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Enhancing the impacts of international service-learning on intercultural effectiveness and global citizenship development through action research

Abstract

This paper reports the results of an action research project on improving students' learning from international service-learning. Participants were two consecutive cohorts of university students enrolled in nine international service-learning projects. Mixed-method findings from the first cohort reveal significant increases in their global competence and intercultural effectiveness but not their social responsibility or global civic engagement. Targeted improvement actions were planned and implemented accordingly for the subsequent cohort, resulting in significant increases in their social responsibility in addition to global competence and intercultural effectiveness scores. No significant increase, however, was found in students' global civic engagement. **The findings suggest that action research can be an effective strategy to improve students' global citizenship and intercultural effectiveness development from international service-learning, and that explicit and intentional elements are needed in the learning and reflective activities to develop these attributes.** Implications for practice and future research are discussed.

Keywords: International service-learning, global citizenship, intercultural effectiveness, action research

Introduction

International Service-Learning is an experiential learning pedagogy that “combines academic instruction and community-based service in an international context” (Crabtree, 2008, p. 18). Through combining aspects of conventional study abroad and service-learning programmes, it offers “an exceptional degree of integration into a target culture and an intensive experience of community service” (Tonkin & Quiroga, 2004, p. 131). International service-learning has been increasingly adopted by universities to better prepare their students to become ‘global citizens’ with intercultural competencies to help them function effectively in a progressively interconnected world (Plater, Jones, Bringle, & Clayton, 2009).

However, research has shown that exposing students to an international experience alone may not automatically improve their intercultural competencies and global citizenship (Vande Berg, Paige, & Lou, 2012). Instead, it takes intentional preparation and effort to make the exposure meaningful and beneficial to both students and the host community (Nickols, Rothenberg, Moshi, & Tetloff, 2013). This is supported by an earlier study by the authors (Chan, Ngai, Yau, & Kwan, in press) which demonstrated that while international service-learning could enhance students’ intercultural effectiveness development, it might have no significant effect on their global civic responsibility and global civic engagement. Besides, wide variations in students’ learning gains were observed across different international service-learning projects.

This study is a follow-up to our earlier study, and reports the results of our effort to improve students’ learning from international service-learning using an action research paradigm. Action research is a cyclical process of problem identification, action planning, implementation, evaluation, and reflection, with the insights gained from the initial cycle fed into the planning of

the second cycle (Riding, Fowell, & Levy, 1995). It could help educators to guide improvement efforts supported by data, and is an ideal strategy for improving teaching and learning (Dyke, 2019). Our action research project aimed to monitor and improve the impacts of international service-learning on student outcomes by identifying the problems and issues in the program design and delivery, and introduced appropriate pedagogical changes to address them in subsequent offerings of the programs. The study is guided by the following research question: “To what extent did the intervention/improvement action help improve students’ global citizenship and intercultural effectiveness development from an international service-learning experience?”

Literature review

International Service-Learning and Global Citizenship Education

International service-learning, which combines service-learning with overseas study and international education, is widely recognized as a powerful pedagogy to achieve the goal of nurturing students into responsible global citizens (Bringle & Hatcher, 2011; Kiely, 2005; Tonkin, 2011) because of its culturally immersive nature, and the degree of dissonance and openness to transformational learning that it can offer to students (Hartman & Kiely, 2014). The potential benefits of international service-learning for students include improved personal competencies, improved global awareness, intercultural competence, and increased sense of global citizenship (Brown, 2007; Nickols et al., 2013).

Global citizenship has no single and generally accepted definition within the literature (Larsen, 2014). Notwithstanding the differences among definitions, educators generally perceive global citizenship as a multidimensional and interconnected concept covering awareness, responsibility,

and engagement on a global scale (Schattle, 2009). In fact, it should be noted that there are at least three paradigms of global citizenship. The *neoliberalist* view stresses the necessary skills and knowledge for an individual to successfully participate in the world. The *radicalist* view emphasizes the recognition of global inequalities and a commitment to challenge and eliminate unjustified problems across countries. The *transformationalist* view highlights collaborative efforts to solve global issues (McGrew, 2000; Shultz, 2007).

Global citizenship is often cited as one of the most prominent goals of international service-learning (Bringle & Hatcher, 2011). However, students' global learning may not automatically be improved by simply exposing them to an international experience (Vande Berg et al., 2012). It has been shown that international service-learning, if poorly planned or implemented, could potentially bring harm to students by reinforcing stereotypes, promoting power disparities, and creating distorted interpretations of social issues (Camacho, 2004; King, 2004). An earlier study by the authors found that students' skills such as intercultural effectiveness and global competence are more easily enhanced than attitudinal values such as social responsibility and global civic engagement. One possible reason is that many teachers did not explicitly include global citizenship in the intended learning outcomes or syllabus of their international service-learning subjects, and made little intentional effort to design and incorporate effective interventions to foster students' development through the experience (Chan et al., in press; Lee, Olszewski-Kubilius, Donahue, & Weimholt, 2007).

Educators argued that intentional effort are required to make an international service-learning experience meaningful and beneficial to both students and the host community (Nickols, et al., 2013). Watson and Reiersen (2017) suggest the following guidelines for enhancing student learning from international experience: maximizing learning gains through reflection, managing

cultural shock, minimizing risks that might occur due to accidental and avoidable losses, promoting cultural sensitivity, committing to impact evaluation, and promoting reciprocity and partnership. For example, King (2014) described a case study of 14 female university students participating in an international service-learning trip to Mexico, which found that intercultural connections and authentic dialogues with people from host community that are culturally different from students' own were essential for them to examine their own values and beliefs. In a study of 57 undergraduate students from a New York community college serving in Nicaragua, Kiely (2005) found three main factors that influenced students' transformative learning from international service-learning; these were: (1) accommodation that facilitated interactions with locals; (2) service nature that allowed intercultural exchange; and (3) adequate reflection opportunities. In a qualitative study conducted with 44 students in Hong Kong, it was found that students' learning from international service-learning was influenced by nine major factors, categorized into three themes. Cultural immersion factors include (1) dialogic intercultural service experiences, (2) cultural training and visits, and (3) homestay. Subject design factors include (4) structured reflection, (5) collaborative learning, (6) students' autonomy within a broad framework, (7) challenging, but manageable tasks, and (8) preparation for services. The teacher factor includes (9) teachers with hearts for service and learning (Tong, Yau, Chan, Ngai, & Kwan, 2019). These nine factors were believed to facilitate team building, prepare students for services, promote deeper reflection, demonstrate project impacts, maximize intercultural exposures, and enhance global citizenship development.

Action research

Action research has a long history, dating back at least to the early twentieth century and has been practiced in many diverse and professional fields, such as education. A notable feature of action

research is that it recognises the capacity of people living and working in particular settings to participate actively in all aspects of the research process (Kemmis, McTaggart, & Nixon, 2013). Action research adopts a methodological, iterative, and cyclical process of problem identification, action planning, implementation, evaluation, and reflection, with the insights gained from the initial cycle fed into the planning of the second cycle (Riding et al, 1995).

Action research in education is research undertaken by practitioners in order to improve their practice (Hendricks, 2019; O'Brien, 1998). A fundamental value of action research is that teachers, by nature of their professional responsibilities, learn to improve their practice and engage in research to discern what represents an improvement (Corey, 1954). Advocates argue that action research serves to establish habits of 'self-monitoring' that enables teachers to continue to learn from the experience and become better at teaching throughout their career (Biott, 1983; Rudduck, 1985).

Action research offers several advantages. For instance, it makes available scientific data rather than preferences or intuitions for educators to guide improvement efforts, and hence educators could propose ideas and theories that can be supported by data. Moreover, implementing action research addresses both the learning of students and the professional growth of teachers because action research is an ideal strategy for students to learn effectively and for teachers to teach effectively. Action research may lead to actions that directly change the learning environment, and improve specific pedagogical practices (Dyke, 2019).

Action research has been applied in the field of service-learning for improving student learning. In a study conducted in the University of the Free State (UFS) in South Africa, action research was used on two service-learning modules in the academic year of 2002 as first cycle and 2003 as action cycle. It was found that students were more actively involved in the learning process after

implementation of relevant action plans. The study shown that the action research approach could stimulate students' critical thinking and help contribute to the scientific management of nursing education (Seale, Wilkinson, & Erasmus, 2005). In another study conducted in Taiwan, action research was used to investigate the multicultural experience of graduate students who enrolled in a SL course. It was found that students had an improved interacting skills with service recipients after some interventions (Liu & Lin, 2017). Since there have been scant studies on the use of action research paradigm in the field of ISL, more action research studies are needed to investigate the effectiveness of ISL and improve students' learning.

Methodology

Research setting

The study was conducted in a large public university in Hong Kong, involving five service-learning subjects covering nine offshore projects from a broad spectrum of disciplines that were taught by the same subject teachers and conducted at the same service sites in the two years. All of the subjects carried three credits and consisted of semester-long lectures, seminars, and workshops, and 40 hours of offshore community service that was closely linked to the academic focus of the subject. Students' reflection was required, and their performance and learning were assessed according to a letter-grade system. The nature of the service projects varied, ranging from English teaching, public health promotion, to installation of small-scale energy systems using solar panels. Those projects also covered a range of service beneficiaries, including primary school village children, households in deprived urban areas, and rural village dwellers. The offshore service sites include Cambodia, Vietnam, Rwanda, and Mainland China. (Although the racial

demographic of Mainland China is very similar to Hong Kong, historical and linguistic factors create an environment which is culturally very distinct.) Data was collected in two cycles, in the 2016/17 and 2017/18 academic years. The total enrolments were 319 and 312 for the first and second cycles respectively. The proposal for the study was reviewed and approved by the university's ethics committee and the investigators were given permission and access to the target participants.

The research team consisted of the six teachers from the five subjects, and was led/coordinated by two of the authors, who were also teachers of one of the subjects. The team was supported by an education expert and a research support staff. The research questions and design were discussed and agreed on by the entire research team, including all teachers. The teachers were also the primary responsible party for reviewing and reflecting on the findings of the respective subjects and projects, developing improvement actions based on the evidence collected, implementing the changes, and examining the impacts and outcomes.

Research design

The study adopted a mixed methods design, utilizing both quantitative and qualitative data to address the research questions.

Quantitative

The quantitative part adopted a pretest-posttest design. Global citizenship was measured using a short version of the Global Citizenship Scale (GCS). The GCS was originally developed by

Morais and Ogden (2011), and validated with 348 undergraduate students in the United States. The short scale version (GCS-SS) was developed and validated with university students in Hong Kong; results showed that the short version was reasonably reliable and valid (Lo, Kwan, Ngai, & Chan, 2014; Lo, Kwan, Ngai, & Chan, 2019). The GCS models the conceptual and operational definition of global citizenship as a three-dimensional construct through three subscales measuring social responsibility, global competence, and global civic engagement. The validated GCS-SS has four, five and six items on each of the subscales respectively. Students were asked to indicate, on a 5-point scale (1=strongly disagree; 3=neutral; 5=strongly agree), their extent of agreement with each of the declarative statements describing various aspects of global citizenship. The intention is that, to understand and measure a respondent's global citizenship development, both the overall and the subscale scores should be taken into account.

The Intercultural Effectiveness Scale (IES) (Portalla & Chen, 2010) was used to measure students' level of intercultural competence prior to and after completing the international service-learning project. The IES measures the respondents' competencies in interacting effectively with people from a different culture. It was validated with 246 students in the United States. It comprises twenty items in total. Students were asked to indicate, on a 5-point scale (1=strongly disagree; 3=neutral; 5=strongly agree), the extent to which they agreed with each of the statements regarding their attitude and behaviors when interacting with people from different cultures.

For both cycles, the pre-survey was administered in class by the course instructor or staff members from the Office of Service-Learning of the university at the beginning of the semester. The post-survey was administered by the course instructor on or after the last day of the international service-learning project. In all of the administrations, the purpose of the survey was clearly explained to the students, with the assurance that their response would not affect their assessment

grades. Students were given fifteen to twenty minutes to complete the questionnaires. They were asked to return it immediately afterwards. Email invitations were sent at least twice to follow up with non-respondents to urge them to complete and return the questionnaire via email. Data were analyzed using SPSS version 24 software. Paired t-tests and Cohen's effect size (Cohen's d) were conducted to detect if there were any statistically significant changes in students' pre-test and post-test scores as measured by GCS-SS and IES for both cohorts respectively. After that, a series of two-way repeated measures ANOVA were conducted on all projects to determine whether there were significant differences between the two cohorts in their respective pre-post changes in the mean GCS-SS and IES scores as a result of the action research project.

Qualitative

The qualitative part of the study took the form of individual semi-structured interviews. Students were asked to explain, among other things, how **their views and beliefs** had changed after participating in international service-learning and what they had learned from the experience. In addition, students in the second cohort were asked to reflect on how, if at all, the intentionally-planned improvement actions undertaken by the respective subject teachers might have contributed to their learning.

For each of the project, two to four students were selected for the interviews depending on the class size. Students were invited to attend an interview by email, and were asked to reply within seven days. They were promised a HK\$200 (~USD\$25.6) coupon upon completing the interview. A total of 44 and 40 students attended the interview for the first and second rounds respectively.

The interviews were conducted in the language preferred by the students (Cantonese, Mandarin, or English) according to the pre-set protocol. Prior to the interview, participants were briefed on the purpose of the study. Voluntary participation and confidentiality of data were emphasized. Written informed consent was obtained from all participants. Each interview lasted about 1 to 1.5 hours; they were audio-recorded with the permission of the interviewees to facilitate subsequent transcription and data analysis. The interviews were first transcribed verbatim in the language in which they were conducted. Data were then analyzed independently by two members of the project team to identify the categories and themes of the feedback obtained. Divergent opinions and views between the two members about the categorization were discussed until an agreement was reached. Detailed coding was then done, major themes were identified, and possible relationships between constructs were investigated by cross-tabulation. Direct quotes from the participants were selected to support and illustrate the categories and themes identified. The software NVivo was used to analyze the qualitative data and to facilitate the cross-tabulation of the participants' responses.

The action research process

After the first cycle of evaluation of the 2016/17 cohort, the quantitative and qualitative results were written up and the aggregated results made available to all team members. For reasons of sensitivity, subject-specific data was made available only to the respective teacher(s) for that subject. A project-wide team meeting was held to discuss the salient features or good practices in facilitating students' learning in international service-learning, students' interviews from the first cycle about effective aspects of an international service-learning project and their suggestions for

improvements. The teacher team members also shared their frontline experiences and intuitions during the meeting. Afterwards, smaller focus meetings were held to discuss and interpret the results regarding each specific subject, and to explore possible enhancement actions and changes for the second cycle (the 2017/18 cohort). In addition, after the first cycle of evaluation, two toolkits were developed for teachers' use to facilitate students' (1) global citizenship and (2) intercultural competence respectively (Yau, Tong & Kwan, 2018; Tong, Yau & Kwan, 2018). Apart from that, a discussion session was organized for all project team members to allow them to share strategies to enhance students' global citizenship development through international service-learning.

After the second cycle of evaluation from the 2017/18 cohort, the quantitative and qualitative results were written up and similarly made available to the project team. A project team meeting was held to discuss the findings and implications. Teacher team members were asked to document problems or issues identified from the first cycle of evaluation, improvement actions taken, observations on what worked and what did not work.

Results

Demographic information

Of the 319 students enrolled in the first cohort, their mean age was 20.34 (SD=1.44). 111 (37.9%) of the respondents were male and 182 (62.1%) were female. 157 (49.2%) participated in international projects and 162 (50.8%) participated in Chinese Mainland projects (even though Hong Kong is part of China, linguistic, political and historical factors make for a very different context in Mainland China, and significant cultural boundaries need to be crossed during these

projects). Of the 312 students enrolled in the second cohort, their mean age was 20.68 (SD=1.70). 88 (28.2%) of the respondents were male and 185 (87.5%) were female. 152 (48.7%) participated in international projects and 160 (51.3%) participated in Chinese Mainland projects.

Major findings and lessons learnt from the first cycle of evaluation

Table 1 shows that in the first cycle, there were statistically significant increases in students' overall score on the Global Citizenship Scale (pre-test=3.40; post-test=3.50; $t=-3.70$; $p<0.001$; effect size (Cohen's d)=0.27) and their score on the Global Competence subscale (pre-test=3.58; post-test=3.84; $t=-7.24$; $p<0.001$; effect size (Cohen's d)=0.51). The changes in the Social Responsibility and Global Civic Engagement subscale scores, however, were not statistically significant at .05 level. Furthermore, there was a statistically significant increase in students' score on the Intercultural Effectiveness Scale after their international service-learning experience (pre-test=68.11; post-test=70.94; $t=-5.97$; $p<0.001$), with an effect size (Cohen's d) of 0.37.

[Table 1 here]

The results suggested that, through international service-learning, students were immersed in a different culture for an extended period of time, and were able to improve their ability to interact with people from different cultural backgrounds. The findings were corroborated by the qualitative interviews, in which students reflected on how they developed a deeper understanding of the history and culture of the host community through interacting with the service recipients and the locals, and became more open-minded and understanding towards others' cultural norms and expectations (Chan et al., in press).

However, there was little evidence from the first cycle of evaluation to support the belief that international service-learning will invariably facilitate students' global citizenship development. Although there was a significant increase in students' overall Global Citizenship Scale score, the increase was mainly attributed to the large increase in the Global Competence subscale score. There were no significant increases in the Social Responsibility and Global Civic Engagement subscales. Qualitative interviews with students revealed that many students did not know what global citizenship entailed and very few of them reported improvements in this aspect.

Results from the first cycle of evaluation revealed the difficulty in changing students' attitudes and beliefs in a short period of time (Chan et al., in press). Furthermore, although global citizenship is deemed an important goal of international service-learning, many teachers participating in the study noted that they had not explicitly included global citizenship in the intended learning outcomes or syllabus of their subjects, and made little intentional effort to design and incorporate effective interventions to foster its development through the international service-learning experience. In addition, some items on the measurement of the global civic engagement dimension might not be applicable to the Hong Kong context. Civic engagement may take many different forms in different communities.

Reflection and improvement actions

A series of research team meetings (whole group or in subject groups) were held after the first cycle of evaluation to discuss the results and explore possible ways to improve students' learning in the next round of implementation. The meetings were facilitated by the education expert, who also served as a 'critical friend' to the teachers. Participating teachers shared their experiences and

reflected on the problems revealed in the first cycle of evaluation. A major finding was that while all teachers espoused the value and importance of nurturing students' global citizenship and intercultural effectiveness through ISL, these were not evident in their enacted value or practice. The recognition informed the improvement actions to be planned and undertaken by the respective subject teachers, drawing upon international best practices identified from the literature. The major issues or problems identified and improvement actions undertaken by the different subject teachers to address them are shown in Table 2 below.

[Table 2 here]

Second cycle of evaluation

Table 3 shows there were statistically significant increases in students' overall score on the Global Citizenship Scale (pre-test=3.43; post-test=3.58; $t = -6.71$; $p < 0.001$; effect size (Cohen's d)=0.43), as well as their score on the Social Responsibility subscale (pre-test=3.41; post-test=3.63; $t = -4.70$; $p < 0.001$; effect size (Cohen's d)=0.32) and the Global Competence subscale (pre-test=3.62; post-test=3.90; $t = -9.08$; $p < 0.001$; effect size (Cohen's d)=0.69). There was a statistically significant increase in students' score on the Intercultural Effectiveness Scale after their international service-learning experience as well (pre-test=69.54; post-test=72.71; $t = -6.67$; $p < 0.001$; effect size (Cohen's d)=0.45).

[Table 3 here]

Comparison of results between the two cohorts

Table 4 shows a statistically significant difference between the two cohorts in their respective pre-post changes in terms of students' Social Responsibility subscale score (Cohort 1: pre- score mean=3.43, post- score mean=3.42, Cohort 2: pre- mean score=3.41, post- mean score=3.63,

F=10.412, $p < 0.001$). The mean difference between the post-test and pre-test scores in Cohort 2 is significantly larger than that of Cohort 1. On the other hand, no statistically significant differences were found between the two cohorts in their respective pre-post changes in Global Competence subscale, Global Civic Engagement subscales, overall Global Citizenship Scale, and Intercultural Effectiveness Scale scores at the .05 level.

[Table 4 here]

Students' feedback for the improvement actions from the qualitative interviews

The qualitative results corroborates with the quantitative findings. More students from the second cohort reported gains in their intercultural effectiveness, global competence, and social responsibility; and many of them commented on the usefulness of the intentional intervention introduced by the subject teachers in helping them learn from the international service-learning experience.

After the explicit introduction about the concept of global citizenship during lectures and debriefings, students think more about the concept and why is it important to be a global citizen. Student A, for example, **stated that he had a realization with respect to the interdependence and interconnectedness of people, with implications on equality and social responsibility:**

‘I recall we have to reflect on global citizenship in reflective journal... I know global citizenship means that we are a global citizen, everyone lives in the same globe and everyone should be treated the same... Also because we are living in a relatively richer city, it is our responsibility to help the others who live in a poorer country...’

In addition, students reported that they were inspired by the teachers' sharing. For example, they could always make some differences on other people's lives with practical actions while actualizing their dreams, as illustrated in the following quote.

'I am inspired by XXX (a subject teacher)... He said that service-learning doesn't mean you have to give up your job/career and engage in full-time services, but you have to remember many people need our help. It is alright to continue to chase and pursue your own career, but always remember their existence and remember your effort and contribution could help better their life. I think this is well-said and think this is global citizenship.'

Moreover, guest speakers' sharing increased students' sense of social responsibility by changing their daily living habits, as mentioned by the following student.

'One of the focuses in the service-learning is about environmental issues and protecting our environment... we have to contribute and protect our planet because we all live in the same planet... After this trip and after listening to YYY (a guest speaker), I will be more aware to be environmental friendly and it is our responsibility to do that and to protect our planet. I will avoid food waste, I will turn off the lights and air-condition when I'm not using it, I will avoid using straws. I will become more treasured about the resources that we have.'

Another student explained how nightly reflection could help him frequently reflect on intercultural competence and global citizenship.

‘Reflection is heavily focused in this service-learning. We have a sketchbook and we have to reflect and write down our thoughts every day. Every day we not only have to write down what we did that day, but how we get along and communicate with people from different cultural background, and how could we help the community... Through frequent reflection, I learnt that it is our responsibility to help different people even **those of** different races.

Furthermore, students appreciated the activities, such as city hunt, that helped them to know more about the local community and their culture.

‘It (city hunt) helps deepen my knowledge about the local culture. We have to talk and communicate with the local people during the city hunt. We have to play some games and explore the community. We have to ask the local people to introduce their culture to us. I therefore know more about the environment, background, art, and architecture of the community’

Discussion

This study shows that action research can be an effective strategy for teachers to monitor and improve the impacts of their international service-learning projects on students’ growth. Results show that the intervention actions have led to significant increases in students’ social responsibility score in the second cycle while maintaining the positive impact on students’ global competence and intercultural effectiveness development. These are consistent with previous studies that international service-learning improved students’ international learning outcomes, including: increased cultural awareness (Curtin, Martins, Schwartz-Barcott, DiMaria, & Oganda, 2013;

Green, Comer, Elliott, & Neubrandner, 2011; Plumb, Roe, Plumb, Sepe, Soin, Ramirez, Baganizi, Simmons, & Khubchandani, 2013), cross-cultural and international skill development (Green et al., 2011; Marsolek, Alcantara, Quintero, Jackels, Cummings, Wayne, Vallejos, & Jackels, 2012; Walsh, 2003) after immersing themselves in a different culture for an extended period of time. This finding is also supported by the qualitative interviews in the second round, in which there were a number of students who reflected on what a global citizen is and how they would contribute to society in the future. These improvements were attributed to teachers' improvement action in intentionally highlighting students' intercultural competence and global citizenship development as one of the learning outcomes and the respective learning activities in the second round of evaluation. Moreover, this study suggests that the impacts of international service-learning on students' global citizenship and intercultural effectiveness are not automatic. Intentional efforts is needed when designing the learning and reflective activities to help students develop these attributes.

Consistent with the first round of evaluation, there were no significant improvements in students' Global Civic Engagement subscale score. One possible reason is that some items on the measurements of the global civic engagement dimension might not work in the Hong Kong context. **These include** *“over the next 6 months, I will contact a newspaper or radio to express my concerns about global environmental, social, or political problems”*, *“over the next 6 months, I will express my views about international politics on a website, blog, or chat room”*, and *“over the next 6 months, I will contact or visit someone in government to seek public action on global issues and concerns”*. **These civic engagement actions are commonplace in some parts of the world, but**

rather uncommon or not even possible in others. This suggests that survey instruments should be adapted for different contexts. More research is needed.

In this study, not all improvement actions undertaken by the subject teachers were found useful, at least from the students' perspective. It appears that some work better while others do not. A successful improvement action must be well planned in advance with adequate support. Peer support was important because shared practices helped teachers to think about the inadequacies of their projects and the respective improvement actions that could be taken (Zuber-Skerrit, 2001; O'Brien, 1998). In the team meeting, teachers exchanged their views, difficulties, and problems during the action research process. Action research also served as a peer learning opportunity for the teachers themselves. Teachers involved in this study reflected that action research was a positive learning experience and they learnt to be more reflective during the process of teaching. It helped them to focus and reflect on specific aspects of their teaching and hence implement respective improvement actions - it is a continuous quality improvement process. This was consistent with previous literature which reported that action research helps teachers to improve their teaching practice (Biott, 1983; Rudduck, 1985).

Implications and limitations

To conclude, the study supports the belief that international service-learning can have strong positive impacts on students' learning outcomes. After the improvement actions, strong positive impacts were demonstrated in students' intercultural effectiveness and global citizenship development. The study reaffirms that action research serves as an effective strategy for teachers

to monitor and improve the impacts of their own international service-learning projects on students' learning and development. However, it is important to note that not all improvement actions work well. For example, one teacher team member devised an improvement action in which her students would bring local schoolchildren to a local history museum. However, the museum was very crowded on the day of their visit, and logistical and operational challenges meant that they did not have sufficient time at the venue. This also suggests that any improvement actions have to be planned in advance with sufficient peer support. As learning environments and teaching methods were variables that might impinge the results of our second cycle of evaluation, further improvement of teaching and instruction methods could be the starting point for the next cycle of our action research.

Based on these findings, we make the following recommendations for future work. First, teaching of intercultural effectiveness and global citizenship has to be made explicit with intentional effort. It is necessary to design effective intervention to help students achieve these qualities. Apart from the museum visits, increases in cultural exchange activities with the local service recipients and the community followed by reflections, teachers could also consider using certain teaching methods such as the use of issue trees, consequence maps, global citizenship self-assessment tools, and relevant prompting questions to enhance students' intercultural effectiveness and global citizenship as well as stimulate them to reflect on these qualities (Yau et al., 2018; Tong et al., 2018). Second, it would be necessary to explore more suitable scales for measuring global civic engagement components of global citizenship for students in different cultural contexts. For scales to be applicable across different groups of students, items that do not explicitly specify particular forms of political involvement might be more appropriate as modes and practices of political

involvement could vary across cultures, countries, and political systems (Chan, Ngai, Yau, & Kwan, in press).

Several limitations of the study have to be noted. First, as this study did not involve a control group, the possibility that the positive changes and students' growth were due to maturation effect cannot be ruled out. Second, all learning gains were self-reported; there may be over- or under-reporting due to recall bias. Third, the study was conducted based on students' feedback only; future study should also gather feedback from instructors to evaluate students' growth from the international service-learning experience. Fourth, the study was conducted in one university in Hong Kong with a particular form of international service-learning. The generalisability of the findings to other universities in other countries with different forms of international service-learning must be viewed with caution. Fifth, it is possible that the results are caused by the variations in teachers and/or students' features or factors between the two cohorts rather than the planned improvement actions. Finally, it should also be noted that there are reservations in parts of the research community towards survey questionnaires that purport to measure attitudes such as global citizenship, and hence the findings should be considered in light of these concerns.

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Table 1 Changes in students' mean scores on global citizenship and intercultural effectiveness development in the first cycle

Measures	Pre-test Mean [SD]	Post-test Mean [SD]	t-value	p	Effect size (cohen's d)
Global Citizenship Scale					
Social responsibility	3.41 [0.76]	3.40 [0.79]	0.385	0.691	0.01
Global competence	3.58 [0.47]	3.84 [0.54]	-7.24	<0.001**	0.51
Global civic engagement	3.23 [0.59]	3.26 [0.67]	-0.61	0.541	0.05
Overall	3.40 [0.36]	3.50 [0.38]	-3.70	<0.001**	0.27
Intercultural Effectiveness Scale	68.11 [7.46]	70.94 [7.71]	-5.97	<0.001**	0.37

** Significant at the 0.001 level

Table 2 Examples of improvement actions undertaken to address issues and problems identified in first cycle of evaluation

Issues or problems	Improvement actions undertaken
<ul style="list-style-type: none"> • Lack of awareness or understanding of civic learning outcomes, global citizenship and intercultural effectiveness as important goals of international service-learning 	<ul style="list-style-type: none"> • 3-hour lecture on delivering the concept of global citizenship and intercultural effectiveness, such as Bennett’s Model of Intercultural Sensitivity (Bennett, 1986) • 5-lesson (2-hour each) on human geography, cultural and historical background of the local community • 13-week of global classroom (3-hour each) to enhance collaboration between students from Hong Kong, Cambodia, and the United States <p>Nightly written reflection approach and address the themes of global citizenship and intercultural effectiveness in particular</p>
<ul style="list-style-type: none"> • Limited understanding of the history and culture of the served community 	<ul style="list-style-type: none"> • One-day visit to local attraction, local museums and cultural heritage sites • Half-day local city hunt activity
<ul style="list-style-type: none"> • Little opportunity to interact closely with local people of the served community 	<ul style="list-style-type: none"> • One-day visit to a local secondary school followed by informal sharing sessions with the locals • Half-day home visit with local families • Half-day cultural exchange activities with local peers • One-day team building activities with the local peers

Table 3 Changes in students' mean scores on global citizenship and intercultural effectiveness development in the second cycle

Measures	Pre-test Mean [SD]	Post-test Mean [SD]	t-value	p	Effect size (cohen's d)
Global Citizenship Scale					
Social responsibility	3.41 [0.68]	3.63 [0.70]	-4.70	<0.001**	0.32
Global competence	3.62 [0.44]	3.90 [0.37]	-9.08	<0.001**	0.69
Global civic engagement	3.28 [0.57]	3.28 [0.59]	0.14	0.89	0
Overall	3.43 [0.34]	3.58 [0.35]	-6.71	<0.001**	0.43
Intercultural Effectiveness Scale	69.54 [6.96]	72.71 [7.09]	-6.67	<0.001**	0.45

** Significant at the 0.001 level

Table 4 Students' global citizenship and intercultural effectiveness development from ISL for both cohorts

GCS-Social Responsibility								
Cohort	Pre-score			Post-score			F	p
	Mean	SD	N	Mean	SD	N		
2016/17	3.43	0.76	256	3.42	0.85	256	10.412	<0.001**
2017/18	3.41	0.68	243	3.63	0.70	243		
GCS-Global Competence								
Cohort	Pre-score			Post-score			F	p
	Mean	SD	N	Mean	SD	N		
2016/17	3.58	0.47	254	3.84	0.54	254	.211	.646
2017/18	3.62	0.44	243	3.90	0.37	243		
GCS-Global Civic Engagement								
Cohort	Pre-score			Post-score			F	p
	Mean	SD	N	Mean	SD	N		
2016/17	3.23	0.59	247	3.26	0.67	247	.302	.583
2017/18	3.28	0.57	240	3.28	0.59	240		
GCS-Overall								
Cohort	Pre-score			Post-score			F	p
	Mean	SD	N	Mean	SD	N		
2016/17	3.40	0.36	245	3.50	0.38	245	2.793	.095
2017/18	3.43	0.34	240	3.58	0.35	240		
Intercultural Effectiveness Scale								
Cohort	Pre-score			Post-score			F	p
	Mean	SD	Mean	SD	Mean	SD		
2016/17	68.11	7.46	244	70.94	7.71	244	.249	.618
2017/18	69.54	6.96	214	72.71	7.09	214		

** Significant at 0.001 level