

# **Service-Learning Impacts on Students and Career Development from Graduates' Perspectives**

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## **Abstract**

Most research on S-L in Hong Kong has featured current undergraduates. This research involved alumni. In the quantitative part, we adopted a quasi-experimental design, comparing Lingnan University (LU) alumni with and without S-L experience. LU alumni with S-L experience reported positive impacts on civic responsibility, career exploration, and research skills, as compared with LU alumni without S-L experience. Although no statistically significant differences were found in terms of self-reported levels of communication skills, organization skills, social competence and problem solving, the fact that the experimental group was significantly younger and had correspondingly less work experience, suggests that S-L experience also has positive impacts on these attributes. In the qualitative part, LU alumni with S-L experience offered suggestions about how to improve S-L project quality.

**Keywords:** Service-learning impact; graduate attributes; career development; comparison study, mixed methods research.

## **Introduction**

Service-Learning (S-L) is an impactful and widely adopted pedagogy among the higher education institutions in Hong Kong. S-L involves a combination of rigorous academic study and meaningful service through reflection (OSL, 2016). Many studies reported that S-L has a positive impact on student's development. The provision of S-L opportunities also reflects the motto of Lingnan University (LU), which is "Education for Service". Recognizing this, instructors at LU have been integrating S-L into their course content, beginning in 2006. Over the years, course-embedded S-L has become increasingly available across LU, and in 2016-17 a policy of making S-L a graduation requirement for LU students was implemented.

By the end of academic year 2017-18, more than 7,000 LU students have participated in more than 350 courses with S-L components. While most existing research on S-L in Hong Kong has focused on existing undergraduate students, the research in this paper is based on a quasi-experimental design, in which a group of LU alumni with S-L experience look back on their S-L experience and its impact, and reflect on how S-L has affected their whole-person development, civic engagement, and career development. Comparisons between this group and another group of LU alumni, who

graduated without S-L experience, were made in terms of the perceived impact of S-L on whole-person development, civic engagement, and career development. Interviews with a sample of alumni with S-L experience also investigated how the quality of such experience can be further enhanced.

### **Literature review**

Much research has indicated the favourable impacts of S-L on students' whole person development (Nagai, 2009; Chan, Lee & Ma, 2009), civic engagement (Steinberg, Hatcher & Bringle, 2011) and satisfaction with career choices (Astin, Volgelsgang, Ikega, & Yee, 2000; Warchal & Ruiz, 2004). Most of the S-L research in Hong Kong has focused on the impact on learning outcomes among existing undergraduate students (Chan, Ma & Fong, 2006; Chan et al., 2009; Shek, Yu, Wu & Chai, 2014; Ngai, 2009) rather than on the longer-term impacts on alumni (Ma, Chan, & Chan, 2016). However, according to Korfmacher's (1999) study, recommendations from alumni can maximize the benefits for instructors, institutions, and S-L researchers.

We reviewed five prior studies about S-L impacts on graduates. Among these, findings indicated that graduates with S-L experience have a better sense of civic responsibility (Ma et al., 2016), better career development (Matthews, Foreman, & Wu, 2015), and improved interpersonal development (Fullerton, Reitenauer, & Kerrigan, 2015). A

summary of the research on S-L impacts on graduates is provided in Table 1.

Table 1: *Summary of the research on S-L impacts on graduates*

Authors, Year of Publication (Location)	Methodology	Samples	Impacts
Ma, Chan, & Chan, 2016 (HK)	Quantitative study	A total of 425 and 345 valid questionnaires from graduates with and without S-L experience from 2005 to 2010 were collected	<p>Graduates with S-L experience reported a greater civic responsibility, better career exploration and enhanced whole-person development than graduates without S-L experience</p> <p>Graduates with S-L experience are more willing to engage in community service and spend more hours of service after graduation</p>
Matthews, Foreman, & Wu, 2015 (USA)	Quantitative study	44 unique pairs graduates (with or without S-L experience) matched for undergraduate major, graduation date, gender, and academic performance, three years after graduation from 2010	<p>Graduates with S-L experience revealed significantly higher starting salaries and shorter time to receive a first pay raise than graduates without S-L experience.</p> <p>However, no significant differences were shown in the time to first job, amount of raise, and time to first promotion.</p>
Fullerton, Reitenauer, & Kerrigan, 2015 (USA)	Qualitative study	20 randomly selected graduates, 3- 16 years after graduation participated in a senior-level Service-Learning course	<p>Graduates reported that the human-to-human engagement during the S-L course led to new and altered perspectives, skills and/ or action including (1) enhanced interpersonal and communication skills, (2) a deeper understanding and appreciation for human diversity, (3) a new perspective that human variation is typical rather</p>

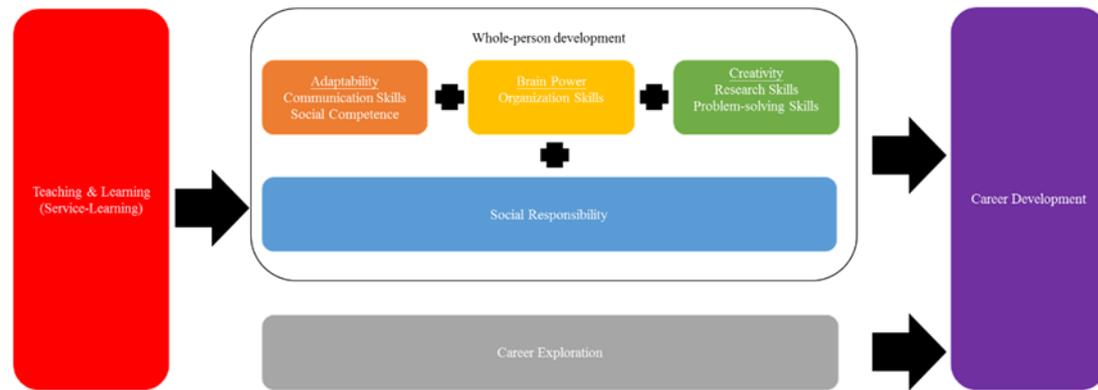
Authors, Year of Publication (Location)	Methodology	Samples	Impacts
			than atypical and (4) a newfound maturity and gratitude leading to a desire to serve.
Bamber & Hankin, 2011 (UK)	Qualitative study,	11 graduates, 1 or more years after participating in course-embedded international Service-Learning followed by local service-related activities	75 % of graduates experienced altered or new perspectives. Five learning processes are identified: contextual border crossing, dissonance, personalizing, processing, and connecting
Kiely, 2005 (USA)	Qualitative study, A Longitudinal case study design	22 graduates, 1 to 8 years after they participated in an international Service-Learning course in Nicaragua	Each participant experienced one or more altered or new perspectives within the moral, intellectual and/ or spiritual domains

### Methodology

Besides incorporating a quasi-experimental design (Babbie, 2013) a mixed method approach was adopted for the research. According to Creswell & Plano Clark (2007), “the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone” (p.5). A quantitative approach was adopted to investigate the perceived impact of S-L on whole-person development, civic engagement, and career development. A qualitative approach was adopted to investigate how the quality of the S-L experience can be further enhanced.

In the quantitative part, two versions of an online survey questionnaire were designed, one for LU graduates with S-L experience and one for those without such experience. Within this questionnaire, items measuring whole-person development and career exploration were included based on a framework (see figure 1) originally adopted by Ma et al. (2016). Six previously validated sub-scales measured aspects of whole-person development (i.e., communication skills, social competence, organization skills, research skills, problem-solving skills, and civic responsibility), together involving 27 items, each rated on a 10-point Likert scale. The questionnaire also included a 4-item scale measuring career exploration, which was piloted and validated before launching the survey. A quota sampling approach was adopted, under which six groups of LU graduates based on their year of graduation and on whether they had undertaken S-L were invited to complete the questionnaire between June and September 2018. For data analysis, besides compiling descriptive statistics, T-testing and ANOVA were performed using SPSS 23.

Figure 1: *Research Framework*



In the qualitative part, our aim to understand how the quality and impacts of the S-L experience can be further enhanced was addressed by conducting in-depth, semi-structured interviews. A sample of interviewees was selected, based on the logic of Maximum Variation Sampling, and targeting 18 graduates with S-L experience, who were diverse in terms of S-L courses taken, study major, graduation year, and gender). Among these, 13 eventually participated in a one-to-one telephone interview. Each interview was audio-recorded, transcribed, and content analyzed using grounded theory. Grounded theory is “an inductive approach to the study of social life that attempts to generate a theory from the constant comparing of unfolding observation” (Babbie, 2013, p.336).

## **Results and Discussion**

The results are divided into quantitative and qualitative parts. For the quantitative part,

the comparisons of the demographics between the experimental and comparison groups are shown in Table 2. Altogether 424 graduates (22.9% male, 77.1% female) with S-L experience, i.e., the experimental group, and 416 graduates without S-L experience (35.8% male, 64.2% female), i.e., the comparison group, completed the online questionnaire. Among the overall sample, the overall breakdown of 29.3% males and 70.7% females is broadly representative of the historical gender profile of LU graduates.

Table 2: *Demographic characteristics of the experimental and comparison groups*

	Experimental Group (with S-L experience)		Comparison Group (without S-L experience)		Total	
	N	%	N	%	N	%
<b>Gender</b>						
Male	97	22.9	149	35.8	246	29.3
Female	327	77.1	267	64.2	594	70.7
Total	424	100.0	416	100.0	840	100.0
<b>Degree</b>						
BA	143	33.7	169	40.6	312	37.1
BSS	125	29.5	139	33.4	264	31.4
BBA	156	36.8	108	26.0	264	31.4
Total	424	100.0	416	100.0	840	100.0
<b>Year of Graduation</b>						
2006-2011	92	21.7	242	58.2	334	39.8
2012-2015	148	34.9	134	32.2	282	33.6
2016-2018	184	43.4	40	9.6	224	26.7
Total	424	100.0	416	100.0	840	100.0
<b>Salary</b>						

	Experimental Group (with S-L experience)		Comparison Group (without S-L experience)		Total	
\$10,000 or below	16	3.8	7	1.7	23	2.7
\$10,000-19,999	243	57.3	124	29.8	367	43.7
\$20,000-29,999	108	25.5	146	35.1	254	30.2
\$30,000-39,999	31	7.3	83	20.0	114	13.6
\$40,000-49,999	12	2.8	28	6.7	40	4.8
\$50,000 or above	14	3.3	28	6.7	42	5.0
Total	424	100.0	416	100.0	840	100.0

In terms of study major, the breakdown of the overall sample was as follows: 37.1% Arts; 31.4% Business; and 31.4% Social Sciences. Within the experimental group, the breakdown in terms of study major was 33.7% Arts; 36.8% Business; and 29.5% Social Sciences, in slight contrast with but still broadly comparable to the comparison group, within which the breakdown was 40.6% Arts; 26.0% Business; and 33.4% Social Sciences.

In terms of year of graduation, the breakdown of the overall sample was as follows: 39.8% between 2006-2011; 33.6% between 2012-2015; and 26.7% between 2016-2018. Within the experimental group, the breakdown in terms of year of graduation was: 21.7% between 2006-2011; 34.9% between 2012-2015; and 43.4% between 2016-2018,

in contrast with the breakdown of the comparison group, within which 58.2% had graduated from 2006 to 2011; 32.2% between 2012-2015; and 9.6% between 2016-2018. Thus, members of the experimental group tended to have graduated more recently than members of the comparison group. This difference in terms of the recency of graduation was reflected in a tendency for working experience in months to be much shorter among the experimental group ( $M = 42.30$ ,  $SD = 38.01$ ), than among the comparison group ( $M = 73.03$ ,  $SD = 44.16$ ), and for median salaries among the experimental group, which fell within the \$10,000-\$19,999 band, to be lower than median salaries among the comparison group, which fell within the \$20,000-29,999 band. Possibly reflecting their shorter post-graduation experience in terms of duration (i.e., less time available to have begun such activities), slightly fewer members (25.2%) among the experimental group reported having engaged in community service after graduation, than among the comparison group (28.6%).

We shall next compare the experimental and comparison groups in terms of variables that likely reflect the impact of S-L experience. Members of the experimental group reported a slightly shorter average time (in months) taken for seeking their first job ( $M = 2.72$ ,  $SD = 5.33$ ) than respondents without S-L experience ( $M = 2.84$ ,  $SD = 4.24$ ). Members of the experimental group reported engaging in more hours of community

service per month after graduation ( $M = 9.07$ ,  $SD = 24.50$ ) than did members of the comparison group ( $M = 5.75$ ,  $SD = 12.25$ ).

A high reliability of the scales was found, with Cronbach's Alpha ranging from 0.70 to 0.95. In addition, the results of independent samples t-tests indicated that members of the experimental group reported significantly higher self-rated levels of research skills ( $t = 2.08$ ,  $p < 0.05^*$ ), connection to community ( $t = 4.00$ ,  $p < 0.001^{***}$ ), civic awareness ( $t = 4.54$ ,  $p < 0.001^{***}$ ), civic efficacy ( $t = 4.03$ ,  $p < 0.001^{***}$ ) and career exploration ( $t = 2.72$ ,  $p < 0.01^{**}$ ) than members of the comparison group (see Table 3). These findings are similar to those of a prior study by Ma et al. (2016). Non-significant differences were found for the other measured outcome variables.

Table 3: *Independent samples t-test results between the experimental and comparison groups*

		Experimental Group (with S-L experience)			Comparison Group (without S-L experience)			t-value
		N	M	SD	N	M	SD	
Whole	Person							
Development								
	Communication skills	424	7.52	1.29	416	7.43	1.45	.92
	Organization skills	424	7.54	1.25	416	7.47	1.35	.77
	Social Competence	424	7.68	1.27	416	7.58	1.42	1.04
	Problem Solving	424	7.52	1.27	416	7.46	1.36	.66

	Experimental Group (with S-L experience)			Comparison Group (without S-L experience)			t-value
	N	M	SD	N	M	SD	
	Research skills	424	7.45	1.40	416	7.24	
Overall	424	7.55	1.13	416	7.45	1.26	1.14
Civic Responsibility							
Connection to Community	424	6.72	1.60	416	6.26	1.74	4.00***
Civic Awareness	424	6.32	1.72	416	5.76	1.85	4.54***
Civic Efficacy	424	5.98	1.86	416	5.44	2.01	4.03***
Overall	424	6.23	1.67	416	5.70	1.80	4.43***
Career Exploration							
Overall	424	6.65	1.63	416	6.33	1.76	2.72**

\*\*\* $\rho < 0.001$ ; \*\*  $\rho < 0.01$ , \* $\rho < 0.05$

The qualitative part of the study involved seven male participants and six females. Among them, six had graduated in Social Sciences, 4 in Arts, and 3 in Business; 9 had completed the 3-year curriculum, and four had completed the 4-year curriculum. The number of S-L courses they had completed ranged from 1-6, while the average number of S-L courses completed was 2.6 (SD = 1.33). Among the 13 interviewees, ten considered that their S-L experience had had an impact on their choices about their career, which they attributed to greater self-understanding through S-L experience. For example:

“I found that I like to communicate with others through S-L experience. Therefore, I work in an industry where I can communicate with others.” (2017 BA Graduate)

All 13 interviewees indicated that they believed that S-L was an effective platform for equipping them with important attributes for their own career development. Attributes mentioned in this regard included communication skills (10 interviewees), proactive attitude (4 interviewees), and problem-solving skills (3 interviewees). For example:

“I think the soft skills I learned from participating in service learning are useful for my current work.” (2014 BBA Graduate)

“S-L has not directly affected my career plan. However, the professional knowledge and soft skills (such as problem-solving skills, communication skills) trained through S-L have been very helpful to me in my current work.” (2017 BA Graduate)

“I improved my communication skills with elderly people through S-L, which has to give me an advantage in the interview.” (2016 BSS Graduate)

These findings are similar to those of Fullerton et al. (2015), who reported that S-L led to the enhancement of interpersonal and communication skills as well as deep understanding and appreciation of diversity. A summary of the in-depth interview findings is given in Table 4.



## **Conclusions**

Both the qualitative and quantitative study parts of the study indicated that S-L experience has significant perceived impacts on the student's career choices. Significant differences between the experimental group and the control group indicated that S-L had positive impacts on self-perceived research skills, civic responsibility, and career exploration, findings that support previous research.

No statistically significant differences between the experimental group and the control group were observed in terms of perceived levels of the professional skills of communication, organization, social competence, and problem solving. However, if we take into consideration that the average age and experience of the experimental group were significantly younger than the control group, there is an alternative way to interpret the pattern of results (no differences) in relation to those particular participant outcomes. That is, we may consider that given the greater average age and experience of the comparison group, their similar levels of self-perceived professional skills indicate that S-L experience may be equivalent to two or three years' worth of employment experience in terms of the impact on the development of such professional skills. Furthermore, qualitative findings indicated that soft skills such as communication skills, problem-solving skills, and proactive attitude are developed by

S-L projects and are useful in the context of graduates' current employment.

One limitation of the quantitative study is that there were relatively fewer recent graduates in the comparison group and relatively fewer older graduates in the experimental group, rendering the task of making comparisons into a more complex matter of drawing inferences. Also, among the interviewees in the qualitative part of the research, the average number of S-L courses undertaken ( $M=2.8$ ) was relatively higher than the that among the experimental group in the quantitative part of the research ( $M=1.8$ ). A further limitation is that the graduates in the research are from one university, LU. Although most other Hong Kong universities are now adopting S-L, our findings may not so easily generalize, potentially because of unique features of the approaches adopted by the different universities when implementing S-L.

Notwithstanding the above-mentioned limitations of the study, the findings of this study provide evidence for the beneficial long-term S-L impacts on graduates, embracing not only career choices and civic responsibility but possibly also a range of professional skills.

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