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Misconceptions and understanding of service-learning among secondary school teachers in Hong Kong: a pioneer study

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ABSTRACT

Service-learning is a high-impact academic practice that effectively nurtures a wide range of learning outcomes, including some which are difficult to achieve in traditional classroom settings. This makes service-learning very attractive as a learning pedagogy for developing students' holistic learning outcomes. However, the nature of service-learning makes it easily conflated with similar civic learning activities, such as community service or volunteering which are widely practiced as non-academic or extra-curricular school activities. Service-learning is quickly gaining popularity as a learning activity in Hong Kong where it has been shown to counteract excesses in traditional examination-oriented education culture. In light of the widely accepted academic service-learning model, this study investigates deviations in Hong Kong secondary school teachers' perceptions of service-learning. Results reveal that misconceptions persist. Although most respondents believed they had a good grasp of service-learning concepts, they did not clearly distinguish service-learning from voluntary/community service, and lacked awareness that improperly-done service-learning can cause harm to students and the community. The study's implications on teacher capacity building and service-learning practice will be discussed, for instance, how training programmes can be designed more effectively and the need for more stringent curriculum standards in service-learning.

Introduction

Service-learning is an educational approach that integrates meaningful community service with academic study and reflection, providing students with practical learning experiences while addressing societal needs. Recognised internationally as a high-impact pedagogy in higher education, service-learning has been associated with a wide range of outcomes, including intellectual, social, civic, and

personal development (Aramburuzabala et al., 2019; Celio et al., 2011; Chan et al., 2020; Conway et al., 2009; Levesque-Bristol et al., 2011; Mergler et al., 2017; Mtawa & Nkhoma, 2020; Resch et al., 2023; Rutti et al., 2016). It also has the potential to impact students in other ways: for example, Song et al. (2017) found a positive and significant relationship between service-learning participation and cumulative GPA, retention, and graduation rates of underrepresented college students. It has also been used in professional and vocational training programmes, for example, to prepare pre-service teachers for their future professions where their students may come from low socioeconomic backgrounds (Butcher et al., 2003), or who may be immigrants from different cultures (Chambers & Lavery, 2022; Wrench et al., 2022).

At the secondary school level, Billig (2000) summarised that students engaged in high-quality service-learning demonstrate notable gains in personal development (e.g. personal and social responsibility, communication, sense of educational competence, self-esteem and self-efficacy, career exploration and aspiration); interpersonal development and the ability to relate to culturally diverse groups (e.g. trust, empathy, cognitive complexity and acceptance of cultural diversity); and academic performance (e.g. homework completion, scores on state tests, initiative to ask questions). Chung and McBride (2015) further highlighted the productive nature of service-learning in helping students understand the value of community service and enhancing their social and emotional skills. In the Asian context, Zahedi et al. (2023) demonstrated that service-learning increased civic engagement among secondary students as well as benefiting the served community.

The benefits of service-learning have resulted in widespread adoption of this pedagogy, especially in its birthplace of North America. In Asia, service-learning has gained much popularity over the last decade as educators and policy-makers alike become more aware that the traditional examination-oriented learning style which mainly focuses on knowledge acquisition does not conduce to students' holistic development (Shek et al., 2015). The result has been a rapid uptake of service-learning, first in higher education institutions, and more recently at the secondary school level.

Concept and practice of service-learning

Bringle and Hatcher (1995) provided a widely cited operational definition of service-learning, defining it as a course based, credit-bearing educational experience in which students (a) participate in an organised service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility (p. 112). As an experiential, civic pedagogy service-learning engages students 'in activities that address human and community needs, together with structured opportunities for reflection designed to achieve desired learning outcomes' (Jacoby, 2014, p. 2). Bringle et al (2012) point out that amid variations in how authors define service-learning, 'there is broad consensus that service-learning involves integration of academic material, relevant service activities, and critical reflection' (p. 6). Academic learning linked to service, service that meets real community needs, and reflection that critically processes personal experience are key components of service-learning. The

integration of academic learning, service and critical reflection sets service-learning apart from other forms of experiential pedagogies, such as field education, internship and practicums (Furco, 1996, p. 3), and community-based activities such as civic engagement, community service and volunteerism (Bringle et al., 2012, p. 5).

Even though service-learning has the potential to bring significant positive impacts to students and community, it has to be stressed that this learning is not automatic. Educators (Butin, 2005; Eby, 1998) have cautioned that improper design or implementation may cause harm to students and/or the community. For example, service-learning often involves relatively privileged students venturing into underserved communities to carry out projects. This affords students a first-hand experience with an outgroup, through which educators often hope to overturn stereotypes and nurture empathy. However, research has shown (Connor & Erickson, 2017) that simple contact with an outgroup often reinforces, rather than combats, negative stereotypes, and intentional design of the learning activity to achieve intergroup cooperation and equal status contact, backed up by reflective activities that reflect on identity and values, is necessary if the desired learning outcomes are to be achieved. This example illustrates the importance of intentional design in service-learning, which is only possible if teachers can differentiate service-learning from other forms of experiential pedagogy, and understand the concepts and practices involved in it.

To guide the design and implementation of effective service-learning projects, the National Youth Leadership Council, in collaboration with experts in the field, has developed a set of K-12 standards for quality practice in service-learning (Billig & Weah, 2008). These standards encompass the following eight dimensions: meaningful service, link to curriculum, duration and intensity, reflection, youth voice, process monitoring, diversity, and partnership.

The distinction between service-learning and other forms of experiential learning with a community component is well documented in the literature. Furco (1996) stressed that service-learning, unlike other forms of experiential learning, puts an equal emphasis on service and learning, and targets equal benefits for the service providers (students) and service recipients (the community). The matter calls to mind an essential element of service-learning, reciprocity, as highlighted by Jacoby (2014), emphasising the partnership between service-learning educators and the community, recognising their respective assets and needs.

Different understandings and myths of service-learning

Institutions, programmes, and teachers often employ the term to encompass a wide range of activities, durations, and formats, leading to diverse impacts and outcomes (Billig, 2000). for example, highlighted the contrasting viewpoints:

> Those who believe that (service-learning) is a philosophy often discuss it in terms of education reform. ... Those who view it as a cocurricular tool see its potential as a powerful, active form of reciprocal teaching and learning and discuss the need for service-learning to be fully integrated into the curriculum and aligned with standards . . . Those who view service-learning as a program are more likely to operationalize it as an elective for high school students, an after-school program, or a short-term activity. (p. 659–660)

Despite attempts to clarify its meaning, service-learning is still often conflated with voluntary or community services which have led to many misconceptions. Howard (2001) identified four common myths of service-learning: the misconception that it is the same as student community service, a mere renaming of internships, synonymous with learning through community experience, or simply the addition of community service to traditional courses.

The development of service-learning programmes or courses as an educational pedagogy relies heavily on teachers' knowledge and skills in service-learning pedagogy. However, the existing research has primarily focused on faculty discourse about service-learning (O'Meara & Niehaus, 2009), their perceptions of the pedagogical benefits, challenges and institutional support (Chen, 2015), or factors influencing their use of service-learning (Banerjee & Hausafus, 2007). In contrast, there has been limited investigation into teachers' understanding of the concept and practice of service-learning. Besides, most of the studies to date were conducted on tertiary teachers in the US. We know very little about the views of secondary school teachers, especially outside of the US.

Context of the study

In Hong Kong, a system-wide education reform aiming to establish an education system conducive to lifelong learning and all-round development was endorsed in 2000 (Education Commission, 2000) with student-centred learning becoming a fundamental principle of the new secondary school system. Schools were encouraged to incorporate 'community service' in the 'Other Learning Experiences' (OLE) component of the new senior secondary curriculum. The term 'service-learning' was not explicitly mentioned in the 2000 reform document but was introduced later in a web-based resource published in 2014.

Despite efforts to distinguish between service-learning and voluntary/community services, confusion may persist, particularly within the pre-university sector. For example, the webpage of the Hong Kong Education Bureau (EDB) defines service-learning as 'learning through service; it must utilize planned service activities and structured reflective processes to foster student learning while meeting community needs' (translated from EDB, n.d.). The definition does not explicitly differentiate between service-learning and voluntary/community services. Consequently, many teachers still perceive service-learning as merely encouraging students to organise or participate in co-curricular voluntary or community activities. Although the EDB and schools have provided some resources and training primarily in the form of online materials or one-off seminars and workshops, they have been sporadic and lacking in theoretical rigour. This conflation inevitably affects the quality of service-learning projects in secondary schools and limits their potential impact on student learning.

The research questions

This study investigated the misconceptions and understanding of service-learning among secondary school teachers in Hong Kong. Specifically, it attempted to address the following research questions:

(1) To what extent do Hong Kong secondary school teachers understand the key concepts and practice of service-learning and are able to differentiate service-learning from other forms of experiential learning?
(2) Is there any discrepancy between self-assessed and actual understanding of service-learning concepts and practice among Hong Kong secondary school teachers?
(3) Are there any significant differences in the self-assessed and actual understanding of service-learning concepts and practice among teachers with different backgrounds (e.g. teaching experience, prior training, previous experience in community service, major areas of teaching, position at school, etc.)?

The questions will be answered based on a large-scale survey in which respondents rated their knowledge of service-learning concepts ('self-assessed understanding'). The survey also contained items replies to which unveiled participants' knowledge of what is essential about service-learning ('actual understanding').

Methods

Participants

The target participants for this study were 2952 teaching staff and school social workers from 45 schools in Hong Kong participating in a project aimed at capacity building in service-learning in secondary schools.

Method and instrument

Data for the study were collected using an instrument developed by the research team with inputs from experienced service-learning educators and researchers from the university. This collaboration ensured the face and content validity of the instrument. The questionnaire (see Appendix) consisted of nine items designed to assess teachers' understanding of the concept and practice of service-learning. Participants were asked to rate each item on a 6-point scale ranging from 1 (totally incorrect) to 6 (totally correct), with an additional option for 'Don't know.' The first eight items were drafted based on commonly defined concepts and practice of service-learning found in the literature. Items 1, 2, and 5 were formulated as negative items based on the definitions by Bringle and Hatcher (1995), Furco (1996), and Jacoby (2014). Item 9 asked participants to rate their own understanding of the concepts of service-learning (i.e. 'self-assessed' understanding).

The survey instrument also included seven questions asking for the following demographic information of the respondent: gender, position at school, years of teaching experience, areas of teaching, experience of participating in community service activities in the past five years, involvement in academic service-learning, and previous training on service-learning.

Procedure

The survey was administered through an online questionnaire created using Qualtrics. A unique link to the online questionnaire was sent to the designated coordinators of all participating schools, who then distributed the link of the survey to eligible participants. The coordinators played a role in identifying the participants and reminding them to complete the survey. To maximise participation, three reminders were sent to participants via phone calls and emails. Participation in the study was voluntary. As a token of appreciation, participants received a HK$50 (~US$6.38) supermarket coupon upon survey completion. Ethical approval for the study was obtained from the University's Institutional Review Board.

Data analysis method

Data analysis was conducted using SPSS version 28. Descriptive statistics were used to summarise the collected data and provide an overall picture of the participants' actual and self-assessed understanding of the concept and practice of service-learning.

To explore potential differences between teachers with different demographic characteristics, a series of one-way ANOVAs and t-tests were conducted. The demographic characteristics examined included: position at school, teaching experience, areas of teaching, previous participation in voluntary or community service, involvement in academic service-learning, and previous training on service-learning. Effect sizes of the differences were also estimated. For the purpose of simplifying the analyses, the following contrasts and recoding were employed:

- Position at school: Only the two largest groups, 'teachers' and 'principals/vice-principals', were contrasted.
- Areas of teaching: The main areas of teaching were recoded into 'STEM-related versus non-STEM related subjects' and 'social/citizenship-related versus non-social /citizenship-related subjects.'
- Participation in voluntary or community service: Responses were recoded into 4 groups: (a) no, (b) as part of work only, (c) in a personal capacity only, and (d) both as part of work and in a personal capacity.
- Previous training on service-learning: Responses were recoded into 'Yes' (indicating having received training in any form) versus 'No.'

Our decision to use parametric instead of nonparametric tests for analysing the ordinal data collected from the Likert-type scale in this study was based on several reasons. Parametric tests have been shown to have higher statistical power, making them more likely to detect true differences. Previous studies have demonstrated the robustness of parametric tests in large studies, even when assumptions, including the use of ordinal data, are violated (e.g. Altman & Bland, 2009; le Cessie et al., 2020; Vrbin, 2022). Experts also support the use of parametric tests in large studies, even for heavily skewed data (Fagerland, 2012; Vrbin, 2022). Moreover, the debate over the use of parametric versus non-parametric methods for analysing Likert scale ordinal data has persisted for several decades. However, applying parametric analysis to real survey data has consistently

yielded similar conclusions to those drawn from non-parametric analyses (Mircioiu & Atkinson, 2017). Considering all these factors, the advantages of parametric analysis, including its discriminant nature and robustness, can be effectively leveraged (Carifio & Perla, 2007; Mircioiu & Atkinson, 2017; Norman, 2010).

Results

Respondents and response rate

The final sample for this study comprised 711 participants, including 377 females (53.0%) and 334 males (47.0%). The actual response rate was 24.1%. Table 1 presents the demographic characteristics of the respondents. The majority of participants (60%) fell within the age range of 31 to 50 years; 24.1% were below 30 years of age. Among the respondents, 91.1% were teachers, while 6.3% held positions as principals/vice-principals. 56.1% reported having 15 years of teaching experience or less. In terms of subject areas, 36.0% were involved in teaching languages, 20.7% in personal, social, and humanities subjects, 19.7% in mathematics, and 12.9% in science subjects. Notably, 32.2% of the participants had not engaged in any voluntary or community service in the past five years, whereas only 24,6% reported having been involved in academic service-learning. Additionally, around three-quarters (74.5%) of the participants had not received any prior training on service-learning.

Teachers' understanding of the concept and practice of service-learning

Table 2 shows the means, standard deviations, and percentage distributions of the teachers' responses to the nine items included in the survey.

Results indicate that teachers generally perceived themselves as having a good understanding of the concepts of service-learning (item 9). Among the respondents, 60.9% rated the items as totally/mostly/somewhat correct, while 19.0% rated it as totally/mostly/somewhat incorrect, and 20.1% selected 'don't know'. The mean score was 4.00 on a 6-point scale.

Their actual understanding, however, is not as good as they reported. On one hand, most respondents were able to identify that:

- reflection is a key element of service-learning (Item 4, mean = 5.25, 95.2% rating the item as totally/mostly/somewhat correct),
- service-learning should require students to apply what they learn in the classroom to serve the community (Item 3, mean = 4.54, 84.4%);
- service-learning should have clearly defined intended student learning outcomes (Item 7, mean = 4.58, 80.9%), and
- service-learning must bring benefits to the community (Item 6, mean = 4.45, 80.7%).

On the other hand, a significant proportion of them mistakenly believe that:

- service-learning is essentially about encouraging/requiring students to take part in volunteering or community service (Item 1, mean = 4.69, with 87.4% rating this negative item as totally/mostly/somewhat correct),

Table 1. Demographic characteristics of respondents.

Demographic characteristics	Categories	n	%
Gender	Male	334	47.0
	Female	377	53.0
	Total	*711*	*100.0*
Age	21 to 30	171	24.1
	31 to 40	237	33.3
	41 to 50	190	26.7
	51 to 60	109	15.3
	61 or above	4	0.6
	Total	*711*	*100.0*
Position at school	Teacher	648	91.1
	Teaching assistant	6	0.8
	Principal/Vice-principal	45	6.3
	School social worker	2	0.3
	Others	10	1.4
	Total	*711*	*100.0*
Teaching experience	5 years or below	158	22.2
	6 to 10 years	84	11.8
	11 to 15 years	157	22.1
	16 to 20 years	91	12.8
	21 to 25 years	97	13.6
	26 to 30 years	53	7.5
	31 years or above	59	8.3
	Not applicable	12	1.7
	Total	*711*	*100.0*
Main areas of teaching [multiple response]	Language	256	36.0[a]
	Mathematics	140	19.7[a]
	Science	92	12.9[a]
	Technology	78	11.0[a]
	Personal, Social & Humanities	147	20.7[a]
	Art and Music	41	5.8[a]
	Physical Education	33	4.6[a]
	Citizenship and Social Development/Liberal Studies	46	6.5[a]
	Religious Studies	23	3.2[a]
	Others	17	2.4[a]
	Total	*873*	
Demographic characteristics	Categories	n	%
Participation in voluntary or community service in the past five years [multiple response]	No	229	32.2[a]
	Yes, as part of work	317	44.6[a]
	Yes, in a personal capacity	258	36.3[a]
	Total	*804*	
Involvement in academic service-learning [multiple response]	Yes	175	24.6
	No, but want/plan to	298	41.9
	No, and not want/plan to	230	32.3
	Missing	8	1.1
	Total	*711*	
Previous training on service-learning [multiple responses]	None	530	74.5[a]
	Resources from EDB/Hong Kong EdCity/other sources[1]	70	9.8[a]
	School-based workshops	85	12.0[a]
	Workshops/seminars/conferences by universities/NGOs etc.	78	11.0[a]
	Short courses/programmes by universities/NGOs etc.	29	4.1[a]
	Others	4	0.6[a]
	Total	*796*	

[a]Multiple-response items: percentage calculated based on the total number of respondents; total may exceed 100.

- service-learning is essentially about letting students learn in the community (Item 2, mean = 4.74, 89.6%), and
- good service-learning programmes should put more emphasis on students' learning than on meeting the needs of the community (Item 5, mean = 4.17, 65.5%).

Table 2. Means, standard deviations and percentage distribution of teachers' responses to the items.

Items	N	Mean	Std. Dev.	1 = Totally incorrect	2 = Mostly incorrect	3 = Somewhat incorrect	4 = Somewhat correct	5 = Mostly correct	6 = Totally correct	Don't Know
				Percentage distribution						
1. Service-learning is basically about encouraging/ requiring students to take part in volunteering or community services [Negative item]	711	4.69	0.87	0.8	1.4	5.1	22.8	53.2	11.4	5.3
2. Service-learning is essentially about letting students learn in the community [Negative item]	711	4.74	0.82	0.3	1.0	4.6	25.0	51.2	13.4	4.5
3. Service-learning should require students to apply what they learn in the classroom to serve the community	711	4.54	0.95	1.0	1.5	7.7	32.1	39.8	12.5	5.3
4. Reflection is a key component of service-learning	711	5.25	0.79	0.1	0.4	1.1	13.9	39.0	42.3	3.1
5. Good service-learning programmes should put more emphasis on students' learning than on meeting the needs of the community [Negative item]	711	4.17	1.17	2.0	5.5	18.8	24.3	31.5	9.7	8.2
6. Service-learning must bring benefits to the community	711	4.45	0.95	0.4	2.0	10.8	34.2	34.7	11.8	6.0
7. Service-learning should have clearly defined intended student learning outcomes.	711	4.58	0.97	0.4	2.4	7.9	27.7	39.0	14.2	8.4
8. Service-learning can possibly do harm to students	711	3.00	1.35	11.5	18.1	16.3	18.1	7.7	2.5	25.6
9. I have a good understanding of the concepts of service-learning [Self-assessed understanding]	711	4.00	1.08	2.8	4.5	11.7	36.3	20.4	4.2	20.1

In addition, it is worth noting that 25.6% of the teachers responded with 'don't know' to the statement 'service-learning can possibly do harm to students' (Item 8), and a further 45.9% rated it as totally/mostly/somewhat incorrect. Only 28.3% were aware of the potential harm of service-learning projects that were ill designed or implemented.

Differences in self-assessed understanding of service-learning concepts across groups

A series of one-way ANOVAs and t-tests were conducted to explore the differences in the actual and self-assessed understanding of the concept and practice of service-learning among teachers with distinct demographic characteristics.

Regarding teachers' self-assessed understanding of service-learning concepts (Item 9), significant differences across groups were found (see Table 3 for details). Principals/vice-principals consistently reported a higher level of self-assessed understanding of service-learning concepts compared to teachers ($t = -2.094$, $p < .05$). Additionally, respondents who had received prior training on service-learning tended to rate themselves higher on this item in comparison to those who had not received such training ($t = 5.715$, $p < .001$). Furthermore, a distinction was observed between teachers who had engaged in community service either as part of their work, in a personal capacity, or both, and those who had not participated in any form of community service. The former groups exhibited higher scores on the self-assessed understanding of service-learning concepts ($F = 7.363$, $p < .001$). Moreover, respondents who had been or were currently involved in academic service-learning reported a significantly higher level of self-assessed understanding compared to those who were not involved but expressed a desire or intention to be involved. In turn, the latter group reported a higher self-assessed understanding compared to respondents who were not involved and did not want or plan to be involved in academic service-learning ($F = 10.264$, $p < .001$). However, the effect sizes of these differences (Hedge's g or eta square) were relatively small. On the other hand, no statistically significant differences were found among teachers of different gender, areas of teaching and levels of teaching experience.

Differences in actual understanding of the concept and practice of service-learning across groups

One-way ANOVA shows that there were statistically significant differences in the actual understanding of the concept and practice of service-learning among teachers with different levels of involvement in academic service-learning (Table 4). Teachers already engaged in academic service-learning generally had a better understanding than those who were not but expressed a desire or plan to be involved. The latter, in turn, had a higher understanding than those who were not involved and did not want or plan to be involved. The differences were statistically significant for the following items:

- Item 2: 'Service-learning is essentially about letting students learn in the community' [Negative item] ($F(2, 669) = 4.26$, $p < .05$),
- Item 3: 'Service-learning should require students to apply what they learn in the classroom to serve the community' ($F(2, 662) = 5.22$, $p < .01$),
- Item 4: 'Reflection is a key component of service-learning' ($F(2, 678) = 9.13$, $p < .001$),
- Item 6: 'Service-learning must bring benefits to the community' ($F(2, 658) = 3.18$, $p < .05$).

Table 3. Differences in self-assessed understanding of service-learning concepts (item 9) across groups.

Demographic characteristics	Sub-groups	N	Mean	SD	F- or t-statistics	p	Effect size	Post hoc comparisons
1. Gender	a. Male	273	4.01	1.054	2.31	.817	$g = 0.019$	–
	b. Female	295	3.99	1.097				
2. Teaching experience	a. 5 years or below	134	4.10	1.021	1.488	.180	$\eta^2 = 0.016$	–
	b. 6 to 10 years	64	3.91	1.294				
	c. 11 to 15 years	124	4.05	1.058				
	d. 16 to 20 years	67	3.81	1.048				
	e. 21to 25 years	78	3.78	1.169				
	f. 26 to 30 years	44	4.07	0.925				
	g. 31 years or above	50	4.18	0.962				
3. Area of teaching	a. STEM-related subjects	205	3.92	1.086	−1.242	.215	$g = 0.108$	–
	b. Non-STEM-related subjects	363	4.04	1.069				
	a. Social/citizenship-related subjects	142	4.13	0.869	2.006	.046*	$g = 0.211$	–
	b. Non-social/citizenship-related subjects	426	3.95	1.133				
4. Position at school	a. Teachers	517	3.96	1.080	−2.094	.037*	$g = 0.347$	–
	b. Principals/vice-principals	39	4.33	1.009				
5. Participation in voluntary/community service	a. None	166	3.71	1.186	7.363	<.001***	$\eta^2 = 0.038$	b > a, p = .016*
	b. Yes, as part of work only	182	4.05	1.021				c > a, p = .028*
	c. Yes, in a personal capacity	139	4.05	1.031				d > a, p < .001***
	d. Yes, both as part of work and in a personal capacity	78	4.36	0.882				
6. Involvement in academic service-learning	a. Yes	145	4.28	1.024	10.264	<.001***	$\eta^2 = 0.035$	a > b, p = .038*
	b. No, but want/plan to	246	4.00	1.028				a > c, p < .001***
	c. No, and not want/plan to	170	3.74	1.123				b > c, p = .030*
7. Previous training on service-learning	a. Yes	160	4.35	0.856	5.715	<.001***	$g = 0.475$	–
	b. No	403	3.85	1.122				

*Significant at .05 level, **Significant at .01 level, ***Significant at .001 level.

Table 4. Actual understanding of concept and practice of service-learning of teachers with different involvements in academic service-learning.

Items	Sub-group	N	Mean	SD	F	df	p	η^2	Post hoc comparison
1.Service-learning is basically about encouraging/requiring students to take part in volunteering or community services. [Negative item]	a. Yes	168	4.58	1.05	2.39	(2, 662)	.093	0.007	–
	b. No, but want/ plan to	291	4.76	0.83					
	c. No, and not want/ plan to	206	4.67	0.72					
2.Service-learning is essentially about letting students learn in the community. [Negative item]	a. Yes	168	4.76	0.89	4.26	(2, 669)	.014*	0.013	b > c, p = .011
	b. No, but want/ plan to	288	4.82	0.83					
	c. No, and not want/ plan to	216	4.61	0.69					
3.Service-learning should require students to apply what they learn in the classroom to serve the community.	a. Yes	165	4.70	0.95	5.22	(2, 662)	.006**	0.016	a > c, p = .004
	b. No, but want/ plan to	290	4.56	0.94					
	c. No, and not want/ plan to	210	4.39	0.94					
4.Reflection is a key component of service-learning.	a. Yes	171	5.30	0.80	9.13	(2, 678)	<.001***	0.026	a > c, p = .013
	b. No, but want/ plan to	293	5.37	0.72					b > c, p < .001
	c. No, and not want/ plan to	217	5.07	0.82					
5.Good service-learning programmes should put more emphasis on students' learning than on meeting the needs of the community. [Negative item]	a. Yes	168	4.33	1.25	2.81	(2, 643)	.061	0.009	–
	b. No, but want/ plan to	275	4.16	1.15					
	c. No, and not want/ plan to	203	4.04	1.12					

(*Continued*)

Table 4. (Continued).

Items	Sub-group	N	Mean	SD	F	df	p	η^2	Post hoc comparison
6.Service-learning must bring benefits to the community.	a. Yes	165	4.59	0.95	3.18	(2, 658)	.042*	0.010	a > c, p = .032
	b. No, but want/ plan to	283	4.45	0.96					
	c. No, and not want/ plan to	213	4.35	0.92					
7.Service-learning should have clearly defined intended student learning outcomes.	a. Yes	160	4.64	1.07	0.61	(2, 640)	.545	0.002	–
	b. No, but want/ plan to	280	4.59	0.94					
	c. No, and not want/ plan to	203	4.53	0.90					
8.Service-learning can possibly do harm to students.	a. Yes	133	3.17	1.40	1.40	(2, 519)	.248	0.005	–
	b. No, but want/ plan to	230	2.95	1.33					
	c. No, and not want/ plan to	159	2.92	1.32					

*Significant at .05 level, **Significant at .01 level, ***Significant at .001 level.

However, the effect sizes of these differences were not large, with η^2 values ranging from 0.010 (Item 6) to 0.026 (Item 4).

Furthermore, an independent t-test revealed significant differences in understanding among teachers with different positions at school (Table 5). Principals/vice-principals tended to have a better understanding of the concept and practice of service-learning than teachers, although the differences were statistically significant only for Items 3 'Service-learning should require students to apply what they learn in the classroom to serve the community' ($t = -2.66$, $p < .05$) and Item 4 'Reflection is a key component of service-learning' ($t = -2.37$, $p < .05$), with respective effect sizes (Hedge's g) of 0.303 and 0.365.

No statistically significant differences were found among teachers with different gender, teaching experience, participation in voluntary or community service, areas of teaching, or prior training.

Discussion

This study examined Hong Kong secondary school teachers' understanding of service-learning, in particular, their awareness of its key concepts and practice and ability to distinguish it from voluntary/community services, whether there are significant

Table 5. Actual understanding of concept and practice of service-learning of teachers with different positions at school.

Item	Group	N	Mean	SD	t	df	p	Effect size (Hedge's g)
1.Service-learning is basically about encouraging/requiring students to take part in volunteering or community services. [Negative item]	a. Teacher	610	4.70	0.87	0.92	653	.358	0.142
	b. Principal/ vice-principal	45	4.58	0.94				
2.Service-learning is essentially about letting students learn in the community. [Negative item]	a. Teacher	617	4.74	0.80	0.49	659	.625	0.076
	b. Principal/ vice-principal	44	4.68	0.96				
3.Service-learning should require students to apply what they learn in the classroom to serve the community.	a. Teacher	611	4.51	0.96	−2.66	56.69	.010**	0.303
	b. Principal/ vice-principal	44	4.80	0.67				
4.Reflection is a key component of service-learning.	a. Teacher	626	5.22	0.80	−2.37	669	.018*	0.365
	b. Principal/ vice-principal	45	5.51	0.69				
5.Good service-learning programmes should put more emphasis on students' learning than on meeting the needs of the community. [Negative item]	a. Teacher	593	4.18	1.16	0.82	633	.410	0.132
	b. Principal/ vice-principal	42	4.02	1.24				
6.Service-learning must bring benefits to the community.	a. Teacher	607	4.43	0.96	−1.46	648	.146	0.229
	b. Principal/ vice-principal	43	4.65	0.84				
7.Service-learning should have clearly defined intended student learning outcomes.	a. Teacher	591	4.57	0.96	−1.93	632	.054	0.305
	b. Principal/ vice-principal	43	4.86	0.89				
8.Service-learning can possibly do harm to students	a. Teacher	476	3.03	1.35	1.15	513	.250	0.192
	b. Principal/ vice-principal	39	2.77	1.31				

differences in their understanding based on different backgrounds, and if there is a discrepancy between teachers' self-assessed and actual understanding of academic service-learning.

Teachers' misconceptions of service-learning

The study's findings indicate a somewhat mixed understanding of service-learning among Hong Kong secondary school teachers in our sample. On one hand, a significant majority subscribe to the importance of reflection, application, community benefits, and intended learning outcomes. However, significant misconceptions persist, particularly in relation to conflating service-learning with voluntary/community services and community-based learning. Additionally, a substantial proportion of teachers prioritise students' learning outcomes over the needs of the community, contrary to the essential feature of service-learning, which emphasises reciprocity and equal benefits (Jacoby, 2014). Most critically in our view, a significant proportion of respondents are unaware of, or unsure about, the potential harm service-learning might pose to students.

Contrary to expectations, the study found no statistically significant difference between teachers who received training and those who did not in terms of their understanding of service-learning. However, teachers who have been involved in academic service-learning exhibit a higher understanding of the importance of reflection, application, and community benefits compared to those who have not been involved. This is true regardless of whether they intend to continue to stay involved in the future. Similarly, teachers who have not been involved but express a willingness to do so appear to have a clearer understanding of the distinction between service-learning and community service. Interestingly, this clearer understanding does not extend to teachers who self-report more experience in participating in or organising community service, suggesting that teachers themselves are able to distinguish, albeit at an intuitive level, the differences between community service and service-learning, even if they are not able to articulate the actual principles and concepts that differentiate the two.

Teachers' self-assessed understanding of service-learning concepts

One major finding of our study is that Hong Kong secondary school teachers, or at least those in our sample, do not seem to be very self-aware of their own limitations in understanding service-learning. The majority assess themselves to have a good understanding of the concepts of service-learning. However, as the results on teachers' understanding reported above reveal, this high level of self-assessment does not seem to be supported by their actual understanding, at least on items relating to conceptual and theoretical principles. With respect to the groupwise comparisons, the higher level of self-assessed understanding exhibited by teachers in management positions (principals/vice-principals) than their peers is supported by a higher actual understanding, which may be due to the fact that teachers in those positions have much more exposure to different kinds of learning pedagogies, including service-learning, as a result of their work duties.

Implications

Several implications for teacher capacity building in service-learning can be drawn from our findings. First, our results emphasise the necessity of providing professional development opportunities and retraining to enhance teachers' understanding and implementation of service-learning. It is well-known that '[t]eachers are central to the practice of service-learning' (Wade, 1997, p. 77), and if service-learning is to live up to its potential as a transformative pedagogy, it stands to reason that misperceptions among teachers need to be taken seriously. It also calls into questions the effectiveness of previous training programmes, especially on their coverage of the theoretical underpinning. Given that service-learning is a double-edged sword in that in its potential to effect tremendous learning outcomes is the potential to cause harm to students, it is important to have stringent curriculum standards to ensure proper student learning in service-learning programmes.

Second, our results also suggest that there is a need to properly assess professional development programmes for actual understanding in addition to self-perceived learning gains. Professional development programmes are oftentimes assessed via participant

feedback on the perceived effectiveness and quality of the programme, or via self-reported assessments of learning. Our findings suggest that there exists a gap between self-perceived understanding and actual understanding, at least for service-learning. This suggests that more rigorous assessment is needed for such programmes. To a certain extent, it also suggests that completion of a programme, or self-reported understanding of concepts, may not reliably ensure individuals with proper knowledge of concepts and skills, at least in service-learning.

Third, our results indicating a higher actual understanding on the part of teachers who have more exposure to service-learning suggest a potential need for a paradigm shift in professional development programmes. Our own experience suggests that an experiential component, where teachers get to observe, evaluate and even participate in actual service-learning projects that are led by other colleagues, is impactful and helpful to their learning. It also suggests a need to facilitate, at a more hands-on level, teachers in designing academic service-learning programmes.

Finally, an indirect implication of our results concerns *student* learning from service-learning in Hong Kong secondary schools. Previous work (Chan et al., 2019; Ngai et al., 2018) has shown that the learning *process* is critical in effecting significant learning outcomes from service-learning. This learning process is designed, in large part, by teachers. Nathan and Kielsmeier (1991) have pointed out that the ultimate success of a service-learning project depends, at least in part, on the skill, knowledge, and creativity of the classroom teacher. Bringle and Hatcher (1995) go as far as to state that 'service-learning courses that are poorly designed and inadequately managed can result in counter-productive results for all' (p. 113). Given that there appear to be significant misperceptions among Hong Kong secondary school teachers in critical foundations and concepts on service-learning, there may be a need for a more rigorous evaluation and assessment of student learning from these programmes.

Limitations

There are some limitations to this research that should be considered before the findings can be generalised. One major limitation of this study is the presence of self-selection bias or volunteer bias. The 711 teacher participants in this research project were recruited from schools that had agreed to take part in the capacity building programme. Even if the teachers themselves were not part of the programme itself or even involved in service-learning, the fact that they are coming from schools which are prepared to be supportive of service-learning may differ them from colleagues coming from non-participating schools. This self-selection bias may limit the generalisability of the findings and should be taken into consideration when interpreting the results.

Another limitation of our findings is the research method employed. Although the survey items were developed by a research team guided by service-learning specialists and educators, the reliability and validity of the questionnaire requires further demonstration. To elaborate, the validation process would benefit from the opinion of non-academic practitioner experts in service-learning; and a psychometric validation of the questionnaire itself through intra-test and inter-test methods. Moreover, the

standardised nature of the survey questions may limit the depth of the responses, making it challenging to explore deeper reasons behind specific items (DeCarlo, 2018). For instance, the reasons why teachers in particular positions at their schools tend to have better understanding of service-learning can only be postulated. To minimise the drawbacks of survey methods, ensuring data quality is of utmost importance (Mukherjee, 2019). In our study, we sent three reminders to track completed surveys and put forth significant effort to assist respondents in filling out the questionnaire correctly and completely.

Finally, the results of this study are based on data collected from Hong Kong secondary schools. While the findings are persuasive within the context of Hong Kong, their generalisability to other settings should be further explored. Therefore, caution should be exercised when attempting to generalise the findings beyond the specific context of this study.

To conclude, while this study provides valuable insights into the understanding and self-efficacy of Hong Kong secondary school teachers regarding service-learning, several limitations should be acknowledged. The presence of self-selection bias, limitations inherent to survey research, and the need for further exploration of generalisability to other contexts should be considered when interpreting and applying the study's findings. Future research should aim to address these limitations and provide a more comprehensive understanding of service-learning in diverse educational settings.

Conclusion

This research provides new insight into the relationship between self-efficacy and the true understanding of service-learning among Hong Kong secondary school teachers. While teachers display positive self-assessment, there is a need to enhance their understanding of service-learning and its differentiation from community service.

The study highlights the importance of equipping teachers with the necessary attitudes, knowledge, and skills to effectively implement service-learning. To maximise the benefits of service-learning and foster meaningful social engagement among students, promoting 'academic service-learning' in secondary schools becomes crucial. This can be achieved through comprehensive professional training and retraining programmes that address theoretical knowledge and practical skills. By empowering teachers, we can bridge the gap between students and community partners, ultimately improving students' academic performance and facilitating their meaningful social engagement. A qualitative study is underway to explore teacher participants' experience of training programmes with experiential component with a view to understanding the critical factors and outcomes of such programmes.

Note

1. Most of these can be considered online resources. EDB refers to the Education Development Bureau, is the government body that monitors education in Hong Kong. EdCity is a wholly-owned company of the government that aims to be a one-stop professional education portal in Hong Kong.

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Appendix. Items included in the survey questionnaire

I. Please rate the extent to which you think the following statements are correct (1 = totally incorrect, 6 = totally correct; with an additional option for 'Don't know')

    1. Service-learning is basically about encouraging/requiring students to take part in volunteering or community services. [Negative item]

    2. Service-learning should require students to apply what they learn in the classroom to serve the community.

    3. Reflection is a key component of service-learning.

    4. Good service-learning programmes should put more emphasis on students' learning than on meeting the needs of the community. [Negative item]

    5. Service-learning must bring benefits to the community.

    6. Service-learning should have clearly defined intended student learning outcomes.

    7. Service-learning can possibly do harm to students.

    8. I have a good understanding of the concepts of service-learning.

II. Please choose the answers according to your situation.

    1. Your gender
      □ Male   □ Female

    2. Position at school
      □ Teacher   □ Teaching assistant   □ Principal/Vice-principal
      □ School social worker   □ Others (please specify)

    3. How long have you been teaching?
      □ 5 years or below   □ 6 to 10 years   □ 11 to 15 years
      □ 16 to 20 years   □ 21 to 25 years   □ 26 to 30 years
      □ 30 years or above

    4. Your main areas of teaching (cam choose multiple responses)
      □ Language   □ Mathematics   □ Science
      □ Technology   □ Personal, Social and Humanities   □ Arts and Music
      □ Physical Education   □ Citizenship and Social Development/Liberal Studies
      □ Religious Studies   □ Others (please specify)

    5. Have you participated in volunteering or community service activities in the past five years? (can choose multiple responses)
      □ No   □ Yes, as part of my work   □ Yes, in a personal capacity

    6. Have you been involved in academic service-learning (i.e. community service that is linked to academic studies)?
    □ Yes, I have been/am currently involved   □ No, but I want/plan to be involved
    □ No, and I do not want/plan to be involved

    7. Have you had any of the listed training on service-learning? (can choose multiple responses)
    □ None
    □ Resources from EDB/ Hong Kong EdCity/other sources
    □ School-based workshops
    □ Workshops/ seminars/ conferences by universities/NGOs/other institutions
    □ Short courses/ programmes offered by universities/NGOs/other institutions
    □ Others (please specify)