$, $df = 4$, $p < .001$). The average age was 22 years overall, and the median was 21. Average age was, however, significantly unequal between the 14 studied countries: from 20 years in Belgium and China to 26 in Israel ($F = 97.3$, $df = 13$, $p < .001$). In total, 15.7% of respondents reported their family to have a low family income, 67.7% reported a middle level income, and 16.6% a high income. There was significant difference between countries ($\chi^2 = 935.7$, $df = 26$, $p < .001$), with the highest percentages of high income families in the Netherlands (41.3%) and Israel (35.6%), while the highest percentages of low income families were found in China (25.9%), New Zealand, and Japan (22% in each). Most of the respondents (92.2%) had studied in a local high school prior to enrolling at university (that is, they were not newcomers to the country), with the highest percentage in China (100%) and Finland (98%) and the lowest in Australia (71.4%; $\chi^2 = 757.6$, $df = 13$, $p < .001$).

FINDINGS
Participation in Volunteering and in Service-learning
In total, over two-thirds (69.3%) of university students students reported that they volunteered in a formal setting, that is, they gave time to help at least one organization in the previous 12 months. The most common targets for volunteering work by students were sport organizations (30.2% of students volunteered in such an organization), followed by volunteering for a university organization (27.9%) and mentoring organizations (27.8%). The least popular organizations were volunteering online (11.8%) and volunteering for the neighborhood (13.8%). Almost one-third of the sample (30.4%)
volunteered in a nonprofit organization, 8.4% in a governmental organization, 7.1% in an international organization, and 24.2% informally (outside an organizational setting).

As can be seen in Table 1, the rates of volunteering varied significantly between the participating countries ($\chi^2 = 875.1, df = 13, p < .001$), with the lowest volunteering rates in Japan (39.1%) and Croatia (51.2%), and the highest rates in India (86%) and China (84.5%). On average, university students volunteered 7.1 hours per month, with the highest mean hours in Canada and Belgium (15 in each) and the lowest in Japan (0.7 hours), India (2 hours), and China (2.4 hours; $F = 18.46, df = 13, p < .001$). Nearly one-half of the university students (44.3%) volunteered occasionally, 8.8% volunteered on a monthly basis, and 13.1% on a weekly basis, while 33.8% did not volunteer. Once more, there were significant differences between the 14 countries regarding the frequency of volunteering ($\chi^2 = 1685.2, df = 39, p < .001$) with the highest rates of weekly volunteering found in Canada (22.1%), Belgium (22.2%), and Israel (19.2%), and the lowest in Japan (2.8%) and India (4.7%).

When asked if their high school had a volunteering or community service requirement for graduation, 22.2% reported to have such a compulsory program in high school, 18% had an optional one, and 59.9% had none. There were significant differences between the 14 countries ($\chi^2 = 3606.4, df = 26, p < .001$), with the highest rates of compulsory volunteering in high school in Canada (62.2%) and Israel (61.7%) and the lowest in Croatia

### Table 1: Student Volunteering and Participation in Service-learning by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>Student volunteering rate***</th>
<th>Participation in service-learning in high school***</th>
<th>Participation in service-learning in university***</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>66.3% 11.3%</td>
<td>19.5% 23.1%</td>
<td>5.2% 27.2%</td>
<td>611</td>
</tr>
<tr>
<td>Belgium</td>
<td>71.4% 22.2%</td>
<td>12.7% 9.1%</td>
<td>2.6% 8.1%</td>
<td>891</td>
</tr>
<tr>
<td>Canada</td>
<td>79.7% 22.1%</td>
<td>62.2% 6.9%</td>
<td>7.7% 15.3%</td>
<td>973</td>
</tr>
<tr>
<td>China</td>
<td>84.5% 6.5%</td>
<td>6.8% 18.3%</td>
<td>4.6% 26.0%</td>
<td>919</td>
</tr>
<tr>
<td>Croatia</td>
<td>51.2% 7.0%</td>
<td>1.3% 6.9%</td>
<td>4.5% 5.9%</td>
<td>600</td>
</tr>
<tr>
<td>England</td>
<td>63.3% 9.2%</td>
<td>11.9% 39.1%</td>
<td>2.3% 40.3%</td>
<td>600</td>
</tr>
<tr>
<td>Finland</td>
<td>70.1% 12.7%</td>
<td>5.9% 12.3%</td>
<td>3.5% 18.7%</td>
<td>665</td>
</tr>
<tr>
<td>India</td>
<td>86.2% 4.7%</td>
<td>23.3% 41.7%</td>
<td>17.9% 47.9%</td>
<td>600</td>
</tr>
<tr>
<td>Israel</td>
<td>67.5% 19.2%</td>
<td>61.7% 10.7%</td>
<td>22.0% 12.7%</td>
<td>590</td>
</tr>
<tr>
<td>Japan</td>
<td>39.1% 2.8%</td>
<td>2.5% 13.0%</td>
<td>0.8% 7.1%</td>
<td>1052</td>
</tr>
<tr>
<td>Korea</td>
<td>73.0% 15.2%</td>
<td>49.3% 25.8%</td>
<td>10.3% 30.5%</td>
<td>696</td>
</tr>
<tr>
<td>Netherlands</td>
<td>61.1% 16.1%</td>
<td>7.0% 8.2%</td>
<td>5.5% 11.2%</td>
<td>602</td>
</tr>
<tr>
<td>New Zealand</td>
<td>74.0% 17.0%</td>
<td>11.3% 39.4%</td>
<td>2.7% 15.9%</td>
<td>605</td>
</tr>
<tr>
<td>United States</td>
<td>78.8% 15.6%</td>
<td>28.7% 14.8%</td>
<td>4.9% 14.2%</td>
<td>1294</td>
</tr>
<tr>
<td>M</td>
<td>69.3% 13.1%</td>
<td>22.2% 18.0%</td>
<td>6.2% 18.8%</td>
<td>10698</td>
</tr>
</tbody>
</table>

***significant at the .001 level.
The highest rates of OSL in high school were found in India (41.7%) and New Zealand (39.4%), while the lowest rates were found in Croatia and Canada (6.9% each).

When asked if their university had a volunteering or community service requirement for graduation, only 6.2% on average reported to have a CSL program, and 18.8% had an optional one, and 74.9% had none. Significant differences were found between the 14 countries ($\chi^2 = 1521.0$, \(df = 26\), \(p < .001\)): the highest rates of CSL were found in Israel (22%) and India (17.9%), while the lowest rates were found in Japan (0.8%), England, New Zealand, and Belgium (about 2% in each). The highest rates of OSL were found in India (47.9%) and England (40.3%), while the lowest were in Croatia (5.9%) and Japan (7.1%).

Additionally, 95.6% of all university students reported to have enrolled in a class in which the professor required students to volunteer: 78.9% reported it to be optional, and 16.7% compulsory. In New Zealand only 40.5% had such a class, the lowest rate of all countries. The highest rate of university students who participated in a course where volunteering was compulsory was in India (57.9%) followed by Israel (29%) and the lowest rates were in Japan (2.7%) and Finland (3.5%; $\chi^2 = 6016.3$, \(df = 26\), \(p < .001\)). We asked university students who did not participate in such a class if they would find it useful: 19.2% of them said they would not find it useful at all (31% in the United States and 5.7% in China); 44% responded rather useful (63.5% in Korea and 28.9% in India); 28.1% responded useful (50% in Croatia and 9.4% in England); and only 8.3% said it would be very useful (17.3% in Israel and 1.2% in England; $\chi^2 = 1054.4$, \(df = 33\), \(p < .001\)).

Background Variables and Participation in Service-learning Programs

Analysis of the cross-national survey data revealed significant correlations between service-learning participation and background variables. Regarding gender, females reported higher rates of participation in service-learning in high school, particularly compulsory service (23.2% vs. 20.6% of males, $\chi^2 = 10.4$, \(df = 2\), \(p < .005\)). Furthermore, females participated in higher rates than males in CSL in university (7.0% vs. 5.1% of males), but males reported higher rates of OSL in university (19.3% vs. 18.2% of females, $\chi^2 = 17.1$, \(df = 2\), \(p < .001\)).

Significant differences were also found in relation to family income: 27.1% of university students from high income families participated in CSL in high school, compared to only 21.9% of middle level income and 18.4% of low income students ($\chi^2 = 48.1$, \(df = 4\), \(p < .001\)). However, in university this relationship was reversed, with highest participation in CSL among university students from low income families (7.0% vs. 6.1% in middle level income and 5.7% in high income), but students from middle level income
had the highest rates of OSL (19.6% vs. 15.5% in high income and 18.3% in low income; $\chi^2 = 18.2$, $df = 4$, $p < .001$).

There was a significant relationship between the students’ major field of study and their participation in service-learning programs. The highest rates of CSL in high school were found among students in humanities (21.6%) and other (42.1%) and the lowest among engineering students (17.9%), while the highest rates of OSL in high school were found among business students (22.6%) and natural sciences (19.8%; $\chi^2 = 411.5$, $df = 10$, $p < .001$). Correspondingly, the highest rates of CSL in university were found among social sciences students (8.1%) and the lowest among engineering students (3.8%), but when it came to OSL, business students had the highest rates (23.5%) followed by natural sciences students (20.4%), and the lowest rates were among social sciences students (12.7%; $\chi^2 = 174.3$, $df = 10$, $p < .001$).

Finally, students who went to a local high school participated at a higher rate in CSL in high school (22.7% vs. 14.9% of newcomers) but less so in optional programs (17.3% vs. 25.2% of newcomers; $\chi^2 = 46.0$, $df = 2$, $p < .001$). Regarding participation in service-learning in university, students who did not go to a local high school (newcomers) participated at significantly higher rates in OSL (28.4% vs. 17.9% of locals); no differences were found regarding CSL ($\chi^2 = 54.2$, $df = 2$, $p < .001$).

Impact of Service-learning on Volunteering

We examined the relationship between participation in service-learning and level of general volunteering among university students in the 14 participating countries.

In general (all countries) we found that participation in service-learning programs in high school was positively related to present volunteering, particularly when it was compulsory at high school. While the average rate of volunteering among all university students was 69.3%, it rose to 77.3% among university students who had completed CSL in high school, 73.4% among university students who had OSL programs, and down to only 65.2% among university students who had no service-learning programs in high school ($\chi^2 = 135.2$, $df = 2$, $p < .001$). Service-learning in university had an even greater impact on volunteering: 83.4% of university students who participated in CSL in university volunteered, compared to 77.4% in OSL and only 66.3% of university students who did not participate in service-learning in university ($\chi^2 = 156.3$, $df = 2$, $p < .001$).

Service-learning was also found to be related to the frequency of volunteering. While among all university students the average rate of weekly volunteering was 13.1%, among university students who had completed CSL in high school the rate was 16.2%, with lower rates among those who
had participated in optional programs (12.1%) or none (12.3%; $\chi^2 = 165.5$, $df = 6$, $p < .001$). Similarly, students who reported participation in CSL in university showed higher rates of weekly volunteering (17%) than students who participated in an optional program (11.7%) or none (13.2%).

Furthermore, while the average hours of volunteering among all university students was 7.1 hours per month, among students who had completed a CSL program in high school it rose to 9.9 hours, compared to only 6.7 hours for students who had participated in an optional program and 6.3 among those who had no program at all ($F = 9.6$, $df = 2$, $p < .001$). Students who participated in CSL in university reported volunteering for 8.2 hours per month. Students who did not participate in any service-learning program had a higher rate of monthly hours compared to students who participated in an optional one (7.3 vs. 6.2; $F = 1.05$, $df = 2$, $p < .001$).

**International Comparisons**

The relationship between participation in service-learning (high school and university) and volunteering (general rate, volunteering frequency, and average hours of volunteering) varied between the participating countries. In general, there were more significant relationships in countries with more service-learning experience (United States, Canada, Israel, India) compared to those where service-learning programs are rare (Finland).

Participation in service-learning programs in high school, especially compulsory programs, was positively related to present volunteering in several countries. As can be seen in Table 2, the rates of volunteering were highest among university students who had completed CSL in high school and lowest among university students who had no service-learning in high school, for instance in India (86% all students, 93% CSL, 85% OSL, 83% no service-learning, $\chi^2 = 8.145$, $df = 2$, $p < .01$) the United States (78% all students, 83% CSL, 78% OSL, 76% no service-learning, $\chi^2 = 7.290$, $df = 2$, $p < .05$) and Canada (80% all students, 82% CSL, 76% OSL, 75% no service-learning, $\chi^2 = 6.912$, $df = 2$, $p < .05$). OSL in high school was related to the highest volunteering rate only in Japan (39% all students, 42% CSL, 50% OSL, 37% no service-learning, $\chi^2 = 7.965$, $df = 2$, $p < .05$).

Participation in service-learning programs in university was also related to present volunteering in several countries. In all countries with a significant relationship between service-learning in university and present volunteering, the volunteering rate was lowest among students with no service-learning program in their university. This was the case, for instance in Israel (68% all students, 82% CSL, 81% OSL, 61% no service-learning, $\chi^2 = 26.711$, $df = 2$, $p < .001$), India (86% all students, 91% CSL, 90% OSL, 79% no service-learning, $\chi^2 = 15.128$, $df = 2$, $p < .01$), and Korea (73% all students, 85% CSL, 77% OSL, 69% no service-learning, $\chi^2 = 10.063$, $df = 2$, $p < .01$).
TABLE 2 Relation Between Service-learning and Volunteering Rates (%) by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>Participation in service-learning in high school</th>
<th>Participation in service-learning In university</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>Compulsory</th>
<th>Optional</th>
<th>None</th>
<th>Compulsory</th>
<th>Optional</th>
<th>None</th>
<th>( \chi^2 )</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia (n = 601, 580)</td>
<td>66</td>
<td>69</td>
<td>71</td>
<td>63</td>
<td>3.715</td>
<td>2</td>
<td>67</td>
<td>83</td>
<td>67</td>
<td>64</td>
<td>5.583</td>
<td>2</td>
</tr>
<tr>
<td>Belgium (n = 888, 886)</td>
<td>72</td>
<td>72</td>
<td>65</td>
<td>72</td>
<td>1.628</td>
<td>2</td>
<td>72</td>
<td>61</td>
<td>79</td>
<td>71</td>
<td>3.396</td>
<td>2</td>
</tr>
<tr>
<td>Canada (n = 963, 959)</td>
<td>80</td>
<td>82</td>
<td>76</td>
<td>75</td>
<td>6.912*</td>
<td>2</td>
<td>80</td>
<td>91</td>
<td>83</td>
<td>78</td>
<td>.762*</td>
<td>2</td>
</tr>
<tr>
<td>China (n = 915, 905)</td>
<td>85</td>
<td>82</td>
<td>88</td>
<td>84</td>
<td>2.062</td>
<td>2</td>
<td>85</td>
<td>93</td>
<td>89</td>
<td>83</td>
<td>8.498*</td>
<td>2</td>
</tr>
<tr>
<td>Croatia (n = 594, 597)</td>
<td>51</td>
<td>88</td>
<td>66</td>
<td>50</td>
<td>8.342**</td>
<td>2</td>
<td>51</td>
<td>52</td>
<td>63</td>
<td>50</td>
<td>2.086</td>
<td>2</td>
</tr>
<tr>
<td>Finland (n = 656, 652)</td>
<td>70</td>
<td>69</td>
<td>78</td>
<td>69</td>
<td>2.684</td>
<td>2</td>
<td>70</td>
<td>78</td>
<td>76</td>
<td>68</td>
<td>3.750</td>
<td>2</td>
</tr>
<tr>
<td>India (n = 588, 585)</td>
<td>86</td>
<td>93</td>
<td>85</td>
<td>83</td>
<td>8.145**</td>
<td>2</td>
<td>86</td>
<td>91</td>
<td>90</td>
<td>79</td>
<td>15.128**</td>
<td>2</td>
</tr>
<tr>
<td>Israel (n = 580, 581)</td>
<td>68</td>
<td>66</td>
<td>73</td>
<td>71</td>
<td>1.995</td>
<td>2</td>
<td>68</td>
<td>82</td>
<td>81</td>
<td>61</td>
<td>26.711***</td>
<td>2</td>
</tr>
<tr>
<td>Japan (n = 1047, 1041)</td>
<td>39</td>
<td>42</td>
<td>50</td>
<td>37</td>
<td>7.965*</td>
<td>2</td>
<td>39</td>
<td>75</td>
<td>64</td>
<td>37</td>
<td>24.478***</td>
<td>2</td>
</tr>
<tr>
<td>Korea (n = 694, 691)</td>
<td>75</td>
<td>77</td>
<td>72</td>
<td>67</td>
<td>6.061*</td>
<td>2</td>
<td>73</td>
<td>85</td>
<td>77</td>
<td>69</td>
<td>10.063**</td>
<td>2</td>
</tr>
<tr>
<td>Netherlands (n = 597, 598)</td>
<td>62</td>
<td>57</td>
<td>78</td>
<td>60</td>
<td>5.987</td>
<td>2</td>
<td>62</td>
<td>76</td>
<td>64</td>
<td>60</td>
<td>3.371</td>
<td>2</td>
</tr>
<tr>
<td>New Zealand (n = 601, 597)</td>
<td>74</td>
<td>82</td>
<td>72</td>
<td>74</td>
<td>3.120</td>
<td>2</td>
<td>74</td>
<td>69</td>
<td>73</td>
<td>75</td>
<td>.432</td>
<td>2</td>
</tr>
<tr>
<td>United States (n = 1281, 1266)</td>
<td>78</td>
<td>83</td>
<td>78</td>
<td>76</td>
<td>7.290*</td>
<td>2</td>
<td>79</td>
<td>87</td>
<td>77</td>
<td>79</td>
<td>.2866</td>
<td>2</td>
</tr>
<tr>
<td>United Kingdom (n = 586, 566)</td>
<td>64</td>
<td>74</td>
<td>66</td>
<td>60</td>
<td>5.651</td>
<td>2</td>
<td>64</td>
<td>92</td>
<td>64</td>
<td>63</td>
<td>4.831</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: *20% of cells have expected count less than 5 which lessens the reliability of chi-square tests.

*** = statistically highly significant (p < .001), ** = statistically significant (p < .07), * = statistically almost significant (p < .05).
Service-learning was also found to be related to frequency of volunteering but only in certain countries (see Table 3). University students who had completed CSL in high school were more likely to volunteer weekly compared to other students in India (5% all students, 7% CSL, 4% OSL, 5% no service-learning, $\chi^2 = 25.915, df = 6, p < .001$), UNITED KINGDOM (9% all students, 13% CSL, 8% OSL, 9% no service-learning, $\chi^2 = 18.549, df = 6, p < .01$), and China (7% all students, 15% CSL, 7% OSL, 6% no service-learning, $\chi^2 = 13.417, df = 6, p < .05$). In several countries service-learning in high school and frequency of volunteering were not related. The relationships between service-learning in university and frequency of volunteering were even more inconsistent. In Canada (weekly volunteering 22% all students, 37% CSL, 17% OSL, 22% no service-learning, $\chi^2 = 20.322, df = 6, p < .01$) and China (weekly volunteering 7% all students, 19% CSL, 8% OSL, 5% no service-learning, $\chi^2 = 23.477, df = 6, p < .01$). Respondents who had compulsory service-learning in university volunteered more frequently compared to those with optional or no service-learning. By contrast, in Israel students with optional service-learning in university volunteered more frequently compared to those with compulsory or no service-learning in university (weekly volunteering 19% all university students, 20% CSL, 42% OSL, 14% no service-learning, $\chi^2 = 45.765, df = 6, p < .001$). In several countries service-learning in university and frequency of volunteering were not related.

CSLOSONly in some countries service-learning and mean hours of volunteering related significantly. Service-learning (optional) in high school was related to higher mean hours of volunteering only in the Netherlands (6.8 all university students, 2.5 compulsory service-learning, 17 optional service-learning, 6.1 no service-learning, $\chi^2 = 8.156^*, df = 2, p < .05$). Service-learning in university was related to higher mean hours of volunteering only in Israel (7.2 all students, 4.6 compulsory service-learning, 17.7 optional service-learning, 6.0 no service-learning, $F = 9.245, df = 2, p < .001$).

DISCUSSION AND CONCLUSION

In this article we sought to investigate the relationship between service-learning and volunteering. For this purpose, we conducted a survey among university students across 14 countries and asked participants about their service-learning in high school and university, the level of choice of participation in service-learning programs (mandatory or optional) and examined the relationship between service-learning and current rates of volunteering, frequency of volunteering and mean hours of volunteering.

Based on previous international studies, we hypothesized that the volunteering rate and participation in service-learning programs would vary across countries. Our findings revealed great variation in volunteer
### TABLE 3  Service-learning and Weekly Volunteering by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>Participation in service-learning in high school</th>
<th>Participation in service-learning in university</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Compulsory</td>
</tr>
<tr>
<td>----------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td><strong>Australia (n = 594, 573)</strong></td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td><strong>Belgium (n = 885, 883)</strong></td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td><strong>Canada (n = 954, 950)</strong></td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td><strong>China (n = 906, 869)</strong></td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td><strong>Croatia (n = 594, 597)</strong></td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td><strong>Finland (n = 653, 649)</strong></td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td><strong>India (n = 588, 585)</strong></td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td><strong>Israel (n = 579, 580)</strong></td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td><strong>Korea (n = 692, 689)</strong></td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td><strong>Japan (n = 1044, 1041)</strong></td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Netherlands (n = 595, 596)</strong></td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td><strong>New Zealand (n = 601, 597)</strong></td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td><strong>United States (n = 1273, 1257)</strong></td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td><strong>United Kingdom (n = 585, 566)</strong></td>
<td>9</td>
<td>13</td>
</tr>
</tbody>
</table>

*Note:* *a*20% of cells have expected count less than 5 which lessens the reliability of chi-square tests.

*** = statistically highly significant (p < .001), ** = statistically significant (p < .01), * = statistically almost significant (p < .05)
participation from very high (e.g., in India and China) to very low (in Japan and Croatia). The countries with the highest rates of volunteering, however, had a low frequency of volunteering and low mean hours of volunteering. We also found variation between participating countries regarding rates of service-learning in high school (both compulsory and optional) and in university. This finding is in accordance with other international comparisons which showed that volunteering rates vary according to countries, political regimes and economies (Anheier & Salamon, 1999). Thus, our first hypothesis was confirmed.

This study, however, is the first to compare service-learning by country. Significant differences were found between countries regarding service-learning in high school and in university, both compulsory and optional. It is interesting to note how some countries are very strong in CSL, while others encourage optional programs. Our second hypothesis was also confirmed.

In accordance with our third hypothesis, we found significant differences regarding service-learning and background variables. We found that females participated at higher rates in service-learning programs. Furthermore, income was positively correlated with service-learning in high school, but negatively in university (higher participation among university students from low-income families). Since there was also a significant correlation between discipline of study and service-learning, it is possible that both gender and income are actually related to discipline and therefore to service-learning. In contrast with a previous article using this data which showed that social sciences students volunteered less than others (Haski-Leventhal et al., 2008), when looking at service-learning, social sciences students had the highest rates of CSL, which is expected, due to the nature of their studies and the fact that in many programs, such as psychology, a student has to volunteer or complete an internship in order to graduate. This connection may explain why students in the social sciences volunteer less in general. Finally, while university students who attended a local high school in the past reported higher rates of high school service-learning, students who did not go to a local high school showed significantly higher rates of university service-learning, particularly optional. This activity may be their way of becoming part of their new society and enhancing their careers.

Based on the extant literature, we further hypothesized a correlation between the level of choice regarding service-learning and rates of volunteering in general: OSL programs will be correlated with higher rates of volunteering, while CSL will be correlated with lower rates of volunteering in general. Contrary to our hypothesis, however, CSL, both in high school and in university, led to higher rates of current volunteering, particularly in some countries. While it is possible to argue that CSL in university may lead people to report higher rates of volunteering (although the students were asked to only report free-will activity), it is still quite remarkable that in all countries but Israel, volunteering in high school several years earlier was
correlated to higher rates of current volunteering. University students who had completed CSL programs in high school reported higher rates of current volunteering, compared to those who had participated in optional programs. This relationship was also with service-learning in university. Additionally, service-learning both in high school and in university led to a higher frequency of volunteering and a higher number of hours volunteered. In some cases OSL programs led to even lower volunteering rates than no program at all. This finding is contrary to our hypothesis and to the existing body of knowledge (e.g. Stukas et al., 1999).

We also hypothesized that the correlation between service-learning and volunteering will vary from country to country. Indeed, the findings show that countries with more service-learning experience, such as the United States, Canada, Israel, and India, demonstrated more significant positive relationships between the two variables. It should be noted that while service-learning programs (in high school and in university) were significantly correlated with volunteering rates, frequency and volunteering hours in several participating countries, CSL was negatively correlated only in Israel. It is possible that the 2–3 years mandatory military service makes university students resent CSL in that country. It is also possible that the higher average age of Israeli students (26 years) compared to the overall sample (21 years) leads to a larger year gap between attendance at high school and university and, therefore, to a weaker relationship.

Thus, we may conclude that service-learning programs are positively correlated to different aspects of voluntary action, even (or particularly) when mandatory. This relationship holds true in all countries but one, although the relationship between the variable was stronger and more significant in some countries rather than others. Accordingly, it may be fruitful for educational institutions as well as governments to introduce service-learning programs in high school and in university and thus elevate the level of volunteering among young people (compare Haski-Leventhal et al., 2009).

REFERENCES


