UTS UNIVERSITY OF TECHNOLOGY SYDNEY

Health Systems Strengthening Through Global Service-Learning: A Mixed-methods Investigation

by Adam Beaman

Thesis submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy (PhD)

under the supervision of: Professor Patricia Davidson (primary); Professor Phillip Newton; and Professor David Sibbritt

University of Technology Sydney
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2021

Certificate of original authorship

I, Adam Beaman, declare that this thesis, is submitted in fulfilment of the requirements for the award of PhD in Health at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise reference or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

This research is supported by the Australian Government Research Training Program.

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5 March, 2021

Acknowledgements

First and undoubtedly foremost, my most sincere gratitude to my principle supervisor Trish Davidson, for encouraging me to undertake this PhD, and for believing that I could finish it (even when I did not.) Your genuine concern and compassion for marginalised people across the globe has been a real inspiration to me. And your mentorship throughout has helped me to improve not only as a researcher, but as a professional and a person. Thank you.

To my co-supervisors, Phil Newton and David Sibbritt, thank you for your time and guidance. Having your expertise available to strengthen and refine my study and manuscripts was invaluable. Thank you also to the various others who have guided and assisted me and made this work possible, in particular, Reiko Asano, Rachel Kennedy, Binu Koirala, Beth Sloand and Nicole Warren. I so appreciate you taking the time to work with me and provide your expert perspectives. The impact of this on the quality of this thesis cannot be understated. Finally, thank you to my wife Natasha for her undying belief in me, proof reading skills, and for keeping things afloat during my absence as I worked on my thesis. None of this would have happened without you.

To everybody mentioned here, and to the many others who I have forgotten, this completed thesis is dedicated to you.

Statement on Format of Thesis

In accordance with University of Technology Sydney Graduate Research Candidature Management, Thesis Preparation and Submission Procedures (2019) this thesis is in Thesis by Compilation format.

Publications

Beaman, A., Asano, R., Sibbritt, D., Newton, P. J., & Davidson, P. M. (2018). Global service learning and health systems strengthening: An integrative literature review. *Heliyon, 4*(8). Status = published (citations = 5)

Beaman, A. & Davidson, P. M. (2020.) Service learning and COVID-19 – what the future might look like? [Editorial] *Journal of Clinical Nursing*. Status = published (citations = 1)

Beaman, A., Koirala, B., Sibbritt, D., Newton, P. J., Davidson, P.M. Global service-learning and the impact on host countries: a mixed methods study. *Heliyon.* Status = submitted on 7 Aug 2020, currently under review.

Beaman, A., Newton, P. J., Reynolds, N., Rowthorn, V., Sibbritt, D., Davidson, P.M. The internationalization of higher education: origins and charting a future for mutual benefit in a new world order. *Journal of Studies in International Education*. Status = submitted on 17 Jun 2020, currently under review.

Davidson P.M., Lin C.J., **Beaman, A.,** Jackson D., Reynolds N.R., Padula W.F. Global digital social learning as a strategy to promote engagement and understanding in the COVID-19 era. *Journal of Clinical Nursing*. Status = submitted on 23 Aug 2020.

Publications not directly related to the thesis

Koirala, B., Hansen, B. R., Hosie, A., Budhathoki, C., Seal, S., **Beaman, A.,** & Davidson, P. M. (2020). Delirium point prevalence studies in inpatient settings: A systematic review and meta-analysis. *Journal of Clinical Nursing*. Status = published (citations = 2)

Davidson, P. M., **Beaman, A.,** & DiGiacomo, M. (2018). Case Study: A Chinese Immigrant Seeks Health Care in Australia. In *Global Applications of Culturally Competent Health Care: Guidelines for Practice* (pp. 381-386). Springer, Cham. Status = published

Davidson, P., Rushton, C. H., Kurtz, M., Wise, B., Jackson, D., **Beaman, A.,** & Broome, M. (2018). A social–ecological framework: A model for addressing ethical practice in nursing. *Journal of Clinical Nursing*, *27*(5-6). Status = published (citations = 11)

Leyva, E. W. A., **Beaman, A.,** & Davidson, P. M. (2017). Health impact of climate change in older people: An integrative review and implications for nursing. *Journal of Nursing Scholarship*, *49*(6), 670-678. Status = published (citations = 10)

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Key Acronyms

Acronym	Expansion
GSL	Global service-learning
HIC	High income country
HSS	Health systems strengthening
LMIC	Low and middle income country

Abstract

Internationalisation is a driving strategy of contemporary higher education, and one mechanism for achieving this goal has been through student exchange, using a global service-learning model, where the pedagogical approach leverages reciprocity and shared learning. While data suggest that global service-learning experiences are generally beneficial to the student, the perspectives of the host organisations are less well understood. Moreover, changing models of international development challenge current models of delivery. The aims of this study were to investigate: the delivery of global service-learning experiences in the health sciences; the impact on host communities and their health systems; and based on the study findings develop guiding principles to facilitate health systems strengthening in host countries. This study applied a cross-sectional, mixed methodology design with concurrent qualitative and quantitative data collection. An online survey (n=69) was used to measure attitudes of the three major stakeholder groups in the global service-learning programmes: students; faculty; and hosts. Semi-structured, in depth key informant interviews (n=12) were undertaken with experts in global health education, research and practice, who had experience across global regions as defined by the World Health Organization. Study findings showed that visits from high-income countries to low and middle income countries were significantly more likely to provide services at no cost to the community ($p=0.001$). Those participants involved in visits with stronger adherence to best practices for global service-learning were significantly more likely to positively view their impact on the local health workforce ($p=0.002$), and on the quality and use of medical products, vaccines and technologies ($p=0.032$). Finally, only 12 of the 69 online survey participants (17%) shared data with local healthcare agencies, limiting opportunities to drive improvements. Qualitative data from interviews yielded four main themes: formal opportunities for preparation and processing were important to generating the desired learning and understanding for all groups of participants; fragmented funding and limited time are a challenge in providing mutually beneficial programs; respect and understanding must underpin the building of relationships and the sharing of resources between partners; and in

some situations it may be appropriate to completely reconsider international student visits. These data underscore the importance of adhering to best practices. Based on the study findings, five guiding principles for global service-learning are proposed: (1) partnership; (2) preparation; (3) impact analysis; (4) collaboration; and (5) reflection. Finally, the study proposes alternative models of global service-learning particularly considering the role of non-government organisations and leveraging digital technology.

Chapter 1: Introduction

The content of this chapter has been submitted as a manuscript:

Beaman, A., Newton, P. J., Reynolds, N., Rowthorn, V., Sibbritt, D., Davidson, P.M. The internationalization of higher education: origins and charting a future for mutual benefit in a new world order. *Journal of Studies in International Education*.

1.1 Background

Internationalisation in higher education has been an important focus over recent decades and as a consequence shifted national and institutional higher education policies. Conservatively, the number of universities globally is estimated to be over 18,000 (United Nations Educational, Scientific and Cultural Organization, 2019). Knight has defined internationalisation as "the process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education" (Knight, 2003). But translating this from rhetoric to action in terms of resourcing, monitoring and impact requires further clarification, and, particularly in the context of COVID-19, has been the subject of debate (Rumbley, 2020).

One way of achieving an internationalist agenda has been through student exchange and teaching and learning, utilising service-learning approaches where there is a goal for reciprocity and shared learning. The concept of service-learning has its roots in the educational philosophies of John Dewey's writings on the nature of understanding and the benefits of participation (Giles & Eyler, 1994). Although commonly advocated across many universities due to the educational benefits for students, there has been limited empirical investigation of the macro-level benefits and burdens of service-learning models.

Within the context of global health understanding, the nature of service-learning and its impacts on students and committees is critically important. This program of doctoral study has undertaken a range of empirical studies and investigations to address the study aims and research questions outlined below.

1.2 Research Questions

1. How are global service-learning (GSL) experiences in higher education health sciences being delivered?
2. How are GSL experiences impacting host communities and the health systems in which they exist?
3. What are the guiding principles for GSL to be optimally translated into strengthened health systems in host countries?

1.3 Aims

1. Describe the role of GSL in health professional education.
2. Identify the barriers and facilitators to ethical, effective GSL and the impact on host countries.
3. Develop and validate a set of guiding principles for most effectively translating student demand for GSL experiences into measurable benefits for host health systems.

In order to understand the drivers of GSL it is important to understand key concepts such as the internationalisation of higher education within the context of contemporary geopolitical activity.

1.4 The Internationalisation of Higher Education

1.4.1 Introduction

In previous centuries universities were for the elite, but evidence that the level of education contributes to gross domestic product has led to the expansion of universities and an explicit agenda to promote inclusion, increase diversity and scale productivity (Stephens, Hamedani, & Destin, 2014). Although in some countries low employment in some career paths, such as law, (Heckman, 2003) has challenged the value of higher education but overall the value proposition remains high. The worth added from a tertiary degree varies across countries and decreases as the number of graduates increase. In sub-Saharan Africa, university degrees provide a 21% return on investment over the course of a lifetime, linked to the relative scarcity of degrees and the low rates of pay for unqualified workers. At the other end of this spectrum are countries in Scandinavia, where this return has been estimated to be at 9% (W.Z., 2018). Reviewing current trends in higher education and an analysis of social, political and economic factors is critical in understanding the internationalisation of higher education.

As discussed above, the number of universities globally is estimated to be over 18,000 (United Nations Educational, Scientific and Cultural Organization, 2019) and the number of individuals graduating from university is higher than 40% of 25 to 34 year olds in OECD countries and nearly 50% of 25 to 34 year old in the United States. Student mobility is an important focus for the internationalisation of higher education in all regions followed by strategic partnerships and international research collaboration. Academic mobility is a hallmark of modern universities. At least 2.5 million students study outside of their home country, and similarly faculty are highly mobile (Altbach, Reisberg, & Rumbley, 2019).

Even though the university has always been a beacon for worldwide collaboration and knowledge exchange, the internationalisation of higher education has only been a focus for universities over recent decades. The agenda and stimulus for internationalisation is not always clear and transparent. Motivations for internationalisation include maintaining advantage in commercialisation and innovation, knowledge sharing, skill exchange and also income generation (Gao, 2015). This trend has shifted national and institutional higher education policies and manifested in a range of strategies including international campuses, international collaborative arrangements, programs targeted specifically for international students and establishing English language programs and degrees in non-English speaking countries (Bradford, 2012). Trends towards internationalisation have also been fuelled by globalisation and the desire to remain competitive internationally; however social, political and economic discussions have the capacity to contract globalisation and free trade (Schindler, 2015).

Therefore, it is important to differentiate between globalisation and internationalisation and to consider the co-existence within an increasingly complex environment of geopolitical stability (Altbach & Knight, 2007). Internationalisation includes the policies, procedures and practices undertaken by universities to engage with a global academic environment whilst globalisation is enmeshed within a social, political and economic agendas of countries and regions (Brandenburg & De Wit, 2015). In addition to the trends of internationalisation is the increase in the privatisation of universities and private, for-profit educational institutions (Hoang, 2019). Many such institutions are keen to embrace economic opportunities, and due to the 'massification' of higher education, can achieve efficiencies and decrease costs by focusing on the teaching and learning mission solely without investing in research and faculty growth (Altbach et al., 2019). Moves

towards nationalism and populism, which oftentimes take anti-science and anti-intellectual positions, threaten the ethos of modern university in the modern era. At the same time universities are under pressure to be creative as well as effective, efficient, and valuable to society through knowledge generation, impact and promoting university – industry partnerships (Greenhalgh, Jackson, Shaw, & Janamian, 2016; Galán-Muros, van der Sijde, Groenewegen, & Baaken, 2017). Understanding the history of the internationalisation movement and documenting current trends is critical to charting a course to ethical and effective global university engagement and as a consequence GSL.

Through undertaking a review of current trends in higher education on an international stage and an analysis of social, political and economic factors this review seeks to identify and describe the political processes, geopolitical factors and the risks that impact upon the ethical and effective internationalisation of higher education.

1.4.2 Method

In order frame a discussion on the internationalisation of higher education through identifying key concepts; trends; and key considerations to inform strategic decisions (Colquhoun et al., 2014). I searched electronic databases including Scopus, CINAHL and Pubmed, using the search terms (internationalization AND of
AND higher AND education) AND (LIMIT-TO (LANGUAGE, "English"))
internationalization [All Fields] AND ("High Educ (Dordr)"[Journal] OR ("higher"[All Fields] AND "education"[All Fields]) OR "higher education"[All Fields]). There were 2,667 articles identified since 1965, with an acceleration in the discourse since 2000. In order to capture the grey literature, I used Google and Google Scholar using the same search terms.

1.4.3 The scale of universities globally

Education abroad offerings to students, the recruitment of international students, international research collaborations and partnerships, and global satellite campuses are some of the major ways in which internationalisation has manifested. Prior to the expansion of global activities in the last few decades, the motivations for universities to engage in global activities was more likely to be mission-based. However, as Altbach et al. (2019) argues, we are in the midst of an academic revolution where increased social mobility and access to technology are challenging the ways universities operate. Now many universities are pivoting their mission, vision and values to align with social responsibility and sustainable development within a context of economic stability. Increasingly, the notion of global students as a commodity has emerged amidst a contested discussion and debate on the purpose, ethics and viability of such endeavours.

A strong motivation of internationalisation has always been to share knowledge globally, promote inclusivity and increase cultural understanding. However, in more recent times this has been overshadowed by competition for the increased tuition revenue paid by international students, and higher slots in global rankings (Altbach & Knight, 2007). This push and pull between the true mission of universities and their economic considerations is one that will recur throughout this discussion and has been pronounced in the huge disruption in the sector as a consequence of COVID-19. In the United Kingdom for example, financial losses associated with decreased enrolments have been estimated at £2.6 billion for FY21 (Kaufman & Chapman, 2020). In the United States, a survey of 415 advancement staff from 48 institutions found that only 22 percent were confident of reaching their FY21 fundraising goals (Taylor, 2020).

1.4.4 Education as big business

For many countries around the world international students, particularly from emerging economies, provide a lucrative source of revenue. For many students, a Western education is coveted because it accelerates career progression and, for some, a pathway to immigration. Many universities have international campuses to bring Western educational products to new constituencies (Kirby & Eby, 2015). Importantly international student recruitment has become big business. In Australia for example, the Australian Government Department of Education and Training (2018) estimates that "international education contributed $32 billion to the Australian economy in 2017-18 and supported more than 240,000 jobs across the country in 2017." In light of these factors, the trend toward the internationalisation of higher education appears destined to continue in spite of the disruptive influence of COVID-19.

For decades, scholars have wrestled with the concept and impact of intentionality within the broader internationalisation movement. De Wit (2019) argues that while it is broadly agreed that the extremes – i.e. a push for full international standardisation versus a complete retreat – are both perilous, the importance of the intention behind the internationalisation activities remains the subject of debate. Knight (2003) provided the following working definition of internationalisation within the higher education sector: "the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education." (p. 2). We see here the emphasis on purpose, which stands in contrast to the financial motives described earlier in this section. For scholars like De Wit, these two concepts, internationalisation and intentionality are inextricably linked. As the internationalisation movement within higher education appears set to continue unabated in spite of recent obstacles, agreement upon acceptable

intentionality and delivery, from all stakeholders, will be critical to achieving ethical and effective engagement.

1.4.5 Academic freedom and internationalisation

Academic freedom refers to freedom of inquiry and expression by faculty and students and is considered by many to be essential to the mission of the academy. Inherent to this critical tenet of academia is that faculty and students will not be targeted for repression based on their values and beliefs. Universities have been the nucleus of society in challenging the status quo and traditional beliefs, and have also been pivotal to many political discussions, debates and movements. For example, the issue of China's influence on Australian higher education has been widely discussed. Chinese student groups in Australia and the Chinese government have been accused of trying to limit criticism of China and disrupt academic freedom (Altbach & de Wit, 2018). The links between business and education mean that the internationalisation agenda potentially places academic freedom at risk as there is a need to censor content to be adherent with national policies.

1.4.6 Rankings and positions internationally

The ranking of universities globally has become big business, particularly in the rush to attract international students who seek a degree from prestigious institutions. In countries like Australia and the United Kingdom, international students pay significantly higher rates of tuition and make a major contribution to an institution's financial viability. The largest global ranking organisation, Quacarelli Symonds, ranks 1,000 universities and claims to source reputational survey data from over 94,000 individuals in the higher education space, and 45,000 employers (Quacarelli Symonds, 2019). Conversely however, due to a dearth of reliable data, rankings do not seek to measure educational quality as part of their rankings.

Rather, rankings tend to focus on the aforementioned reputational surveys, and scholarly productivity and impact data made available through publication management systems. Critics have argued that this has led to a shift in universities focus away from education and research and towards reputational enhancement and publication quantity (Amsler & Bolsmann, 2012). At a minimum, increasing participation in global rankings represent a diversion from the core mission of universities, away from education and the discovery of new knowledge, and towards reputational management.

1.4.7 Alignment of countries for regional interest

Coalitions between countries and institutions are often motivated by both national and regional interest. BRICS is the acronym for an association of five major emerging national economies (Brazil, Russia, India, China and South Africa), an alliance built on emerging suppliers of manufactured goods, services, and raw materials. In line with economic collaboration, it has also been an alliance of universities promoting educational activities to support these emerging economies (Carnoy et al., 2013). China has been intentional in a series of five year plans to build a strategic education agenda. The "Belt and Road Initiative" (the Silk Road Economic Belt and the twenty-first-century Maritime Silk Road or B&R) provides a new perspective for China's higher education internationalisation. The 13th Five-Year Plan (2016–2020) (2015) states the aim of strengthening cooperation between China and B&R countries in the fields of education, science and technology, culture, environmental protection, health, and Chinese medicine. These strategic alliances between academic institutions primarily focus on economic development, but they also represent an opportunity for international university co-operation.

1.4.8 Harmonisation of qualifications

In the context of developments in global higher education landscape and the evolving role of supranational institutions, issues such as credit transfer, harmonisation and mutual recognition of qualifications have become increasingly important (McGrath, Wong, & Holewa, 2011). Technological innovation and global communication have created a highly mobile workforce. The Bologna Process in Europe is a core exemplar and Africa and Asia have also undertaken significant initiatives to align academic qualifications (Reinalda & Kulesza, 2006; Knight, 2014). In order for the internationalisation of higher education to progress and realise its true potential, it is important that qualifications can be quickly and accurately recognised across national borders.

1.4.9 Global service-learning

The concept of service-learning has its roots in the educational philosophies of John Dewey's writings on the nature of understanding and the benefits of participation (Giles & Eyler, 1994). Service-learning can be characterised as an experiential approach predicated on reciprocal learning (Sigmon, 1979). From the perspective of an institution in a high income country (HIC), the motivation to offer short-term GSL experiences may be to build global health interest and capacity at their institution, to provide global experience to their faculty, and to build partnerships with organisations in other countries. From a host organisation perspective, the possibility of strengthening their workforce and capacity may be the primary motivators, along with a desire to improve cross-cultural understanding. Overwhelmingly though the primary beneficiaries of short-term GSL experiences are considered to be the students, who may experience personal growth, improved cultural competence, increased understanding of the global health environment, and improved

language skills (Larson, Ott, & Miles, 2010; Puri, Kaddoura, & Dominick, 2013; Reuland, Frasier, Slatt, & Aleman, 2008; Sherraden, Lough, & Bopp, 2013). However, some researchers have questioned whether GSL programs, often one-way (i.e. HICs students visiting low and middle income countries (LMICs)) and thus not truly "exchanges," are of any real benefit to the host community (Kulbok, Mitchell, Glick, & Greiner, 2012).

It is important that GSL activities be viewed through a broader lens than direct student and community impact. Critics of short-term GSL and "voluntourism" have labelled it a neo-colonial endeavour, which, when students from HICs are visiting LMICs, runs the risk of exposing locals to the provision of poor quality and culturally incompetent care and promoting dependence (Crabtree, 2013). A range of guidelines have been developed in order to avoid these worst-case scenarios. These recommendations include ensuring strong community partnerships, a commitment to reciprocity, and sustainability of funding (Crabtree, 2013; Lattanzi & Pechak, 2011; McKinnon & Fealy, 2011). The desire of students to undertake GSL, and the existence of programs that do not adhere to best practice implementation, represent yet another obstacle to ethical and effective global engagement.

1.4.10 The ethics of internationalisation and loss of human capital

There are approximately five million mobile students worldwide contributing to a global economy. In 2017, in the US alone, almost 90% of Indian doctoral students and 83% of Chinese doctoral students indicated their interest in remaining in the US after their studies (Bhandari, 2019). A discussion of 'brain drain' has emerged as a remnant of neo-colonialism but recent discussions have reframed the discussion to consider more issues of 'brain circulation' and 'brain linkage' (Saint-Blancat, 2019). This is a complex and

multifaceted issue as it is necessary to consider the motivations of individual students as well as host institutions and home countries. A significant proportion of students from LMICs countries progress to immigrating to their host country. Regions such as Africa continue to experience a significant loss of human capital through student mobility challenging already disrupted demographics (Alemu, 2019).

In an ideal world, higher education students from lower-income countries would seek to return home and use their education to advance practices in their discipline. Moreover, they would have the resources and legal rights to easily return to the country where they received their education and continue to engage with colleagues and consolidate and contemporise their knowledge. But the combination of establishing roots in a new country, the quality of life offered in higher income countries, and the immigration policies make the reality of this global mobility a real challenge. Finally, such students' home institutions and organisations would have the resources to consistently host visitors from higher-income countries to promote sustainable improvement and cross-cultural understanding.

Scholars have suggested that LMICs preventing people from studying abroad is unlikely to solve the issue. Rather, measures such as government engagement with diaspora, incentives to returning home, and pursuing transnational agreements might be more effective mitigation strategies (Shin & Moon, 2018). Such measures have the potential to transform the brain drain phenomenon into a global environment of brain circulation and brain linkage.

1.4.11 Economic sanctions and their influence

Science and innovation is strongly linked to business and productivity. This is also an important motivation for the internationalisation of education and a desire for exchange of ideas. An economic sanction or restrictive practice is the withdrawal of trade and financial relations for foreign- and security-policy purposes and this can be undertaken in either comprehensive or targeted ways. Governments and multinational bodies impose economic sanctions to try to alter the strategic decisions of state and non-state actors that may work against their own interests or violate globally agreed upon ethical standards. The 2017 abandonment of the Iran nuclear agreement by the US had the consequence of also significantly reducing academic exchanges between the two countries (Sawahel, 2018), an example of the way sanctions can serve as a barrier to ethical and effective internationalisation of higher education.

1.4.12 Recent debate regarding intellectual property

Intellectual property has been a key point in the US's recent and ongoing trade negations with China, but China appears unwilling to yield much ground on this issue. IP restrictions tend to come after domestic capacity to innovate exceeds the foreign, not before. This of course has the capacity to influence the higher education sector as leaders in research and innovation; where technology developed at universities is regularly licensed for profit. When this licensed technology is sold internationally, the level of profit for universities under the licensing agreement is inherently dependent upon the global trade environment. This represents yet another factor influencing the internationalisation of higher education.

1.4.13 A new era for internationalisation

What is becoming increasingly evident is that the internationalisation of education cannot be divorced from political processes, geopolitical factors and the risks of global pandemics. In fact, it has been argued we are entering a post-globalisation era and the impact of COVID-19 is likely to increase this trend (Altbach & de Wit, 2018). The rise of nationalist and populist forces around the world will have a significant impact on higher education policy from considerations of both funding, academic freedom and global migration (Rizvi, 2019). Trends towards isolationism may also have an impact on economic prosperity. The recent coronavirus outbreak has crippled the movement of students internationally as the threat of a pandemic became evident (Wu, Leung, & Leung, 2020). Similarly sanctions between countries can be disruptive to programs of study and the movement of students (Mathews & Bourgeault, 2018).

1.4.14 Towards a model that recognises the reality of internationalisation

Two primary motivations for higher education sectors in HICs engage with international institutions are economic gain and educational outcomes for students. But this raises the question of the power dynamic between high versus LMICs, and specifically, whether HICs are exploiting LMICs by pilfering their "best and brightest" residents, and by using LMIC resources as service-learning settings without providing sustainable benefit to the host community.

Indeed, scholars have argued that for many people in LMICs, globalisation is indistinguishable from imperialism (Amin, 1999.) Moreover, portrayals of people from LMICs are perceived by some scholars to be subject to strong out-group homogeneity and LMIC societies to be less civilised and ultimately inferior to HICs (Smith, 1999.) Such

factors also undoubtedly colour the interactions between students, employees and other stakeholders of universities as international collaboration takes place.

The internationalisation of higher education is inherently political and power differentials and relationships exist. As we enter an era of increasing populism and nationalism, population and migration flows challenge an internationalisation agenda (Copelovitch & Pevehouse, 2019). Universities, as brokers of knowledge and challenges of social norms and the status quo, have an opportunity to bridge competing agendas and forge an agenda to address both the quest for knowledge and innovation as well as forging a just and civil society.

1.4.15 The Importance of an ethical and effective higher education system

There are a range of social, political and economic factors impacting the internationalisation of higher education. It will take a multi-faceted approach to ensure that the internationalisation movement within higher education is ethical and effective. At the institutional level, universities themselves bear some responsibility for striking a balance between mission-based and economic activity, with the implementation of service-learning programs serving as a salient example. Federal governments also have an obligation to mitigate institutions' appetite for economically-based internationalisation efforts, and can do so by reversing the trend of decreasing public funding for universities. Finally at the global level, co-operation in terms of immigration policy, the recognition of qualifications and the transfer of intellectual property will greatly assist in the realisation of ethical and effective internationalisation.

1.4.16 Integration with the Sustainable Development Goals

Despite the fragmented course of the internationalisation of higher education and mixed motivations for collaboration, there is an opportunity to set established principles and a philosophy of reciprocity to achieve specific goals. Global challenges require collaboration, and moving this agenda forward will likely require agreements with transparent agendas. This is particularly important in the context of healthcare and achieving the Sustainable Development Goals (SDGs).

The SDGs are a 17 goals agreed upon by all 190 United Nations member states in 2015, and represent a "blueprint to achieve a better and more sustainable future for all" (United Nations, 2015). The achievement of SDG #3, Good Health and Well-being, is by definition dependent upon robust health systems to deliver primary, secondary and tertiary services. Ideally, internationalisation within the higher education sector would operate within the principles of the SDG framework, and internationalisation activities in the health sciences in particular, would be strengthening health systems in partner countries. However, evidence surrounding the implementation of GSL program for example suggest that such an intentional and ethical approach is uncommon (Beaman, Asano, Sibbritt, Newton & Davidson, 2018).

1.5 Health Systems Strengthening

In recent decades there has been a shift in the focus of global health activities towards the strengthening of local health systems to effectively, efficiently and sustainably deliver healthcare to all. The World Health Organization's (WHO) publication "Strengthening health systems to improve health outcomes" (2007) defines health systems as: "all organizations, people and actions whose primary intent is to promote, restore or maintain

health." In expanding upon this definition, WHO (2007) emphasises the role of the health workforce in health systems strengthening (HSS), as navigators to help patients access care and as advocates for healthcare policy improvements. WHO (2007) provides six building blocks for HSS: service delivery; health workforce; information; medical products, vaccines and technologies; financing; and leadership/governance.

A review of HSS efforts in Bangladesh, Ethiopia, Kyrgyzstan, Thailand, and the Indian state of Tamil Nadu found significant improvements in health indicators, services or policies in these countries and state when compared to neighbouring countries (Balabanova et al., 2013). The study attributed these successes to solid and committed governance, effective bureaucracies and institutions, innovation, and health system resilience. Another study found that on the whole HSS efforts have been skewed towards service delivery, and that a more balanced approach reemphasising governance, financing and IT systems may be warranted (Warren, Wyss, Shakarishvili, Atun, & de Savigny, 2013). The burden of COVID-19 underscores that on this planet we are all inextricably linked (Davidson, Padula, Daly & Jackson, 2020). The forces of nationalism and populism have hindered moves towards internationalism have hindered global collaboration underscoring the need for investigating and fostering moves for global cohesion and collaboration.

1.6 Justification for the Study

Student exchange and service-learning have often been touted as a strategy for internationalisation and yet the motivations and expectations have not always been clear. The perspectives of the host organisations and communities on short-term GSL visits are not well understood and as a consequence there may be deleterious effects as well as benefits. Some studies have even suggested many of these visits are harming local

communities (Kulbok et al., 2012), raising the question of their appropriateness moving forward. Further, to date, no research has been conducted to determine the impact that GSL experiences of health sciences students are having on the host country health systems. An investigation into the nature of this impact and indeed the question of whether there is another way for HIC students to achieve the outcomes afforded them by short-term GSL, certainly appears both timely and warranted.

As outlined above, this research study examined short-term GSL experiences for higher education students in the context of HSS and the WHO's Framework for Action in particular. Through a systematic review of the literature, policy analysis and consultation with key stakeholders, this research contributes to the understanding of the impact of GSL on host country health systems. This study also led to the development of set of guiding principles and a model for most effectively translating student demand for GSL experiences into host country health system benefits.

1.7 Organisation of the Thesis

The following presents the organisation of the thesis, references are presented at the end of each chapter for the ease of the reader.

1.7.1 Chapter 1: Introduction

This chapter has introduced the concept of internationalisation of higher education, and provides the platform for the deeper investigation of GSL. It is within this context that the importance of GSL is presented as a pedagogical strategy. Higher education institutions are acutely aware of the need to prepare students for the global challenges tomorrow. Providing opportunities for engagement with diverse opinions, and solving problems by engaging multiple perspectives and diversity of thought is important. Although there is broad

acceptance that GSL is a worthwhile and significant work has been undertaken in developing processes. However, little evaluation has been undertaken from the perspective of the host country and in particular the impact of achieving broader perspectives, such as global health strengthening. Therefore this study provides an important step in understanding how universities can contribute to building a global health agenda.

1.7.2 Chapter 2: Literature review

This chapter reviews 49 articles published on the GSL in the health sciences and applies thematic analysis. This paper has been published (Beaman et al, 2018) and has provided an important foundation for the methodological approach.

1.7.3 Chapter 3: Methods

This chapter outlines the methodological considerations of the study and provides a description of the study design. Methodological considerations in the development of the online survey are provided and the justification of the mixed method approach. In order to ensure methodological clarity quantitative and qualitative data are presented separately and then synthesised and recommendations presented.

1.7.4 Chapter 4: Quantitative results

This chapter provides an analysis of the data from online survey responses. The analyses of the online survey revealed that stronger adherence to GSL best practices was associated with more positive perceptions of impact on the local health workforce, and on the quality and use of medical products, vaccines and technologies.

1.7.5 Chapter 5: Qualitative results and integration

This chapter provides an analysis of the data from key informant interviews. Key informant interviews yielded four main themes: preparation, processing, learning and understanding; fragmented funding and limited time is a challenge; respect, understanding, resources and relationships; and reconsidering international student visits. In this chapter the quantitative and qualitative data are also synthesised. In particular, the views of host countries are elucidated and opportunities identified for enhancing the GSL experiences.

1.7.6 Chapter 6: Conclusion

This chapter summarises the study and provides support for the ongoing implementation of short-term GSL programs that are responsibly delivered. This study also recommends that project planning, data collection and monitoring needs to play a more prominent role in GSL. Finally, it has highlighted that there is a need within the higher education sector for guidance on alternatives to GSL when a best practice program is not available to students. Recommendations for policy, practice, education and research are also presented.

1.8 Significance of the Thesis

This thesis has addressed a critical issue in the context of contemporary university and provides a significant contribution to knowledge regarding service-learning within a global context. This study will also be significant in developing educational programs within an increasingly globalised society. The study uses a convergent mixed method study design that considers perspectives of students, institutions and host organisations.

1.9 Conclusion

This chapter has provided an introduction to the thesis through specifically outlining the internationalisation of education and the strong desire for providing students with international experiences within a GSL context. The following chapter describes the literature review which will begin to explore the impact of GSL experiences on the various stakeholders.

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Chapter 2: Literature review

The literature review has been published:

Beaman, A., Asano, R., Sibbritt, D., Newton, P.J., Davidson, P.M., (2018). Global service-learning and health systems strengthening: An integrative literature review. Heliyon, 4(8).

2.1 Introduction

The previous chapter has introduced the study aims and emphasised the importance of empirically assessing pedagogical strategies that contribute to engagement in a dynamic and international context. Over the last two centuries the process of global interconnectedness has intensified leading to a number of social, political and economic drivers in the context of global health. A range of factors, such as power differentials and health care disparities, have driven a range of initiatives for HICs to support LMICs. At the same time, rapid technological advancements have allowed individuals in HICs to access both information illustrating the extent of these disparities, and the means to travel to LMICs with relative ease. There has also been a recognition of diversity in being an astute and integrated global citizen. Addressing these commonly convoluted and competing objectives is complex and multifaceted, and motivations for international work range from a mission-based agenda driven by a desire for compassion, to motivations for national security. The aspiration to learn and serve is a challenging issue requiring achieving clarity of nomenclature, transparency of agenda as well as shared, collaborative and negotiated models. Community engagement pedagogies that are commonly termed service-learning, combine learning goals and community service with the motivation of achieving educational outcomes for students as well as benefits for communities. Whilst conceptually

alluring the devil is often in the detail and unless this is addressed systematically, what is well intentioned can have adverse effects. The proceeding sections will illustrate the challenges and opportunities particularly in the context of global health and workforce development.

2.1.1 Foreign Aid

The concept of foreign aid is generally defined as the transfer of funds, goods or services from a country or organisation to a recipient country for the purpose of benefitting the recipient and its people. The phenomenon began centuries ago with the Catholic Church sending state-sponsored missionaries to less developed regions across the globe, and other Christian denominations in the US following suit by the early part of the 19th century (Heist & Cnaan, 2016). For these missionaries, the religious teaching aspect of their mission was inextricably linked to healthcare. As a result, local approaches to healthcare have been heavily influenced by the Judeo-Christian values espoused by the missionaries during this period. Today, it is estimated that 59 per cent of international development organisations in the US were faith-based non-government organisations (NGOs), accounting for 40% of gross NGO revenues (Heist & Cnaan, 2016).

By the early 20th century – even as colonies were gaining their independence – colonial powers like Great Britain, France and Spain were providing regular aid to their colonies to help develop infrastructure and stimulate economic growth to facilitate trade. While economic development and trade were the express purpose of foreign aid during this period, the underlying philosophy was self-evident: that the political, economic and social characteristics of the colonial powers were the standard to which other countries should aspire to. Post-World War II, the U.S. became the most significant investor in foreign aid

and implemented the Marshall Plan in 1951 to help Western Europe rebuild (Bandyopadhyay & Vermann, 2013). Critically, these aid activities were also used to develop diplomatic and trade relationships with countries of strategic importance as the Cold War continued.

International organisations like the International Monetary Fund, World Bank and the United Nations were also formed during the post-war period, assuming the majority of aid and development work from the traditional colonial powers. During the 1960s, foreign aid began to take the form in which it exists today, with all HICs, not just former colonial powers, beginning to set budgetary targets for foreign aid. Meanwhile, World Bank president Robert McNamara implemented an agenda of investment in the education and health sectors with the aim of generating profit through human capital. From this time onwards, HICs commitment to foreign aid has oscillated due to a range of global economic and political factors. For example, the recession in the 1980s caused foreign aid to lower in priority in HICs as LMICs counties felt the dual impact of reduced aid and their own struggles with the global economic downturn. Consequently, many banks greatly reduced the amount of debt they were seeking to recover from LMICs, as the burden of repayment was deemed to be an impediment to economic growth. In the aftermath of the September 11, 2001 attacks on the U.S., investment in the Middle East increased sharply as western nations sought to mitigate perceived terrorist threats in the region.

2.1.2 Health systems strengthening

On the subject of foreign aid and investment in health, there can be little doubt that the impact of disease-specific interventions at the global level have made significant impacts in reducing disease prevalence, particularly in the field of infectious disease (Ozawa, Clark,

Portnoy, Grewal, Brenzel & Walker, 2016). However, in recent decades researchers have called into question the sustainability of impact of many global interventions in the absence of adequate local financial and human resources (Biesma et al., 2009). In particular, global health organisations have identified local financial and human resource shortages as perhaps the major obstacles. In response, there has been a shift in focus towards the strengthening of local health systems to effectively, efficiently and sustainably deliver healthcare to all. This is evidenced by the allocation of a combined US$1.1 billion in funding allocation by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the Global Alliance for Vaccines and Immunization (GAVI) and the Global Fund, on HSS between 2005 and 2010 (Hafner & Shiffman, 2013).

The WHO's publication "Strengthening health systems to improve health outcomes" (2007) defines health systems as: "all organizations, people and actions whose primary intent is to promote, restore or maintain health." This definition is significantly broader than those traditionally emphasising publicly owned health systems providing services to individuals and families. In expanding upon this definition, WHO (2007) emphasises the role of the health workforce in HSS, as navigators to help patients access care and as advocates for healthcare policy improvements. WHO (2007) provides six building blocks for HSS: service delivery; health workforce; information; medical products, vaccines and technologies; financing; and leadership/governance. WHO's definition has been widely adopted, including by PEPFAR, GAVI and the Global Fund (Hafner & Shiffman, 2013).

A review of HSS efforts in Bangladesh, Ethiopia, Kyrgyzstan, Thailand, and the Indian state of Tamil Nadu published in the Lancet, found significant improvements in health indicators, services or policies in these countries and state when compared to

neighbouring countries (Balabanova et al., 2013). The study attributed these successes to solid and committed governance, effective bureaucracies and institutions, innovation, and health system resilience. Another study found that on the whole HSS efforts have been skewed towards service delivery, and that a more balanced approach reemphasising governance, financing and IT systems may be warranted (Warren, Wyss, Shakarishvili, Atun, & de Savigny, 2013).

It should be noted though, that there have been ebbs and flows in preferences for horizontal (those engaging all elements of the local health system) versus vertical (those operating independently of the local health system) approaches to global health programming. This is due to a range of factors, including: economic and political factors in HICs; the challenge of developing productive partnerships and achieving measurable outcomes with local health systems; and the desire to meet millennium development goals targets (Hafner & Shiffman, 2013). Other criticisms of HSS have centred around: the vagueness of the concept; the fact that many global health organisations are delivering disease-specific initiatives simply re-branded as HSS initiatives, and that local efforts have been undermined by global actors with superior resourcing (Marchal, Cavalli, & Kegels, 2009). This undermining can include duplication of efforts, imbalances of financial resourcing, and service interruptions (Marchal et al., 2009).

2.1.3 Service-learning

While specific data are unavailable, there is increasing demand among higher education students in the health sciences for short-term experiences that can contribute to improving global health. Perhaps reflective of this trend is the total number of U.S. students studying abroad for credit, which has nearly doubled over the last 15 years from 154,168 in 2001 to

304,467 in 2015 (IIE, 2016.) Further, it has been estimated that there are 1.6 million volunteer tourism visits globally, contributing to a $2 billion industry (Bandyopadhyay & Patil 2017). Studies have documented volunteer motivations and outcomes, but more recently, researchers have investigated potential negative impacts associated with this industry, including a lack of consideration for the goals of local people and health systems, impeding local efforts, and unintended division between cultures (Guttentag, 2009).

The concept of service-learning has its roots in the educational philosophies of John Dewey's writings on the nature of understanding and the benefits of participation (Giles & Eyler, 1994). Service-learning can be characterised as an experiential approach predicated on reciprocal learning (Sigmon, 1979). Sigmon also provided four typologies of service-learning (Sigmon, 1994):

- Service-LEARNING: Learning goals primary; service outcome secondary
- SERVICE-learning: Service outcomes primary; learning goals secondary
- Service-Learning: Service and learning goals completely separate
- SERVICE-LEARNING: Service and learning goals of equal weight and each enhances the other for all participants

Service-learning is also linked to critical social theory (CST), a "multidisciplinary knowledge base with the implicit goal of advancing the emancipatory function of knowledge" (Leonardo, 2004). The CST approach emphasises the importance of discourse and critique of established societal norms and structures to quality education. A central tenant of service-learning is the student-teacher reflection process, which provides the opportunity to engage in this discourse and critique emphasised by CST. Through such a lens, service-learning in global health has the capacity not only to improve health science

student cultural competence and understanding of the global health environment, but to increase their understanding of the very causes of global health inequity. Such a profound educational outcome could be reasonably assumed to have the potential to alter a student's worldview and career course.

The benefits of GSL for students are well documented, and include personal growth, improved cultural competence, increased understanding of the global health environment, and improved language skills (Larson, Ott, & Miles, 2010; Puri, Kaddoura, & Dominick, 2013; Reuland, Frasier, Slatt, & Aleman, 2008; Sherraden, Lough, & Bopp, 2013). However, some researchers have questioned whether GSL programs, often one-way (i.e. HICs students visiting LMICs) and thus not truly "exchanges," are of any real benefit to the host community (Kulbok, Mitchell, Glick, & Greiner, 2012). In response to these concerns, there has been a substantial amount of research into the core principles that should guide GSL in the health sciences in ensuring that they are of benefit to the host community. These include ensuring strong community partnerships, a commitment to reciprocity, and sustainability of funding (Crabtree, 2013; Lattanzi & Pechak, 2011; McKinnon & Fealy, 2011). However, relatively little research has been conducted to determine the impact that health sciences GSL experiences are having on the host country health systems.

2.2 Methods

A literature review was conducted in the PubMed, CINAHL, Embase, ERIC, Scopus and Web of Science databases to examine the linkages between GSL and HSS. The searches yielded 107 results. There were 20 duplicate articles, 13 exclusions and 25 articles did not meet the inclusion criteria, leaving 49 articles for review (see Figure 2.2.1 below). A summary of the literature review is in the following Results section, and the full details of the literature search methodology are at Appendix 1.

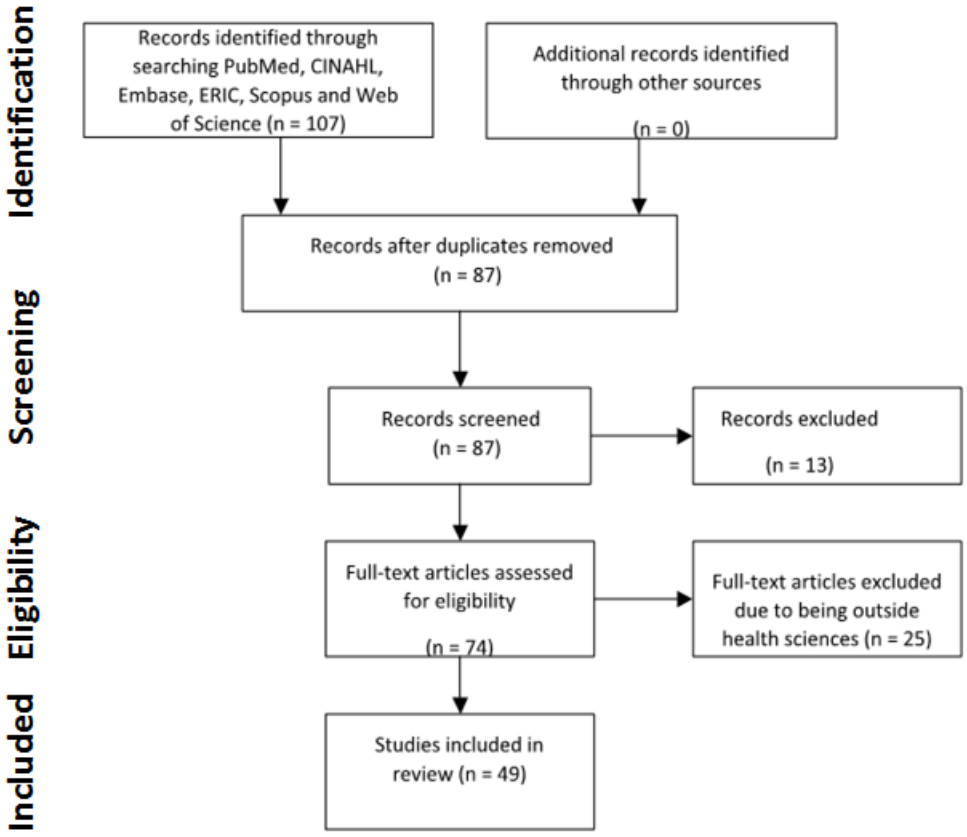

Figure 2.2.1. Literature search methodology using PRISMA framework

2.3 Results

2.3.1 Summary table

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Abedini, Gruppen, Kolars, & Kumagai, 2012	Understanding the effects of short-term international service-learning trips on medical students	Authors from: U.S. Type of Experience: One-week international service-learning trips (ISLTs); One way U.S. to Cuba, the Dominican Republic, Guatemala, Jamaica, or Peru Purpose: To understand what meaning(s) preclinical students attributed to participation in one-week international service-learning trips	A 15-item online questionnaire, Face-to-face, semi structured interviews	A random sample of 24 students; 17 students agreed to participate	Students reported: --improved clinical skills and outcomes for the community --a range of challenges associated with the nature of the visit and working in a low-income setting --improved understanding of working in a global health context

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Amerson, 2010	The impact of service-learning on cultural competence	Authors from: U.S. Type of Experience: A week-long immersion experience in Guatemala Purpose: To evaluate the self-perceive cultural competence of baccalaureate nursing students enrolled in a community health nursing course following the completion of service-learning projects with local and international communities	Survey; The Transcultural Self-Efficacy Tool (TSET) was administered at the beginning and completion of the semester.	A convenience sample of 69 baccalaureate nursing students enrolled in a community health nursing course	Nursing students perceived an increase in their abilities in cognitive, practical, and affective dimensions following participation in a service-learning project
Amerson & Livingston, 2014	Reflexive photography: an alternative method for documenting the learning process of cultural competence	Authors from: U.S. Type of Experience: One-way trip to Guatemala Purpose: To evaluate the learning process of cultural competence during an international service-learning project in Guatemala	Qualitative descriptive study; conducted family and community assessments, engaged in home visits, and provided health education	A purposive sample of 10 baccalaureate nursing students travelled to Guatemala	Making home visits and teaching others from a different culture increased students' transcultural self-efficacy

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Bentley & Ellison, 2007	Increasing Cultural Competence in Nursing through International Service-Learning Experiences	Authors from: U.S. Type of Experience: One-way international service-learning trip to Ecuador Purpose: To prepare nursing students to become culturally competent practitioners	Descriptive study; student evaluation of course and trip	25 nursing students	The trip and immersion experience led to changed attitudes toward working with those from other cultures. --Tailored cross-cultural courses help increase knowledge about other cultures including knowledge about values, beliefs, and practices --For most students to achieve greater cultural competence, immersion experience was needed --In an immersion experience, like an international trip, students may more easily leave their daily personal and professional relationships and responsibilities behind and truly experience the lives and environment of those visited --The specific course and service-learning international trip made a valuable difference in the

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
					students' development of cultural competence

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Booth, 2016	Compassion: a universal language	Authors from: U.S. Type of Experience: One-way medical trip to Indochina Purpose: To utilise any available resources in nursing education to demonstrate and model compassionate behaviours in order for students to not lose sight of what compassion means for the profession and calling of nursing	Descriptive study	N/M	Students perceived that despite cultural differences, language barriers, and thousands of miles of separation, compassion had the capacity to reduce these barriers
Chaponniere, Cherup, & Lodge, 2013	Measuring the impact of health education modules in Cameroon, West Africa	Authors from: U.S. Type of Experience: One-way trip to Cameroon to create a sustainable source of clean water and improve the overall health of people in Nkuv Purpose: To evaluate the impact of a health education program in a small rural community in Cameroon	Descriptive study	Engineering, nursing, and education students at Hope College	--Reduced incidence of childhood diarrhoea --Students learned the importance of pairing service-learning and research that respect local cultures to foster a healthier global community

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Chuang et al., 2015	Medical and pharmacy student concerns about participating on international service-learning trips	Authors from: U.S. Type of Experience: One-way international service-learning trips (ISLT) Purpose: To identify student concerns before and after attending a service-learning trip and the impact on student satisfaction and achievement of personal and professional goals	Literature review of pre and post surveys	35 medical and pharmacy students who attended ISLTs	--Decrease in concerns related to cultural barriers, disease/epidemics, natural disasters, terrorism, travel monetary issues, hospitality and food --Languages and group dynamics still remained concerns post-trip

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Cipriani, 2017	Integration of International Service-learning in Developing Countries within Occupational Therapy Education: Process and Implications	Authors from: U.S. Type of Experience: N/A Purpose: N/A	Literature review	N/A	The following seven issues were emphasised as to mutually beneficial GSL: 1. Occupational justice 2. Fidelity to accreditations standards 3. Reciprocal school-community partnerships and learning 4. A focus on safety 5. Cultural competence 6. Guided self-reflection 7. Sustainability

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Colodny, Miller, & Faralli, 2014	The development of a feeding, swallowing and oral care program using the precede-proceed model in an orphanage-hospital in Guatemala	Authors from: U.S. Type of Experience: N/A Purpose: To evaluate a long-term on-going international academic service-learning (I-ASL) intervention	A quantitative study, using the PRECEDE - PROCEED model	56 speech language pathology graduate students	The researchers perceived a trusting and mutually supportive relationship was built between the I-ASL team and the host organisation
Crabtree, 2013	The Intended and Unintended Consequences of International Service-Learning	Authors from: U.S. Type of Experience: N/A Purpose: To examine issues related to university-community engagement in global contexts, particularly consequences for host communities	Case study	N/A	Outcomes vary by intended and unintended, positive and negative, for students, faculty members, organisations and their staff, and the communities that host visiting teams from U.S. universities
Curtin, Martins, & Schwartz-Barcott, 2015	A mixed methods evaluation of an international service-learning program in the Dominican Republic	Authors from: U.S. Type of Experience: One-way trip to Dominican Republic Purpose: To examine the impact of an international service-learning experience (ISL)	Descriptive study quantitative and qualitative	11 female, Caucasian, senior and junior baccalaureate nursing students	Students reported: -- Increased motivation to learn and ability to speak another language. -- Enhanced understanding of the U.S. culture

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Curtin, Martins, Schwartz-Barcott, DiMaria, & Ogando, 2015	Exploring the Use of Critical Reflective Inquiry With Nursing Students Participating in an International Service-Learning Experience	Authors from: U.S. Type of Experience: One-way 2-week trip to Dominican Republic Purpose: To explore the value of critical reflective inquiry (CRI) in guiding nursing students reflection on an international service-learning experience in the Dominican Republic	Qualitative descriptive study	5 senior and 2 junior female baccalaureate nursing students	The CRI model was helpful in promoting in-depth description and reflection on the students' underlying assumptions and values, as well as identifying beginning strategies from emancipation in specific patient care situations
Dalmida et al., 2016	Volunteer Service and Service-learning: Opportunities, Partnerships, and United Nations Millennium Development Goals	Authors from: U.S., Botswana, West Indies Type of Experience: N/A Purpose: To explore approaches to service involvement and provide direction to nurse leaders and others who wish to begin or further develop global service or service-learning projects	Literature review	N/A	Before engaging in service, volunteers should consider the types of service engagement, as well as the design of projects to include collaboration, bi-directionality, sustainability, equitable partnerships, and consideration of the United Nations Sustainable Development Goals

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Davis et al., 2015	Interprofessional global service-learning: A pharmacy and nursing practice experience in Botswana	Authors from: U.S. Type of Experience: 27 days Interprofessional activities in Kanye, Botswana Purpose: To develop, implement, and assess an interprofessional global service-learning experience in rural government-run clinics and a community hospital for pharmacy and nursing students	Qualitative survey	5 Pharmacy students 11 nursing students	Global service-learning is a valuable opportunity to prepare collaborative teamwork among pharmacy and nursing students: --Partnerships with other health care programs' established educational experiences can facilitate pharmacy program expansion into global interprofessional practice experiences
Dharamsi et al., 2010	Enhancing medical students' conceptions of the Canadian Medical Education Directions for Specialists (CanMEDS) Health Advocate Role through international service-learning and critical reflection: a phenomenological study	Authors from: Canada Type of Experience: One-way 8 week-trip to Uganda Purpose: To explore the international service-learning (ISL) experience of three medical students and the value of critical reflection as a pedagogical approach to enhance medical students' conceptions of the CanMEDS Health Advocate Role	In-depth phenomenological study	3 medical students	Students noted: -- An increasingly meaningful sense of what it means to be vulnerable and marginalised -- A heightened level of awareness of the social determinants of health -- The related importance of community engagement -- A deeper appreciation of the health advocate role and key concepts embedded within it

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Downes, Murray, & Brownsberger, 2007	The use of Service-Learning in drought response by universities in Ethiopia	Authors from: U.S. Type of Experience: Purpose: To describe a successful Service-Learning experience and its outcomes that affected over 10 million Ethiopians	Descriptive study	2,191 health science students and 350 university instructors	Service-Learning has potential benefits for various stakeholders and student. Roles included: -- Provision of clinical, direct patient care for episodic problems -- Nutritional interventions of therapeutic and supplementary feedings Implementation of preventive and promotive health activities -- Participation in the control of disease outbreaks -- On-the-job training of professionals and others in the deployment areas

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Footer et al., 2015	Return on investment of international immersion programs: Stakeholder perspectives	Authors from: U.S. Type of Experience: One-way international global health immersion and service-learning trip Purpose: To develop an approach to evaluate the return on investment of international immersion programs in higher education	Mixed methods design	13 graduate students in physical therapy, nursing, and pharmacy programs	All participants indicted: -- Increased awareness and understanding of concepts related to topics such as social determinants of health, community development, global interdependence -- Personal and academic challenges upon return home from the program related to personal beliefs and values, cultural awareness and understanding, and impact of service-learning on themselves and others

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Foster, Guisinger, Graham, Hutchcraft, & Salmon, 2010	Global Government Health Partners' Forum 2006: eighteen months later	Authors from: U.S. Type of Experience: Government chief nursing officers and chief medical officers in a joint learning and planning experience Purpose: To evaluate the outcomes of the Global Government Health Partners (CGHP) forum	Descriptive study	21 CGHP participants	Improvements made in human resource among participant countries included: --revising key job descriptions --improving incentives --better distribution of nurses to rural areas --continuing education and increasing the number of nurse trainers Work that remains to be done: --Policy recommendations are currently overlooked --CNOs do not have a voice in the government commensurate with their responsibilities
Gates, Fletcher, Ruíz-Tolento, Goble, & Velloso, 2014	A Pesar De Las Fronteras/"In Spite of the Boundaries": Exploring Solidarity in the Context of International Service Immersion	Authors from: U.S. Type of Experience: One-way 3-week service-learning immersion trip to Nicaragua Purpose: To learn about experiences of Nicaraguans who hosted U.S. American students in their homes and communities	Ethnographic: observation and in-depth interviews	26 interviews with a total of 29 Nicaraguans who hosted U.S. students	Students identified cultural difference and inequality as salient themes, and that thy shaped the relationships and possibilities for joint action between U.S. students and their hosts

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Green, Comer, Elliott, & Neubrander, 2011	Exploring the value of an international service-learning experience in Honduras	from: U.S. Type of Experience: One-way volunteer medical mission to the isolated and mountainous western region of Honduras Purpose: To determine the effect of an international service-learning experience in Honduras on the cultural competence of the participants	Pretest-posttest Quantitative: questionnaire Qualitative: interview	15 students	The value that was ascribed to the experienced included: -- stepping outside their world --connecting with culturally different people --awe of the community --learning innovation
Hartman, Paris, & Blache-Cohen, 2014	Fair Trade Learning: Ethical standards for community-engaged international volunteer tourism	Authors from: U.S. Type of Experience: International volunteer tourism programs operating at the nexus of university-community engagement Purpose: To articulate a set of ethical standards for international volunteer tourism	Comprehensive review	N/A	Student learning and community goals must reinforce and inform one another. Either is undermined by the absence of the other.
Hope, 2008	The development of a medical service-learning study-away program	Authors from: U.S. Type of Experience: One-way service trip to Ecuador Purpose: the considerations for planning a study-away experience for nurses and nursing students in another country.	Summary article	2 faculty members 3 pre-med students 1 MSN student 2 BSN students	After the trip, some students changed their academic majors, and several made major health behaviour changes.

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
				10 nursing students	
Johanson, 2009	Service-learning: deepening students' commitment to serve	Authors from: U.S. Type of Experience: One-way service-learning trip to Mexico (9-day trip) Purpose: To emerge from the experience with enhanced cultural sensitivity	Summary article	Nursing students	All the students in the first group and the three cohorts to follow: -- commented that seeing this level of need and sensing their ability to make a difference would have an impact on the way they practiced nursing. --their general perception was that they would be more empathic professionals and continue to volunteer and serve when they became registered nurses
Jones, Ivanov, Wallace, & VonCannon , 2010	Global service-learning project influences culturally sensitive care	Authors from: US Type of Experience: One-way service-learning trip to a small town in Russia Purpose: to examine the	Pretest-posttest	Nursing students	Students reported increased awareness of cultural differences and social determinants of health

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
		prevalence of components of the metabolic syndrome			
Kaddoura, Puri, & Dominick, 2014	International academic service-learning: lessons learned from students' travel experiences of diverse cultural and health care practices in Morocco	Authors from: U.S. Type of Experience: One-way academic service-learning to Morocco Purpose: To engage students in meaningful hands-on activities to serve community-based needs	Summary article	9 health professions students	Participants perceived that international ASL provided them with lessons in access to care, practice, interdisciplinary teamwork, communication, ethical awareness, leadership, and cultural sensitivity
Kent-Wilkinson, Dietrich Leurer, Luimes, Ferguson, & Murray, 2015	Studying abroad: Exploring factors influencing nursing students' decisions to apply for clinical placements in international settings	Authors from: Canada Type of Experience: Purpose: To explore factors influencing nursing students' decisions to study abroad	A descriptive longitudinal design using online survey	A total of 1058 nursing students registered in the 2013-2014 academic year	Students indicated that their interest in study abroad international experiences was high, with many perceived benefits, but barriers to participation were also high for these students. Financial barriers topped the list followed by family responsibilities and job obligations

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Kohlbry, 2016	The Impact of International Service-Learning on Nursing Students' Cultural Competency	Authors from: U.S. Type of Experience: Purpose: The effect of and international immersion service-learning project on the level and components of cultural competence of BSN nursing students	A triangulated methodology -- the Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals-Students Version -- Cultural Self-Efficacy scale -- A demographic survey -- Open-ended qualitative questions	121 BSN nursing students from three southern California universities	The international service-learning experiences: -- strengthen the process of becoming culturally competent -- impact and improve cultural competency

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Kreye & Oetker-Black, 2013	A global service-learning experience for nursing students in Tanzania: a model for collaboration	Authors from: U.S. Type of Experience: One-way trip to Moshi, Tanzania for the 3-week service-learning experience Purpose: To address a model for creating a short-term global service-learning program	Analysis article	2 faculty 13 junior level nursing students 1 student affairs representative	International academic partnerships, developed in accordance with WHO standards, will enhance educational experiences for nursing students both in the U.S. and abroad
Krishnan, Richards, & Simpson, 2016	Outcomes of an International Audiology Service-Learning Study-Abroad Program	Authors from: U.S. Type of Experience: One-way study abroad program to Zambia Purpose: To evaluate students' academic and civic learning, with particular interest in cultural competence, gained through participation in the Speech, Language, and Hearing Sciences in Zambia study-abroad program	Pre- and post-program administration of the Public Affairs Scale to measure changes in participants' civic learning Qualitative data included journals, end-of-program reflection papers,	12 female students	Comparison of the pre- and post-program Public Affairs Scale data showed: -- a significant increase in cultural competence and a marginal increase in community engagement at the conclusion of the program Qualitative data showed: -- participants' cultural awareness was increased, they benefited from hands-on learning, and they experienced a variety of emotions and emotional and personal growth

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
			videos, and researcher field notes		
Larkin, 2015	Close encounters of the other kind: Ethical relationship formation and international service-learning education	Authors from: Canada Type of Experience: One-way ISL trips to Tanzania Purpose: The possibilities for a practice of ISL education that centres on the formation of socially ethical engagements with others	Analysis article	N/A	Racial and socio-economic differences are two key tensions that emerged as participants and community partners struggled to understand their respective roles

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Larson et al., 2010	International cultural immersion: en vivo reflections in cultural competence	Authors from: U.S. Type of Experience: One-way trip to Guatemala for an international cultural immersion course Purpose: To explore the impact of cultural immersion on students nurses' cultural competence	Qualitative descriptive study, in-depth interviews and en vivo reflective journals	13 junior and senior nursing students	Exercises in participant-observation and reflective writing could enhance student self-awareness and their ability to benefit from a cultural immersion course
Lattanzi & Pechak, 2011	A conceptual framework for international service-learning course planning: promoting a foundation for ethical practice in the physical therapy and occupational therapy professions	Authors from: U.S. Type of Experience: Purpose: To explore the current literature related to PT and OT ILS and build a conceptual framework for ISL course planning	Literature review	N/A	The five elements were identified as essential to promote a foundation for ethical practice as framed by beneficence and non-maleficence across all stakeholders in ISL: -- Cultural competency training -- Communication -- Coordination with community -- Comprehensive assessment -- Strategic planning

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Loewenson & Hunt, 2011	Transforming attitudes of nursing students: evaluating a service-learning experience	Authors from: Type of Experience: Purpose: to examine nursing students' attitudes toward homelessness before and after participation in a service-learning clinical rotation with families experiencing homelessness	Pretest-posttest interventio n study	23 students enrolled in a public health nursing course	The clinical experiences positively influenced students' attitudes and supported the value of integrating service-learning clinical opportunities with homeless individuals into nursing curricula
Logar, Le, Harrison, & Glass, 2015	Teaching corner: "first do no harm": teaching global health ethics to medical trainees through experiential learning	Authors from: U.S. Type of Experience: N/A Purpose: There have been some attempts in the last few years to incorporate more substantive ethics guidelines into pre-departure training; however, theses tend to be too broad and often leave the trainees with very little practical guidance	Analysis article	N/A	The tension between the benefits of service-learning on the one hand and the respect for patients' rights and well-being on the other could be resolved by the application of a simulation based approach to global health ethics education

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Long, 2014	Influence of international service-learning on nursing student self-efficacy toward cultural competence	Authors from: U.S. Type of Experience: One-way 2-week service-learning medical experience to Belize, Central America Purpose: measure pre-intervention scores of cultural competence and self-efficacy in nursing students; compare post-intervention scores; evaluate the effectiveness of an international service-learning experience as a teaching strategy in strengthening self-efficacy toward developing cultural competence	Quantitative study, using the Cultural Self-Efficacy Scale Qualitative study, using the self-reflection journals	34 students (17 in an international intervention group, 17 in a control group)	Significantly improved self-efficacy, self-confidence, skills, and self-awareness among students in working with the Hispanic culture and developing cultural competence.
McKinnon & Fealy, 2011	Core principles for developing global service-learning programs in nursing	Authors from: U.S. Type of Experience: N/A Purpose: To outline and discuss core principles for global service-learning in nursing	Analysis article	N/A	The seven key principles that can usefully guide global service-learning are: compassion, curiosity, courage, collaboration, creativity, capacity building, and competence

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Myers & Fredrick, 2017	Team Investment and Longitudinal Relationships: An Innovative Global Health Education Model	Authors from: U.S. Type of Experience: A four-year Global Health Scholars Program to participate in two separate month long trips abroad Purpose: Assessing the global health programs among medical schools	Analysis study	191 medical students	The response from students was positive, but logistical challenges were evident including sustaining team investment and maintaining longitudinal relationships between student teams and host communities
Parsi & List, 2008	Preparing medical students for the world: service-learning and global health justice.	Authors from: U.S. Type of Experience: N/A Purpose: To discuss the growth of international service-learning in undergraduate medical education	Analysis study	N/A	Students engaged in service-learning in some of the most impoverished places experience a burden of knowledge that for many demands a response and unparalleled opportunity to address disparities. -- Medical educators who can further empower these students through training in critical reflection and response stand to inspire a broader movement for more justice in global health

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Pascal, 2011	Incorporation of core values and mentoring to enhance service-learning in entry-level and post-graduate physical therapy curricula	Authors from: U.S. Type of Experience: One way service-learning trip to Guyana Purpose: Effect of having students at different levels of education and clinical experience work together internationally provides a unique opportunity for peer teaching and direct application of the core values of physical therapy professionalism.	Qualitative study, using questionnaires and reflection paper	5 physical therapy students	Service-learning can be an effective tool to promote learning and awareness of global health issues at the entry-level and post-graduate levels
Puri et al., 2013	Student perception of travel service-learning experience in Morocco	Authors from: U.S. Type of Experience: One-way service-learning trip to Morocco Purpose: To explore the perceptions of health profession students participating in academic service-learning in Morocco with respect to adapting health are practices to cultural diversity	Semi-structured, open-ended interviews	9 dental hygiene and nursing students	Students perceived growth as a health care providers. The application of knowledge and skills learned in academic programs and service-learning settings were found to help in bridging the theory-practice gap

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Richards & Novak, 2010	From Biloxi to Cape Town: Curricular Integration of Service-learning	Authors from: U.S. Type of Experience: One-way service-learning trip to Cape Town, South Africa Purpose: to review the service-learning framework, course planning, and implementation of a recent service-learning project	Review article	4 senior nursing students and 1 science student	students held a favourable view of service-learning and understood the components involved in its process
Ryan-Krause, 2016	Short-Term Global Experiences: Reflections, Themes, and Implications	Authors from: U.S. Type of Experience: One-way service-learning trips to Central America and the Caribbean Purpose: to articulate the essential les- sons learned from short-term experiences and to offer directions for planning and executing more meaningful and long-lasting outcomes for nursing students and host communities	Qualitative study, using post-travel reflection paper	89 advanced practice nursing students	Improvements were noted in clinical skills and linguistic abilities. Challenges included ethical issues of undermining the value of local providers, obstacles to appropriate follow-up care, and disruption of community life.

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Saffran, 2013	Dancing through Cape Coast: ethical and practical considerations for health-related service-learning programs	Authors from: U.S. Type of Experience: One-way service-learning trip to Ghana Purpose: to explore some of the ethical and practical issues that arise when U.S. students work in health-related programs in developing countries	Commentary article	N/A	Service-learning programs should lead students to consider issues such as which basic services people are entitled to, regardless of where and in what circumstances they live, and how differences in access to social and economic resources contribute to health disparities on a global scale.
Sherraden et al., 2013	Students Serving Abroad: A Framework for Inquiry	Authors from: U.S. Type of Experience: N/A Purpose: To propose a framework for inquiry on international service programs	Essay	N/A	Differences in outcomes for students, host communities, and home colleges and universities are the result of variations in individual and institutional characteristics and service activities.

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Smit & Tremethick, 2014	Preceptorship in an international setting: Honduran nurses and American nursing working together	Authors from: U.S. Type of Experience: One-way international service-learning trip to Honduras Purpose: to describe the anticipated rewards and barriers of Honduran nurses working as preceptors for students from the United States and to describe the experiences of Honduran nurse preceptors and students working together in a service-learning experience in Honduras	A qualitative descriptive design	Group 1: A convenience sample, 15 nurses Group 2: A purposive sample of 3 of the 10 nurses Group 3: A purposive sample of 8 of the 9 nursing students	Nurse preceptors in Honduras were receptive to working with nursing students from the United States and felt that sharing knowledge with the students was the primary re- ward for their preceptorship. Students valued the opportunity to practice skills in a supportive environment with receptive patients.
Stoner, Perry, Wadsworth, Stoner, & Tarrant, 2014	Global citizenship is key to securing global health: the role of higher education	Authors from: U.S., New Zealand Type of Experience: N/A Purpose: To argue that through consciously identifying global health within the constructs of global citizenship, institutions of higher education can play an instrumental role in fostering civically engaged students capable of driving social change.	Review article	N/A	1. Personal health is not solely an individual, self-serving act; rather, the consequences of our lifestyle behaviours have deep and wide consequences extending to the community, national, and global contexts. 2. Being a true global citizen means one is: (a) cognisant of these interconnections and the role personal decisions play in each context; and (b)

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
					civically engaged and capable of driving social change.

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Tremethick & Smit, 2014	Honduran Nurses' Work-Related Rewards and Challenges: Implications for International Service-learning and Collaboration	Authors from: U.S. Type of Experience: Service-learning experience in Honduras Purpose: To describe the current status of healthcare in Honduras and their study to learn about the work of Honduran nurses	A qualitative study, using semi-structured interviews, open-ended questions	Convenience sampling to interview 15 nurses	--Nurses reported that their perceived rewards were centred on caring and helping others. --Negative experiences and dissatisfaction with the lack of resources for healthcare services reported by Honduran nurses --Whether working with Honduran nurses in a mission setting or with students in a study abroad program, it is vital to understand the high demands on Honduran nurses of the day-to-day work. --Assisting these local nurses in their educational advancement would help to establish mutually beneficial partnerships by giving back to them.

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Ventres & Wilson, 2015	Beyond ethical and curricular guidelines in global health: attitudinal development on international service-learning trips	Authors from: U.S., El Salvador Type of Experience: International service-learning trips in low and low/middle income countries Purpose: To explore how attitudes contribute to the success or failure of international service-learning trips	Review article	N/A	1. The attitudes with which visiting health professionals approach international service-learning activities can be important components of the success or failure of the experiences. 2. Through thoughtful consideration of attitudes and approaches, participants on such trips can build a framework for rich and rewarding experiences in global medicine and global health
Watzak, Engelhardt, Bentley, & Self, 2015	Assessment of ethics and values during an interprofessional, international service-learning experience	Authors from: U.S. Type of Experience: Multi-year, short-term medical service-learning trip to Bolivia Purpose: to identify and review ethical issues that arose during the trip	Post-trip survey and pre- and post-trip journaling prompts	30 participants including faculty and second through fourth-year students enrolled in medical, nursing, pharmacy, public health, and dental programs	--Team members felt they acted ethically. --Pre-trip planning processes are required to be reviewed. --Uncertainty in novel situations was the major cause of anxiety for participants

Authors and year	Title	Country/ Experience/ Purpose	Design/ Method/ Models	Sample/ Size	Findings
Wittmann-Price, Anselmi, & Espinal, 2010	Creating opportunities for successful international student service-learning experiences	Authors from: U.S. Type of Experience: N/A Purpose: To extract lessons learned from an actual trip and dissects them from a safety, legal, and educational standpoint.	A qualitative study, using reflective journals	N/A	Service-learning experiences are educational events; as such, faculty benefit from comprehensive planning and preparation to maximise the trip's focus on achieving the learning outcomes.

2.3.1 Thematic analysis

Theme 1: A dominant service-LEARNING typology. Consistent with Sigmon's service-LEARNING typology, outcome measures of the reviewed studies generally focused heavily on educational outcomes for students, such as personal growth, improved cultural competence, increased understanding of the global health environment, and improved language skills. The consideration of benefits to the host community were oftentimes secondary and sometimes completely absent. None of the reviewed studies provided an-depth consideration and discussion of the concept of HSS.

Theme 2: A unidirectional pattern. The studies reviewed primarily described partnerships with health facilities within LMICs, the stated purpose of which was to host visiting students and faculty from LMICs, primarily the US. Since the majority of students studied were pre-licensure and thus not licensed to practice either in their home or host country, they are of limited practical utility to the host health system. Moreover and particularly in relation to shorter-term visits, the time taken to train incoming students in the provision of care within the host community represents a significant burden on the host organisation. There was limited discussion of students in LMICs visiting HICs for reciprocal experiences.

Theme 3: The pre-eminence of nursing. While the literature search methodology included all students of the health sciences, it is evident from the search that the concept of service-learning is largely associated with the nursing discipline.

2.4 Conclusions

The literature review conducted has highlighted that the primary aims of the majority of GSL experiences are student development and to a lesser extent host community health, consistent with Sigmon's service-LEARNING typology. GSL has yet to be examined in the context of HSS and particularly within a context of reciprocity. This is perhaps due to the nature of nursing and medical education; educators and students alike are compelled to develop their clinical skills as part of their education. Indeed, in order to meet accreditation requirements in pre-licensure programs, this is oftentimes mandatory. Moreover, in many individuals there is a strong motivation for altruism and contributing to a better world (Yach & Bettcher, 1998). But as the discipline of global health evolves, a re-consideration of GSL experiences is warranted. Moreover, it can be argued that efforts to deliver GSL should be holistic and incorporate HSS endeavours that are outside the realm of the traditional clinical service GSL model.

Anecdotally, there is a large demand among students of the health sciences for GSL. Implicitly, if this demand outstrips the supply of appropriate and viable GSL opportunities, then there is a large and willing temporary workforce that is being underutilised and that could have benefit to the global community. Moreover, costs of travel mean that many of these experiences are not distributed equitably across student populations and potentially exacerbate inequities. Framing students' strong desire to engage in GSL through both an organisational lens and as a part of the global health workforce, contextualises this research. The use of the word "temporary" here is also key, as it is a challenge that GSL educators have been wrestling with for decades; how can truly sustainable improvements occur when the workforce is subject to constant turnover

An additional issue to consider, particularly in light of the SDGs, is the adverse environmental impact of air travel. Traditional GSL experiences have typically involved in-person travel to a community in a developing country. But experiences that mirror GSL, but which can be delivered without actual travel, may be increasingly possible as technological advancements continue to shape the learning environment (Salam, Iskandar, Ibrahim & Farooq, 2019). Such an approach would also make contribution to reducing carbon emissions, as well as being more financially viable for students and educational institutions.

As events like the COVID-19 pandemic, Ebola and Zika outbreaks, and the ongoing global tensions surrounding immigration policy have demonstrated, communities, countries and global regions do not operate in isolation. This will undoubtedly fuel additional interest in the global health discipline, particularly as technological advancements increasingly allow for instant access to information from across the globe. Moreover, it appears that the healthcare workforce of the future is willing to meet this challenge. The onus will be on higher education institutions in HICs to develop and deliver evidence-based GSL that is beneficial and engaging for students while most effectively meets the need of the global community. This chapter has summarised the extant literature describing GSL identifying key items to consider in not only describing challenges but also opportunities. This information has provided the context for the study. The following chapter describes methodological considerations as well as ethical issues and concerns.

2.5 References

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Chapter 3: Methods

The content of this chapter has been submitted as part of a manuscript:

Beaman, A., Koirala, B., Sibbritt, D., Newton, P. J., Davidson, P.M. Global service-learning and the impact on host countries: a mixed methods study. *Heliyon.*

3.1 Introduction

The previous chapter has summarised the extant literature investigating GSL and in particular focused on the need to investigate the impact of GSL. This chapter builds upon the conceptual elements of GSL and the role in a global health agenda, outlines methodological and ethical issues considered in the study and discusses how findings can be applied to ensure that a GSL is relevant and appropriate. This study applied a cross-sectional design, employing a mixed methodology design to address the study questions. This design allows drawing on fundamental conceptual and theoretical elements from qualitative and quantitative methods to describe and elucidate key concepts to answer a specific research question (Johnson & Onwuegbuzie, 2004). In this study we specifically sought to address this study questions identified in Chapter 1, specifically

1. How are GSL experiences in higher education health sciences being delivered?
2. How are GSL experiences impacting host communities and the health systems in which they exist? and
3. What are the guiding principles for GSL to be optimally translated into strengthened health systems in host countries?

As this study sought to both understand the current GSL environment, as well as develop and validate a model for optimal implementation, a mixed methodology offers the

ability to gather the varied data required to address these distinct aims (Johnson, Onwuegbuzie, & Turner, 2007). Data were collected through an online survey (Appendix 5), which provided insight into various stakeholder attitudes towards short-term GSL, and also focused the questions that were be utilised in the key informant interviews, which collected comprehensive information on GSL programs, best practices, and consideration of HSS principles.

3.2 Aims

1. Describe the role of GSL in health professional education.
2. Identify the barriers and facilitators to ethical, effective GSL and the impact on host countries.
3. Develop and validate a set of guiding principles for most effectively translating student demand for GSL experiences into measurable benefits for host health systems.

3.3 Conceptual Framework

The benefits of GSL for students are well documented, and include personal growth, improved cultural competence, increased understanding of the global health environment, and improved language skills (Larson, Ott, & Miles, 2010; Puri, Kaddoura, & Dominick, 2013; Reuland, Frasier, Slatt, & Aleman, 2008; Sherraden, Lough, & Bopp, 2013). The impact upon host communities and health systems however is not as well understood and changes in models of international development have not necessarily been incorporated in GSL. Increasingly it is argued that there is a need to shift from international development considered as rich North/poor South, and to move towards a more integrated global development framework (Horner & Hulme, 2019). A study of U.S. students' GSL visit to

Nicaragua emphasised the cross-cultural learning taking place, and the real connections being made between students and their hosts (Gates et al, 2014.) The study also found however that the work of the visiting students did not always contribute to real, positive change for the community, and may have even created false hope within the community for future support, for example, from U.S. government aid. Gates et al (2014) also underscored the importance of community and organisational preparation.

The impact of GSL visits on the host country's health system has to date not been the subject of in depth research. As the global recognition of HSS increases, it is important that short-term GSL visits – a subject not immune to criticism and questioning – are conducted in a way that considers closely the host health system. The WHO's HSS building blocks (2007) will serve as the basis for the outcomes measures for the proposed study as it is postulated that contributing to these crucial elements reflects the notion of 'service' and also contribution to improving health outcomes, particularly for those in the health sciences. Conceptually and pedagogically, these factors should be considered in GSL, particularly as we strive to address the SDGS (United Nations, 2020).

The below Figure 3.3.1 provides a conceptual framework for the proposed research project based on the literature reviewed and potential frameworks. The frameworks given closest attention were those developed by Sherraden, Lough and Bopp (2013), Lattanzi and Pechak (2010) and McKinnon and Fealy, (2011). The McKinnon and Fealy model was considered conceptual for the purpose of this study. The Lattanzi and Pechak model was focused too heavily on the planning phase. Moreover, both these models referred specifically to one discipline, nursing and occupational therapy respectively. The Sherraden, Lough and Bopp (2013) model overcame these shortcomings, providing a discipline-neutral framework which described in detail the evidence-based GSL outcomes

for each of the three stakeholder group of interest: students; faculty/institutions; and hosts. It thus provided an ideal platform upon which to extend the consideration of GSL to the concept of HSS.

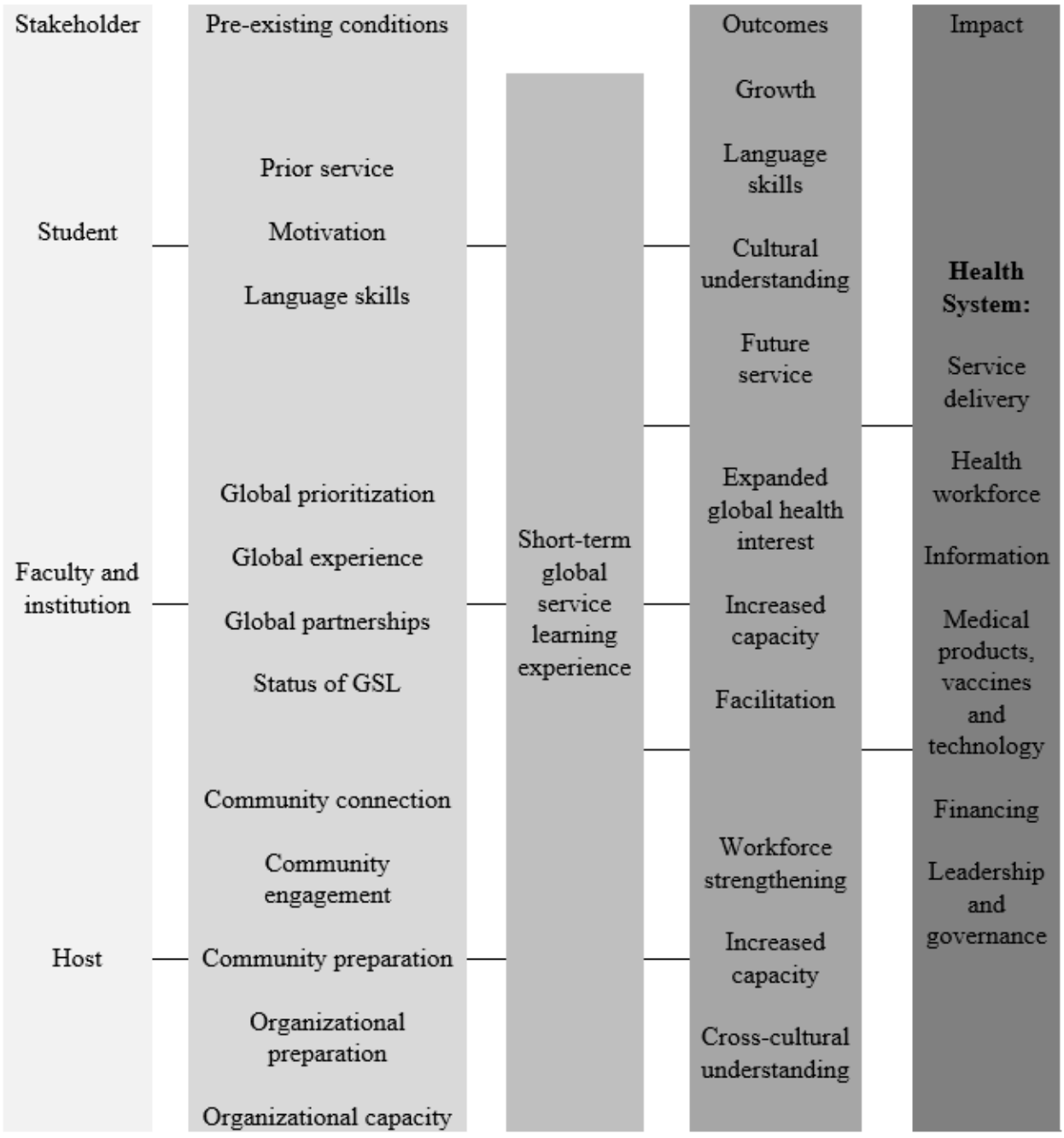

Figure 3.3.1. Conceptual model for the study (adapted from Sherraden, Bopp, & Lough, 2013).

3.4 Study Design

A single epistemological approach is often insufficient to adequately address research questions that arise from complex phenomena. Over recent decades mixed methods research has become a growing trend in research methodology. The underlying principle of mixed methods research combines qualitative and quantitative approaches to provide a better understanding of research problems than either approach alone (Johnson, Onwuegbuzie & Turner, 2007). A knowledge of both paradigms and aspects of methodological rigor is required to design and carry out mixed methods research (Creswell, 2003.)

In his seminal writings on research design, Creswell (2003) provides a set of criteria for selecting a methodological approach to address a research question. For the current study, I sought to understand the relationship between: origin and destination country income levels; adherence to best practices; and Sigmon typology, and the perceived impact of the visit on the host community and health system. As these questions involved previously defined variables, these questions lend themselves to a quantitative design. However, in developing principles for maximising the positive impact of higher education students' contributions to global health, this is a broad topic upon which there has been limited research, and lends itself to a qualitative design. Thus, a mixed methods design was selected.

At the next level of detail, assigning level of emphasis to each of the methods was required. Again consulting Creswell's (2003) work, I decided upon a triangulation design, as I wanted to give equal primacy to quantitative and qualitative data. Under this design, results from each are merged from one method to compare, interrelate or validate results from the other. I designed and implemented this study such that quantitative and qualitative

analyses were completed concurrently, and results and themes could be directly compared, integrated and synthesised immediately following analysis

3.5 Online Survey

3.5.1 Sample

In order to meet the inclusion criteria for this quantitative phase of the study, participants had to have taken part in a short-term GSL experience. Short-term was defined as three weeks or less in duration. GSL was defined as student travel to a foreign country for the primary purpose of experiential learning intended to benefit both the student and the community being visited. Activities such as sponsored research projects, clinical practicums and observerships were not included under this definition and represented the exclusion criteria. There were three groups of respondents: student participants (hereafter referred to as "student"); faculty or staff involved in arranging and/or delivering the student visit ("faculty"); and members of the organisation that hosted the student visit ("hosts".)

Participants were recruited using snowball sampling, a technique whereby participants initially recruited to the study recruit further participants from among their own networks (Goodman, 1961). Initial participants were recruited by contacting: distribution lists of current and former students and professionals in the health sciences; individuals with experience in the field of education and research for forwarding on to their network of colleagues who may have had direct involvement in short-term GSL; networks of global health professionals; and promotion on social media. The online survey invitation and information letters are at appendices 3 and 4 respectively.

3.5.2 Online Survey

To ensure the survey had a global reach an online questionnaire was designed, using Qualtrics online survey software. A questionnaire is a systematic method for gathering information from individuals for the purposes of describing the attributes of the larger population of which the individuals are members (Groves et al, 2011).

The limitations of online surveys were given close consideration as part of the methodological design process. In particular: that the methodology excludes anybody who does not have access to the internet; that an online survey in one language does not allow for the use of a translator where one might be needed; and that despite clear terms and definitions, the cultural and linguistic diversity of participants may impact upon their perception of the meaning of a given item (Evans & Mathur, 2005).

These factors were then weighed against the significant benefits associated with online surveys. One especially salient methodological concern was the achievement of truly global participation in order to avoid a western hemisphere sampling bias, something online surveys are well positioned to overcome. Moreover, online surveys provide an efficient method of recruitment when a snowball sampling methodology is used (as was the case in this study), and also allow for automated redirection of participants to different survey items based on responses to prior items (as was required by this study) (Evans & Mathur, 2005). Ultimately on the basis of these factors, I decided upon the online survey as the optimal methodology for this study.

Questionnaire item generation was informed by an extensive literature review (Beaman et al, 2018), overarching conceptual framework, and appraisal by and comment by an expert review panel comprising of two faculty with experience in delivering short-term GSL programs, and two doctoral students in the field of global health. In particular,

the panel advised on the appropriateness of survey items given to suit a global audience with varying terminologies, levels of English fluency and education. A 40 to 45 item questionnaire (length depended on which of the following groups was selected "student participant", "faculty or staff involved in arranging and/or delivering the student visit" or "member of the organisation that hosted the student participants.")

The questionnaire comprised of seven sections: 1) demographics (to gather information on the respondent's age, gender and country of residence for example); 2) pre-departure (to measure the respondent's level of experience and preparation prior to the visit); 3) during (to determine whether data collection and structured reflection exercises took place during the visit); 4) post-trip (to determine whether structured reflection exercises took place after the visit); 5) service-learning typology (to gather attitudes the prioritisation of learning versus service goals) on ; 6) outcomes (to measure impact on the individual); and 7) local health system (to estimate impact on the host country health system). Sections two to four were designed to measure the pre-existing conditions, as defined in the conceptual framework, and the extent to which participants felt that their GSL experience had followed the best practices for GSL implementation described in the preceding sections and in close alignment with the work of Crabtree (2013). Sections five to seven intended to measure whether the GSL experience achieved its intended outcomes, as defined in the conceptual framework, as well as the impact on the local health system. The health system impact items were developed in close reference to WHO's building blocks for health systems (2007). Prior to launching the survey was piloted in four individuals and refined for ambiguity, redundancies and alignment with study objectives.

Participants were recruited using snowball sampling, a technique whereby participants initially recruited to the study recruit further participants from among their own networks (Goodman, 1967). Initial participants were recruited by contacting: distribution lists of current and former students and professionals in the health sciences; individuals with experience in the field of education and research for forwarding on to their network of colleagues who may have had direct involvement in short-term GSL; networks of global health professionals; and promotion on social media.

3.5.3 Variables

Countries of origin and destination of the GSL visit were classified into HIC and LMIC based on the World Bank's Country and Lending Groups (2020) (these lending groups are provided in full at Appendix 7). Visits were also categorised by attitude of service-learning typology (Service-LEARNING: Learning goals primary; service outcome secondary, or SERVICE-learning: service outcomes primary; learning goals secondary, or Service-Learning: Service and learning goals completely separate, or SERVICE-LEARNING: Service and learning goals of equal weight and each enhances the other for all participants).

Seven survey items were combined to create a single best practice variable measuring best practice adherence. The seven items related to: the length of relationship between the visiting institution and host organisation; whether the students had received briefings prior to their visit (cultural, ethical, safety); whether structured reflection exercises took place during and after the visit; and whether data were collected during the visit. All Likert scale items were converted to binary variables ("agree" and "strongly agree" were recoded as 1; "neither agree nor disagree", "disagree" and "strongly disagree" were recoded as zero), summed together and then divided by the number of the seven items

to which the participant responded, in order to generate a final best practice adherence variable on a scale of 0 to 1. A score of greater than 0.5 was considered to represent adherence to best practices.

A similar process was followed to develop indices for each of WHO's six building blocks for HSS: health services (five items); health workforce (three items); health information (three items); medical products, vaccines and technologies (18 items), health financing (one item), and leadership and governance (four items). All Likert items were converted to binary variables (i.e. for five-point Likert items, "agree" and "strongly agree" were recoded as one, all other responses were recoded as zero), summed together and then divided by the number of the items to which they participant responded, in order to generate a final best practice adherence variable on a scaled of 0 to 1. A score of greater than 0.5 was considered to represent positive health system impact.

3.5.4 Data analysis

The survey data were analysed using IBM's Statistical Product and Service Solutions (SPSS) software 25.0 (IBM Corp., 2017). Descriptive statistics were used to describe participants of the study. Because the online survey data being analysed were on either binary or Likert scales, they were treated as categorical variables (the usage of parametric tests on these types of data can lead to misleading results (Allen & Seaman, 2007)). The Chi-square test is used when examining relationships between categorical variables (McHugh, 2013). Chi-square tests were used to examine the association between HSS building block and: visit type; best practice adherence; Sigmon typology. Statistical analysis was supervised by Professor David Sibbritt.

3.6 Interviews

3.6.1 Sample

In order to gather the range of perspectives required and maintain the feasibility of the study, 12 participants were identified as key informants for this study. A key informant represents an organisation, program, problem or interest group, and serves as a proxy for his or her associates within this group (Lavrakas, 2008). A purposive key informant sampling technique was used; a deliberate selection of participants based on their unique and specific attributes (Etikan, Musa, & Alkassim, 2016). The candidates were selected based on their impact on global health education, research and practice, as well their experience across all global regions. Six were faculty from HICs, two were faculty from LMICs, two were employees of international NGOs in HICs, and two were employees of international NGOs in LMICs.

3.6.2 Key informant interviews

Interviews were recorded using Zoom videoconferencing software with the participants' permission to record. At the completion of the interview, the audio file was moved to the University of Technology Sydney's encrypted cloud storage. As the interviews were being recorded the interviewer recorded observations and reflected on interpretive statements.

Interviews were semi-structured and in-depth, to elicit detailed information, but there was ample opportunity for participants to initiate discussion and topics (Brinkmann, 2014). Unlike the survey, and in order to gain a broader understanding, discussion was not limited to GSL, and allowed for discussion of international student travel for practicum, research and the like. These interviews were critical to gaining a full understanding of the context of global health programming for higher education students. Moreover, they

provided the level of detail and understanding essential to the development of a set of robust, evidence-based guiding principles. The interview guide is provided at Appendix 6.

3.6.3 Data Analysis

The data analysis of the key informant interviews was undertaken through content thematic analysis. Thematic analysis is a method for identifying, analysing, organising, describing, and reporting themes found within a data set, and is very useful for examining the perspectives of different research participants, highlighting similarities and differences, and generating unanticipated insights. (Braun & Clarke, 2006). The 12 interviews were firstly transcribed. Then, Professor Patricia Davidson and I independently and carefully read the transcripts multiple times to ensure a thorough understanding of the content. We each assigned preliminary codes to the data to describe the content, and then preliminary patterns in codes were identified across data from each interview. I then simultaneously reviewed the two sets of codes and patterns, first identifying themes and sub-themes, and then collapsed any common themes. I then re-read the transcripts again, and then reviewed the thematic analysis to ensure that research aims and questions were being addressed.

3.7 Develop and Validate a Set of Guiding Principles

Guiding principles are critical for increasing the synergy between strategy and execution. Guiding principles are embedded in values that establishes a framework for expected behaviour and decision-making (Wilkinson et al, 2016). Moreover, guiding principles ensure that the long-term objectives and values of a program survive and assists organisations to drive performance and align expectations (Fawcett & Magnan, 2004). In the context of GSL, clear articulation of guiding principles will help to ensure that the vision and values of these experiences are transparent and accountable.

Developing a set of guiding principles can also help define workflows in an efficient, effective and value-concordant way (Ratnavadivel, 2014). These principles are intended to drive strategy, promote execution and inform evaluation. The literature review described in Chapter 2 has provided crucial elements of the guiding principles but findings from quantitative and qualitative data elucidated further content as well as validating assumptions. Moreover, existing GSL programs to date have not necessarily been explicit and transparent in their agenda and motivations, potentially leading to malalignment in expectations. Key advantages of guiding principles are that they: clearly articulate values and philosophies; facilitate and guide behaviours; create transparency and accountability; build a framework for monitoring and performance management; and ensure that all members of the organisation/team/activity share the same values and objectives (Wilkinson et al, 2016).

As is described in section 5.3, data from the online survey and the key informant interviews were integrated and synthesised and key recommendations derived. A set of guiding principles, adapted from Crabtree (2013), were then developed, which addressed the concordances, differences, and implications of the data analysed. For validation of the guiding principles, they were then presented to the three key informants who had most direct experience with the implementation of short-term GSL for formative feedback. They were all members of faculty at universities in HICs.

3.8 Researcher Positioning

Following the completion of my Bachelor of Psychology degree, I began working at the Australian Government Department of Health, working on the management of federally funded mental health programs. This opportunity provided me with unique insight into the

way that non-government organisations interacted with the various levels of government (local, state, federal), and in particular, the federal government's role in "filling the gaps" in health care service delivery that local and state governments had been unable to fill. During this time, I developed a preference for and focus on the macro; how can resources be allocated to best meet the needs of the most people? It is this question and this philosophy that has driven my career and my studies to date. I also completed a Master of Public Health degree during my time at the Australian Government Department of Health.

More recently, I have for several years been involved in the administration of global health initiatives at Johns Hopkins University School of Nursing in the United States. This includes global student and faculty exchange programs, global health research, and the administration of the Global Network of WHO Collaborating Centers for Nursing and Midwifery. These professional experiences combined with my own worldviews and belief in the principles of equity, social justice and diversity, coalesced into my interest in the topics that form the basis of this research. Hearing from students, faculty and staff about the mixed motivations for GSL fuelled my passion for clearly elucidating the value position and propositions from the perspective of multiple stakeholders.

3.9 Ethical Considerations

Approval to undertake this research was granted by the University of Technology Sydney Human Research Ethics Committee (UTS HREC reference number: ETH18-2957) (Appendix 2). The study adhered to the National Statement on Ethical Conduct in Human Research guidelines; it was seeking to gather data from stakeholders around the world, in order to develop guidelines for positive and impactful contributions to global health systems. LMICs and the intended beneficiaries.

I was the only person able to access the raw online survey response data. When the survey was closed, response survey data were downloaded as an SPSS file, and moved to the University of Technology Sydney's encrypted cloud storage. The data were then deleted from the Qualtrics online survey software system's servers. Video files from the interviews were recorded onto my computer. On completion of the interview, the files were moved to the University of Technology Sydney's encrypted cloud storage and deleted from my computer. No hard copies of any document containing response data were generated.

The research team considered the risk of identification to be very low, and furthermore, the survey did not ask participants to reveal any information that is sensitive or incriminating in nature. Key informants were not be asked to provide their name or organisational affiliations. As such, the risk of them being identifiable was extremely low. As with the online survey, the interviews did not ask participants to reveal any information that is sensitive or incriminating in nature.

At no point were participants coerced; they engaged of their own free will and were informed that they can excuse themselves at any time.

3.10 Conclusions

This chapter has outlined the methodological considerations of the study as well as ethical and logistical issues. Key issues elucidated in this chapter has been the importance of considering the GSL beyond the individual level of the student and university to considering the impact from the perspectives of systems and more importantly embedded with a policy driven framework of HSS. The following chapter presents the quantitative data from the online surveys.

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Chapter 4: Quantitative data

The content of this chapter has been submitted as part of a manuscript:

Beaman, A., Koirala, B., Sibbritt, D., Newton, P. J., Davidson, P.M. Global service-learning and the impact on host countries: a mixed methods study. *Heliyon.*

4.1 Introduction

As described in Chapter 3, an online survey was developed in order to address the first two study aims: describe the role of GSL in health professional education; and identify the barriers and facilitators to ethical, effective GSL and the impact on host countries. Although the study is mixed method in design, the quantitative and qualitative data are presented separately as they were considered to carry equal weight in the study design and occurred concurrently. These data are integrated and synthesised in Chapter 6.

The survey was opened on 19 June, 2019 and closed on 17 May, 2020. Participants were recruited using snowball sampling (Goodman, 1961). Initial participants were recruited by contacting: distribution lists of current and former students and professionals in the health sciences; individuals with experience in the field of education and research for forwarding on to their network of colleagues who may have had direct involvement in short-term GSL; networks of global health professionals; and promotion on social media. In total, 119 survey responses were received. Of these, 39 participants self-identified as not having been involved in a short-term GSL experience, and were excluded from analysis. Ten participants responded with the same country of origin as destination (thus making the visit non-global), and were excluded. One additional response was blank with the exception of the inclusion criteria item; this response was also excluded. This left 69 responses

available for analysis. This process is illustrated in Figure 4.1.1. As discussed in the preceding chapters, a key aim of this study was to ascertain the impact of GSL on HSS, specifically, the six health systems "building blocks": Service delivery; Health workforce; Information; Medical products, vaccines and technologies; Financing; and Leadership / governance (World Health Organization, 2007).

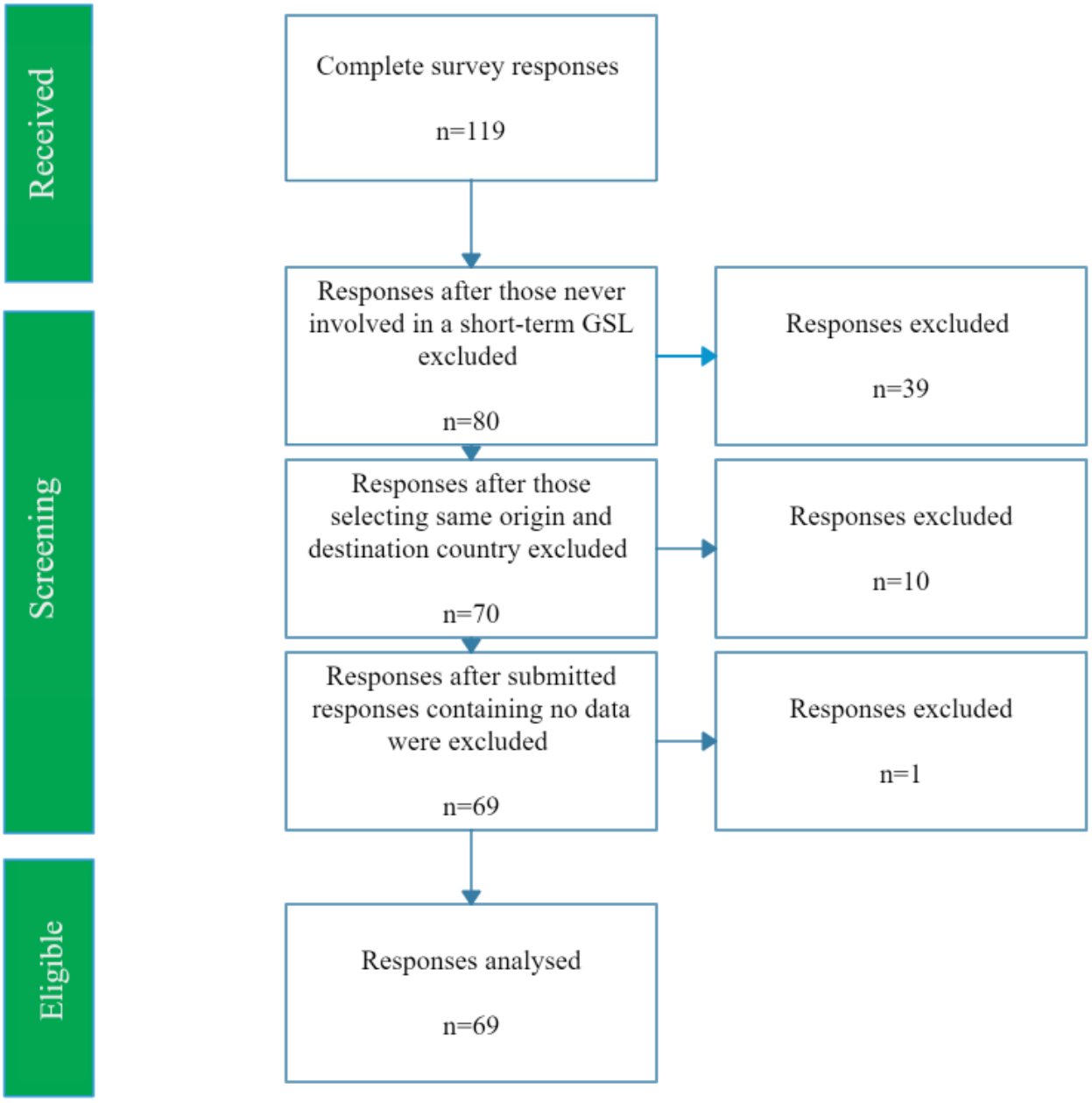

Figure 4.1.1. Diagrammatic representation of online survey response screening process

4.2 Results

Of the 69 online survey responses analysed, ten respondents identified as male and 59 identified as female, with a mean age of 37.8 years (SD=14.8). Of these respondents, 38 were students; 25 were faculty; and six were hosts. These results are displayed in Table 4.2.1.

Table 4.2.1

Demographic characteristics of online survey participants

Characteristic	Students	Faculty	Hosts	Total
Gender				
Male	7 (18.4%)	1 (4%)	2 (33.3%)	10 (14.5%)
Female	31 (81.6%)	24 (96%)	4 (66.7%)	59 (85.5%)
Age				
Mean	29.2	50.2	40.3	37.8
SD	9.4	13.3	11.2	14.8

Of the 69 GSL visits, there were 12 countries of origin, with the most common being the United States of America (38), China (ten) and Hong Kong (five). There were 32 destinations, with the most common being Guatemala (eight), Australia (six) and Singapore (five.) These data are presented in Figure 4.2.1.

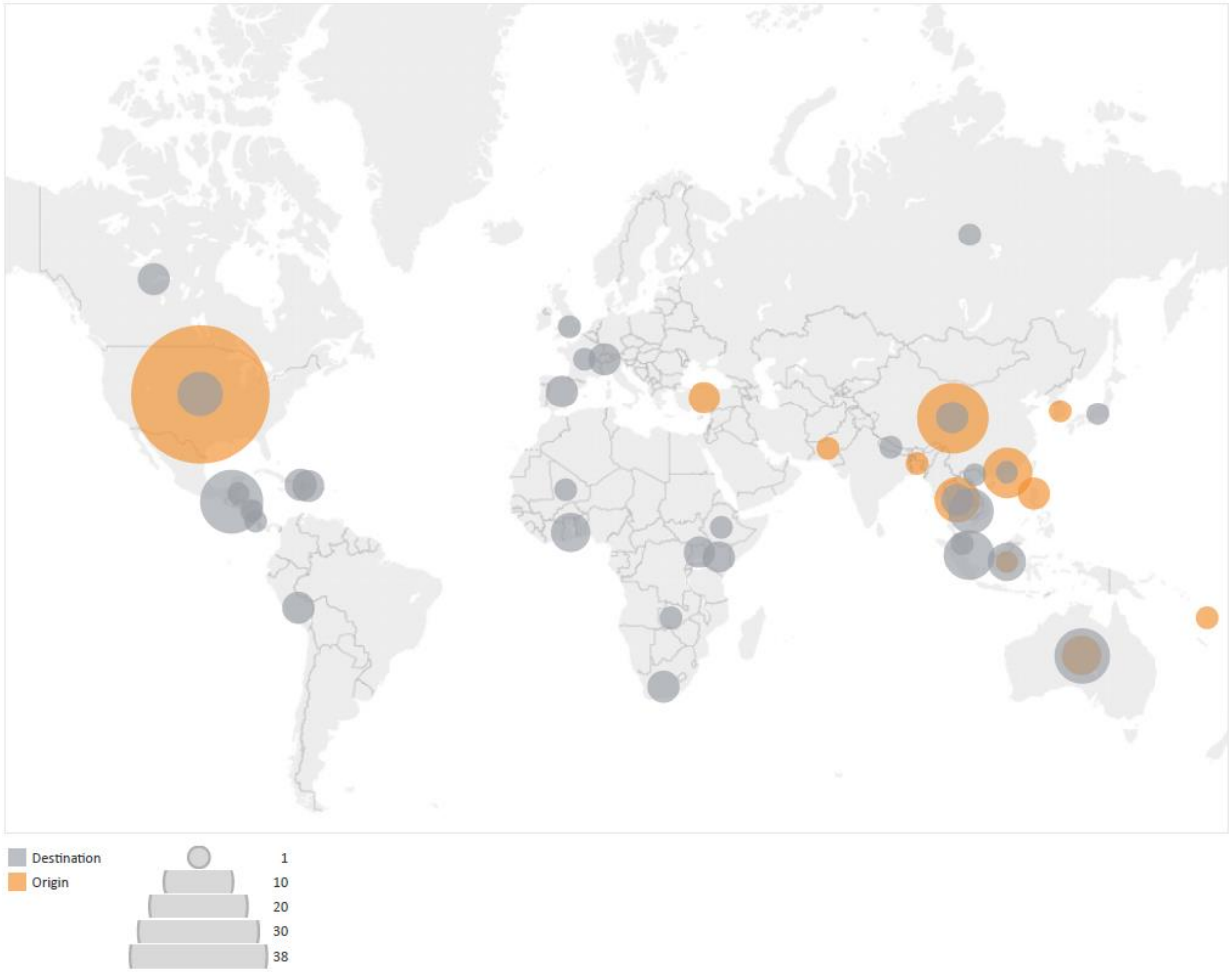

Figure 4.2.1. Online survey participant country of origin (orange) and destination (grey) of GSL visit

Of the visits surveyed, 38 of the 69 GSL were from an origin country classified by the World Bank (2020) as HIC to a low or LMIC, with the other 31 being made up of the three other possible combinations (HIC to HIC, LMIC to LMIC and LMIC to HIC.) This question sought to examine whether host and destination income brackets for GSL visits were affecting the perception of health system impact. Frequencies and chi-square p-values for WHO HSS building block by visit type are shown in Table 4.2.2. Only the financing building block reached statistical significance ($p=0.001$), indicating that visits where

students travelled from a HIC to a LMIC were significantly more likely to provide the service being provided at no cost to the host community.

Table 4.2.2

Frequencies and chi-square p-values for WHO HSS building block by visit type

Health systems strengthening building block		Visit type		*p-value*
		HIC to LMIC	All other	
Service delivery	Agreed	26	24	*0.485*
	Did not agree	12	7	
Health workforce	Agreed	31	20	*0.108*
	Did not agree	7	11	
Information	Agreed	5	7	*0.304*
	Did not agree	33	24	
Medical products, vaccines and technologies	Agreed	23	12	*0.071*
	Did not agree	15	19	
Financing	Agreed	30	12	*0.001*
	Did not agree	8	19	
Leadership / governance	Agreed	23	19	*0.948*
	Did not agree	15	12	

HIC to LMIC = High-income country of origin to Low- or Middle-income country destination

In total, 47 of the 69 survey participants considered their GSL visit to have adhered to more than half of the established GSL best practices that were adapted from Crabtree (2013). Specifically: whether the length of relationship between the visiting institution and host organisation had been in place for more than five years (60 per cent); whether the students had cultural (68 per cent), ethical (57 per cent), and safety (84 per cent) briefings prior to their visit; whether structured reflection exercises took place during (88 per cent) and after (75 per cent) the visit; and whether data were collected during the visit (52 per cent).

Frequencies and chi-square p-values for WHO HSS building block (World Health Organization, 2007) by adherence to best practices are presented in Table 4.2.3. Two building blocks reached a level of significance under this test, demonstrating that stronger best practice adherence increased perception of student contribution to health workforce (*p=0.002*), and their use of medical products, vaccines and technologies (*p=0.032*).

Table 4.2.3

Frequencies and chi-square p-values for WHO HSS building block by adherence to best practices

Health systems strengthening building block		Best practice adherence		*p-value*
		>50%	=<50%	
Service delivery	Agreed	35	15	*0.586*
	Did not agree	12	7	
Health workforce	Agreed	40	11	*0.002*
	Did not agree	7	11	
Information	Agreed	9	3	*0.573*
	Did not agree	38	19	
Medical products, vaccines and technologies	Agreed	28	7	*0.032*
	Did not agree	19	15	
Financing	Agreed	28	14	*0.747*
	Did not agree	19	8	
Leadership / governance	Agreed	30	12	*0.461*
	Did not agree	17	10	

Using the Sigmon (1994) typology classification, 39 of the 69 GSL participants surveyed considered their experience to be one in which service and learning goals were of equal weight and each enhances the other for all participants. The remaining 30 participants made up of the three other possible Sigmon typologies (service-LEARNING: Learning goals primary; service outcome secondary (n=17), or SERVICE-learning: service outcomes

primary; learning goals secondary, or service-learning (n=7): Service and learning goals completely separate (n=6)). This test sought to investigate whether perception of primacy of service versus learning goals impacted upon perceived impact on the host country health system. No p-values reached a level of statistical significance. These data are described in Table 4.2.4.

Table 4.2.4

Frequencies and chi-square p-values for WHO HSS building block by Sigmon typology.

Health systems strengthening building block		Sigmon typology		*p-value*
		SERVICE-LEARNING	All other	
Service delivery	Agreed	31	19	*0.136*
	Did not agree	8	11	
Health workforce	Agreed	31	20	*0.229*
	Did not agree	8	10	
Information	Agreed	8	4	*0.435*
	Did not agree	31	26	
Medical products, vaccines and technologies	Agreed	22	13	*0.281*
	Did not agree	17	17	
Financing	Agreed	27	15	*0.105*
	Did not agree	12	15	
Leadership / governance	Agreed	21	21	*0.173*
	Did not agree	18	9	

4.3 Summary and Conclusion

Visits from HICs to LMICs were significantly more likely to provide services at no cost to the community (p=0.001). Those participants involved in visits with stronger adherence to GSL best practices were significantly more likely to positively view their impact on the local health workforce (p=0.002), and on the quality and use of medical products, vaccines

and technologies (p=0.032). Finally, it was noted that only 12 of the 69 online survey participants (17%) reported that their GSL project reported data to local healthcare agencies. The full data analysis process is described in Section 3.5.4.

This chapter has presented the findings on the online survey. Stronger adherence to GSL best practices was associated with more positive perceptions of impact on the local health workforce, and on the quality and use of medical products, vaccines and technologies. The following chapter reports the findings of interviews (qualitative data).

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Chapter 5: Qualitative data and integration

The content of this chapter has been submitted as part of a manuscript:

Beaman, A., Koirala, B., Sibbritt, D., Newton, P. J., Davidson, P.M. Global service-learning and the impact on host countries: a mixed methods study. *Heliyon.*

5.1 Interviews

As discussed in Chapter 4, analysis of qualitative data was undertaken through thematic analysis of interviews. These semi-structured interviews were important to explore the experiences of participants and the meanings they attribute to them in respect of GSL. In order to gather the range of in-depth perspectives required and achieve data saturation, 12 key informant interviews were conducted. A purposive sampling technique was used; a deliberate selection of participants based on their unique and specific attributes (Etikan, Musa, & Alkassim, 2016). The candidates were selected based on their impact on global health education, research and practice, as well their experience across all global regions. Six were faculty from HICs, two were faculty from LMICs, two were employees of international NGOs in HICs, and two were employees of international NGOs in LMICs. Interviews were conducted until no new information emerged.

The 12 interviews were firstly transcribed verbatim and illustrative quotes of themes are provided below (the full data analysis process is described in Section 3.6.3). Discussion of emerging themes were conducted amongst the supervision team. As part of this process, I also carefully considered my positioning in this study. I recognised that my values and goals of the project had the potential to influence the findings. With this stance, I engaged with the data from a process of reflexivity and used my field notes to interpret statements. I was careful to make sure that the interviews became the voice of participants.

Multiple reading of the transcripts ensured that I remained close to the participants and honoured their views and perspectives.

5.2 Findings

Key informant interviews yielded four main themes: formal opportunities for preparation, processing, learning and understanding were important to generating the desired learning and understanding for all groups of participants; fragmented funding and limited time is a challenge in providing mutually beneficial programs; respect and understanding must underpin the building of relationships and the sharing of resources between partners; and in some situations it may be appropriate to completely reconsider international student visits.

5.2.1 Preparation, processing, learning and understanding

Several key informants emphasised the importance in preparatory activities prior to departure on a GSL trip to ensure an effective educational experience for the students, but also a successful trip for all stakeholders. Additionally, the role of post-trip communication and reflection was a recurring theme.

> The first thing to do is to select the right students, admit the right students into your program who both demonstrate some certain level of cultural competence and humility and they desire to learn, and then they demonstrate those things during their studies before they go, then being able to go through their studies where they can appreciate the rule of the outsider because that's largely what we're doing in global health, whether it's for this visit or in the rest of their career that are basically there as privileged outsiders. F-HIC-W.1

But I think probably the most important thing is to help them-- even have a pictures and videos of where they'll be staying-- when they go out to the field, what the conditions are like-- I think that's where people freak out a lot, where they freak out and then they're useless and become a real burden. F-HIC-W.2

We had a very systematic approach to preparation that played out over the weeks that preceded departure. F-HIC-W.3

Enabling them to learn about what the cultural that they're going into. So they're culturally sensitised to the environment that they're in. So when those pre-deployment sessions occur, that should be mandatory and it doesn't happen all the time. It happens sometimes, but sometimes it doesn't. And then the having to make sure that there's contact with the student when they're there if they have questions or concerns. And then when they come back, there ought to be a post-deployment debriefing presentation so the student can share what he or she learned. NGO-HIC.1

I feel like the students were well prepared. Actually, the NGO really was excited to have the students there and felt that they were very useful and very culturally competent, which was really important to us because … there's a lot of considerations to be taken when you're working with a population that is very poor and low resource. And just from my own observation as a faculty member and leading the project, I felt like the students worked very well with the community and with the NGO. I felt like the relationships were solid. F-HIC-W.5

So what we're talking about going forward is… developing a course on global health nursing and practice that is actually a prep course with some movable pieces for the country you may plan to go to. F-HIC-W.4

5.2.2 Fragmented funding and limited time is a challenge

Several of those interviewed referred to visit durations of around 2 weeks perhaps being enough for the students to receive benefit, but being sub-optimal to making a positive impact on the host community.

I think it went-- it didn't go as well as I would've liked it to be. I think that we possibly needed more time for exploration. And again, this project, the proposal was to only explore. We didn't have to develop an intervention per se... having this exploratory data, it helped us recognise so many needs that are really important, but we have not been able to act on it. There were a lot of barriers. For one thing, the public health program that we were pushing this through could no longer be integrated into the curriculum, so that was a challenge in getting students to travel with the new curriculum. F-HIC-W.5

That's challenging. I think for the students it could be two weeks to have benefit. I think less than two weeks it gets a little-- not really anything, a vacation. But I think ideally it's a month… I don't think we should expect the partners to get much out of it if it's less than a month. I think the longer the better. F-HIC-W.2

> Yeah, I'm not a fan of sending clinical students over for two weeks to work at a clinic in another-- I mean, we don't have medical students but I was a medical student. That's okay, but let's be clear that that's-- you said for mutual benefits. That's the difference. If you're just having somebody coming over, there may be some mutual benefit. But basically it's tourism and the benefit is all to the visitor except that, okay, maybe you've created some relationships. But the mutual benefit-- the mutual part of it is quite limited. F-HIC-W.1

> The trip (to an LMIC) was short. It was seven days or something. F-HIC-W.3

> I mean, we've been asked can we send a student to do clinical with (an international partner located in a Caribbean LMIC nation) and she'd like a student for two or three months. But we have not had the kind of curriculum that allows for that. And so we went for anywhere from 8 to 10 days and the main reason was curricular because all the students were taking other courses and that's how much they could be released for. F-HIC-W.4

Further, key informants from LMICs mentioned the challenges associated with funding, particularly as it related to sending their students to HICs for reciprocal visits.

> Actually, it's not enough for them to know nursing in (my country, an LMIC in Asia). But I think because it's restricted by the budget… so they can only stay for two weeks. And actually, for our students, it's an exchange program. So we only have two students who will come to (a HIC) and they will stay (there) for half a

year to learn more about the nursing situation… so I think this might be better. But this can only cover for two students. F-LMIC.2

I think that is one of the issues that have been constantly raised, because most of the time it's the international-- I mean, the international students visiting us, but due to the limitations in resources of our F students and most of our students, they are just few institutions who can actually visit other countries as well, so it tends to-- there's this tendency for it to be one way F-LMIC.1

5.2.3 Respect, understanding, resources and relationships

Perhaps the most salient theme to emerge from the interviews was the importance of maintaining a respectful relationship with global partners, one that showed true understanding of and appreciation for their circumstances and their efforts in hosting the students.

What needs to be baked into that for the HIC institution (is) to be able to provide benefits to the lower-income institution based on their needs over the long haul. And to understand that when students are there, they're actually draining the resources. So the high-income must, with the low-income country, in my view, calculate what that use is and then make sure that what's going into the low-income institution exceeds what's being taken out of that. I think it's important in these relationships that the starting point is that wherever they end up, the bulk of the benefits accrue to the low-income institution. It's a matter of fundamental and ethical priority-- so there's ethical parity. NGO-HIC.1

Specifically, relationships that cultivated a deep level of understanding, so that HICs can provide the right resources, were repeatedly cited as the goal.

> They (the hosts) were trying to make them feel welcomed, accommodated, and showing them around. And then, they would leave. And they would never hear from the student again and that they didn't see-- they would like to continue relationships. They would like to continue to change the information and learning. But oftentimes, the students just went on with their lives. And they might try to contact them once or twice. But they wouldn't hear back. F-HIC-W.2

> One thing that we also have tried to do is access to open source journals. Just helping people get access. One of the things that somebody asked was, "Could they spend the money on having internet? Supporting internet at their office." … for internet (in the host location) for the year… it's $3,500. That's less than really in (a HIC) to have wireless. So I try to do things like that. Those are the things that really help people get the information they want. That's the huge things that they want access to read articles, to take classes. Those are the kinds of things that are really I think make a big difference in the partnership. And you can communicate with them more, and that's good. F-HIC-W.2

> So simple and the reading glasses we bought, we bought all different strengths and they were from the dollar store … and we brought just under 300 reading glasses. Wow. That was just amazing. F-HIC.W.5

5.2.4 Reconsidering international student visits

In discussing what could be improved about international student visits and service-learning, many key informants cited that a reconsideration and recalibration is required. Moreover, many cited examples of successful projects in which students did not actually visit a foreign community.

> Their (the students) motives are really outstanding. They really want to make a difference, and they want to make a contribution. Usually… they focus on health systems which usually is sickness systems, and we don't focus on the other ministries that are essential to human well-being such as finance and justice. NGO-HIC.1

> So perhaps you have community to community projects taking place and there will be an online relationship built between the community and the community through online and then they email and request our advanced monies raised, for example. And it does enable also community to understand that other community a little bit better, a lot better, albeit from a distance, but it does occur. It's very grassroots, honestly…it's built on personal relationships that develop. NGO-HIC.1

> I could reach out to my-- the partners I have interactions [with, and] say, "What kind of things could students do from here?"…that should be possible. F-HIC-W.4

> So I've definitely had students who worked on projects and didn't ever go. So that has to be continually offered as an option we all know especially with the global impact of getting on planes, sometimes the fantasy is that we need to be on the

ground, but in reality, we do not. It just feels great, and you can build relationships on the ground that you just can't do over site so I recognise that. But sometimes these trips are sort of more for us than the project. And I don't want to dismiss that they can be really critical at certain points in the project. So one is even when people are doing international work making sure that they don't exclude students who can't or don't want to travel because there's a lot we can still to do, there is so much to still learn. F-HIC-W.3

I really do think that global learning could happen anywhere. But when visiting is not feasible, I think we should always continue and promote global learning. And I think that should go for performing literature reviews, looking at the history of the country … so I think there's different ways to learn without actually going to the country, and I think it's all about just education, learning what happens, what is the history of this country, where is this country now, what is their infrastructure and resources, and how can help, and what interventions are necessary… we fundraised it to bring medications with us. So we were able to shop and get over the counter medications, toothbrushes, books for children, a lot of items for people in a community. So I think by donation is another way. Philanthropy is another way to learn. F-HIC-W.5

5.3 Integration

The online survey and key informant interviews were undertaken simultaneously and independently, and each were treated with equal importance within the study design. These

two data sets were synthesised and integrated in the context of a convergent parallel design as shown in Figure 5.3.1.

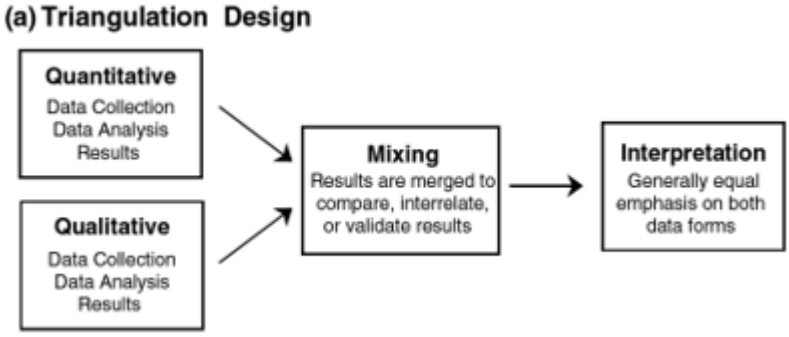

Figure 5.3.1. Triangulation design as described by Creswell et al (2007)

In the mixing and interpretation phases, equal weight was given to both data sets and they were treated according to methodological and conceptual premises. Following analysis, the two data sets were combined looking for similarities and differences. This step was important in developing the guiding principles as it not only elucidated values and beliefs but also adherence with existing recommendations. A summary of the mixed methods integration is presented in Table 5.3.1.

Table 5.3.1

Summary of mixed methods integration

Quantitative	Qualitative	Concordance	Difference	Implications for Guiding Principles and relevance to conceptual framework
Visits from HICs to LMICs significantly more likely to provide services at no cost	Formal opportunities for preparation, processing were important to generating the desired learning and	Best practices are important to achieving desired outcomes Thoughtfully and	No differences as such, only that interviewees emphasised relationship-building as a key to ethical	In order to optimise impact, need greater emphasis on best practices, data and partnerships.

Stronger adherence to GSL best practices was associated with more positive perceptions of impact on the local health workforce, and on the quality and use of medical products, vaccines and technologies 17% of respondents reported that their GSL program shared data with local healthcare agencies. Demonstration of adherence of best practices was not always present emphasising a need to embrace models that are just, equitable and explicit.	understanding for all groups of participants Fragmented funding and limited time is a challenge in providing mutually beneficial programs; Respect and understanding must underpin the building of relationships and the sharing of resources between partners In some situations it may be appropriate to completely reconsider international student visits particularly from a perspective of diversity, equity and inclusion There is increasing evidence of complexity in managing international student experiences.	intentionally considering the impact of GSL, particularly on host systems emphasised which aligned with the conceptual model of HSS	delivery in a way that the survey could not, given its design. The interviews provided greater elucidation of the importance of contribution to communities. Issues of diversity were more pronounced in the interviews	In some situations alternatives should be pursued. Values driven approaches are necessary Feeling that contemporary world circumstances will require a reconsideration of GSL models

The conceptual framework described in Chapter 3 also informed analysis, and is provided again here for reference (see Figure 5.3.2). Importantly, this framework has focused on the importance of considering HSS in truly leveraging the capacity of GSL. Specifically, HSS is the process of identifying and implementing the changes in policy and practice in a country's health system, enabling a positive response to health and health system challenges through improvements in access, coverage, quality, or efficiency (World Health Organization, 2007). This approach explicitly delineates an outcome of GSL and can also drive approaches to programmatic delivery. Pedagogical approaches should not be ad hoc and focused solely on the student but also consider the impact on the health system. The fact that only 17% of respondents reported that their GSL program shared data with local healthcare agencies is perhaps a lost opportunity for advancing health care locally.

The driving conceptual framework for this study describes the influence of antecedent factors and in particular how these issues influence HSS. The results have emphasised the importance of the second pane in the framework (pre-existing conditions) and the centre pane (the implementation of the GSL experience) in optimising outcomes (fourth pane) and impact (final pane). Specifically, the nature of the pre-existing relationship between the faculty and host stakeholder groups – before, during and after the GSL visit takes place – was identified as critical to optimising outcomes for hosts. Moreover, regarding the centre pane of the framework – the implementation of the GSL visit itself – confirmed previous findings on the importance of GSL best practices (Crabtree, 2013; Lattanzi & Pechak, 2011; McKinnon & Fealy, 2011) not only in achieving desired GSL outcomes, but also the perceptions of health system impact. Data collection, analysis and distribution of information as a best practice was particularly noteworthy in its scarcity among online survey respondents. Finally, a stakeholder group that emerged from

this study that was not contained in the framework, government agencies and non-government organisations. The emergence of the power and influence of NGOs in influencing in-country dynamics and service delivery is something to be further considered in future work.

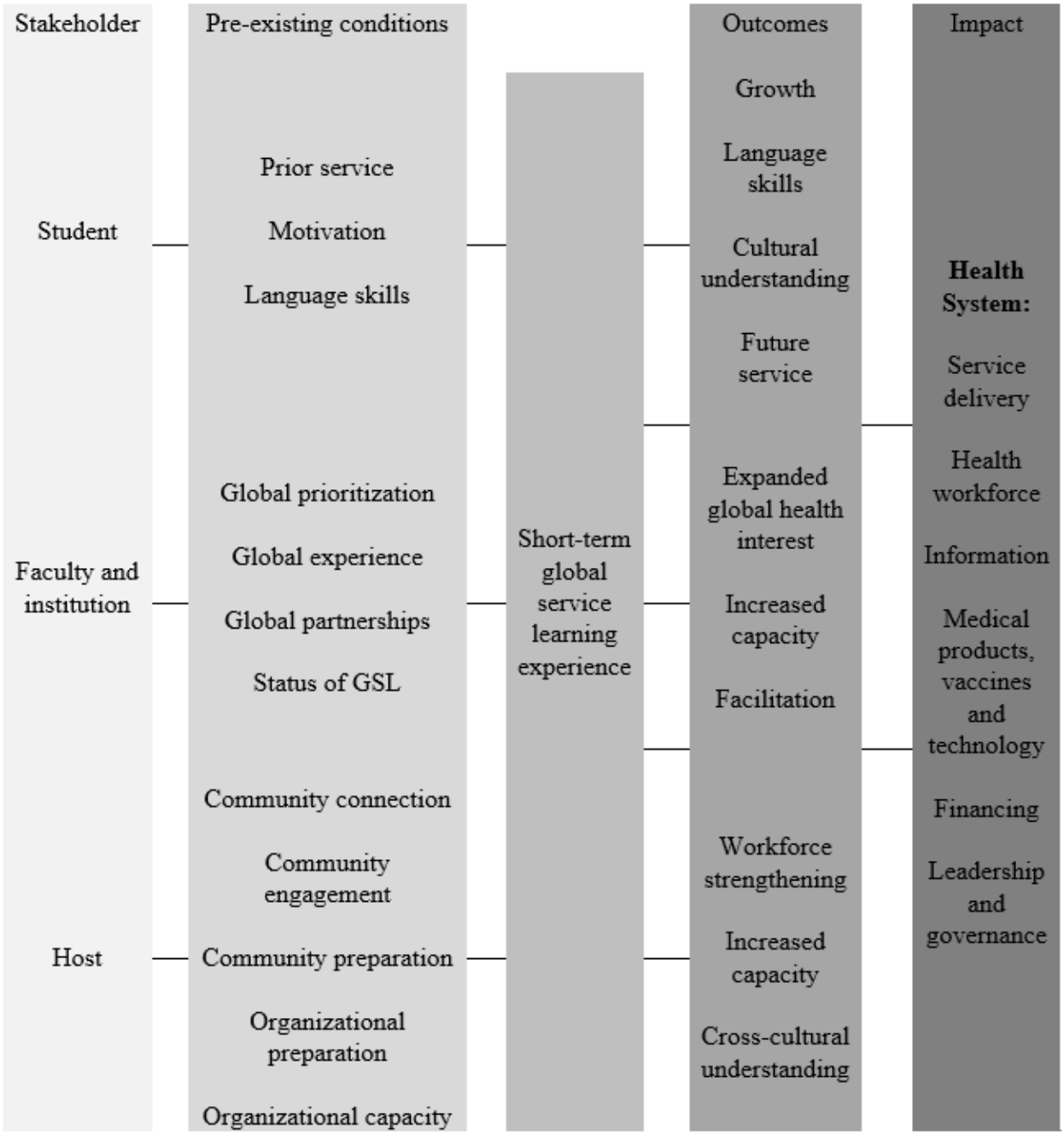

Figure 5.3.2. Conceptual framework adapted from Sherraden, Lough & Bopp, 2013.

5.4 Conclusions

This chapter has reported the findings of the qualitative study arm, and their integration with the quantitative results. In summary, key informant interviews yielded four main themes: formal opportunities for preparation, processing were important to generating the desired learning and understanding for all groups of participants; fragmented funding and limited time is a challenge in providing mutually beneficial programs; respect and understanding must underpin the building of relationships and the sharing of resources between partners; and in some situations it may be appropriate to completely reconsider international student visits. A critically important finding is that the GSL should be considered within the dynamics of social, political and economic factors not solely the aspirations of the student or single academic institution. The recommendation that students focus on other aspects than purely clinical skills was noted and has implications for future development. The integration of these results with the quantitative results has crystallised the themes that will be explored in the next chapter. Moreover, the consideration of these results in the context of the exploration of constructs, such as internationalisation will be considered.

5.5 References

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Chapter 6: A Way Forward for Global Service-Learning

The content of this chapter has been submitted as part of two manuscripts:

Beaman, A., Koirala, B., Sibbritt, D., Newton, P. J., Davidson, P.M. Global service-learning and the impact on host countries: a mixed methods study. *Heliyon.*

Davidson P.M., Lin C.J., Beaman, A., Jackson D., Reynolds N.R., Padula W.F. *Global digital social learning as a strategy to promote engagement and understanding in the COVID-19 era*. Journal of Clinical Nursing.

6.1 Introduction

The previous chapter has presented the mixed method integration of the study findings. In this chapter the study findings are discussed and guiding principles to move the field forward are presented. The strengths and recommendations are provided as well as implications for policy, practice education and research.

Study findings have emphasised the importance of adherence to best practices for GSL congruent which is with previous studies (Crabtree, 2013; Lattanzi & Pechak, 2011; McKinnon & Fealy, 2011). Briefly, these practices advocate for principles of reciprocity, careful planning and cultural competence. The online survey in this study found that stronger adherence to GSL best practices was associated with more positive perceptions of the impact on the local health workforce, and on the quality and use of medical products, vaccines and technologies which contribute to HSS. More broadly, the data from this study suggest that adherence to best practice service-learning recommendations can improve the impact of the visit on the host country health system. This is an affirming position of the role of GSL within a broader context of global health. The key informant interviews supported and elucidated these findings.

This thesis has demonstrated, particularly through the literature review in Chapter 2, that student learning outcomes remain the primary focus in GSL programming, but this unidimensional focus is not necessarily congruent with the key aspirations of this pedagogical approach. Study findings have shown that GSL can generate a range of positive outcomes for students, such as personal growth, language skills and cultural understanding (Sherraden, Bopp & Lough, 2013). Thus, on the basis of findings of the thesis, GSL does play an important role in the education of health professionals, but the impact on host organisations is minimally developed and should be an important focus of future work.

The literature review in this thesis has also unscored the lack of consideration of host organisations and governments in data collection and analysis in GSL programming. The results of the online survey also confirmed observations made not only of GSL, but of HSS also, that there may be an under emphasis on the role that data collection, information and analysis can play in improving the health of communities and nations (Warren et al, 2013). In her work on the consequences of GSL, Crabtree (2013) advocated for the conducting of research not only into students, but also faculty and hosts, and the evidence from this study suggests that this is not happening.

The study demonstrated that benefit to the host can only be generated through long-term relationships with partners, in which the host's needs are well understood and can be addressed by a means outside of and in addition to the student service. An interesting observation of this study was the role that NGOs play in facilitating experiences. To date the partnerships between NGOs and universities has attracted minimal discussion. NGOs play a critical role in not only service delivery but research (Delisle et al, 2005). They not

only contribute to determining the relevance and effectiveness of the research but also knowledge translation and dissemination.

Broadly engaging in partnerships requires thoughtful and intentional activities beyond overarching memoranda of understanding and also resource allocation. An in depth exploration of the internationalisation of education has identified that motivations can be often opaque and need to be clear and transparent (Altbach & Knight, 2007). A number of specific recommendations were made by study participants to achieve equanimity, including online library access, access to online training, reciprocal visits, and fundraising for a range of items. It should be noted too that depending on the nature of the relationship and the power dynamic between the two organisations, hosts may not feel comfortable making requests of visiting institutions. Power relationships can potentially limit advocating for these issues and therefore offering these factors should be considered particularly by HIC countries. This again serves to underscore the importance of relationship-building as a GSL best practice and also clear articulation of principles of interaction.

More strategic engagement with both host country governments and NGOs in strategic and data-driven decision-making may improve public health programming and systems. As one interviewee noted, engagement with host country governments forces a conversation about the true beneficiaries of these visits, and a consideration of the ethical situation, similar to an institutional review board process. Ideally, relationships with host country governments would be maintained in parallel with the relationships to hosts themselves. This is often challenging in the context of geopolitical instability and changing leadership. If a productive visitor-host government relationship is developed, visiting institutions can feel more assured that they are positively contributing to the country's

strategic healthcare objectives. They may also expand the scope of their activities beyond more traditional service delivery models to areas in which evidence suggests it may be more needed, like financing and governance. This would contribute to HSS particularly in LIMC.

Ultimately, the results of this study have emphasised three key areas of opportunity for more ethical and effective GSL delivery: collaborative data collection, analysis and dissemination of data on the impact on all stakeholders; interdependent faculty-host partnerships characterised by constant and ongoing consideration of how the institution can help build the partner's capacity; and host country engagement through government and non-government organisations to help ensure that GSL programs are ethically and effectively meeting the needs of the host country health system. This provides an opportunity to continue to transition towards host communities as equal partners and beneficiaries in the GSL process, through the set of evidence-based guiding principles.

6.2 Guiding Principles

Millions of privileged people travel to LMICs seeking to make a difference through community service and cross-cultural learning (Bandyopadhyay & Patil, 2017). However, there are unintended consequences of these activities (McLennan, 2014). New ways of preparing, engaging, and following-up from these experiences are necessary to make real and sustainable change. Using a set of overarching guiding principles may assist in developing more ethical and effective GSL programs. Values-driven models and guiding principles imply a conscious commitment by GSL partners at all levels to engage with their values, align these to organisational practices, and create a framework that optimises

performance, accountability and contribution. Leveraging a values based framework may be more effective than providing solely administratively driven guidelines.

Core principles of service-learning practice are the factors of achieving reciprocity and meeting community needs. Keith (2005) argues that interdependence is a better fit with the values and practices than reciprocity. Inherently, this requires a value-driven approach and is built upon shared values and clearly outlined approaches. The below guiding principles derived from the study findings, reflect this principle of interdependence, in particular, the need for broader and deeper host organisation and country engagement and data collection. These principles have been shared with key stakeholder groups and future studies should consider further validation of this tool.

Table 6.2.1

Guiding principles for ethical implementation of GSL (adapted from Crabtree, 2011)

Guiding Principle	Detail
Partnership	Both the visiting and host institution should ensure that the partnership is built on a foundation of interdependence, characterised by constant and ongoing consideration of how the institution can help build the partner's capacity.
Preparation	In addition to the well-established practices for student preparation, community partners should be continuously engaged in the lead-up to the visit, so that there is a shared understanding of the purpose and process of the visit, and that personal relationships can be built and maintained.
Impact analysis	All global service-learning programs should collect, analyse and disseminate data on all stakeholders. In particular, data to measure the impact on the host community, and community partners should be engaged in developing an evaluation plan.
Collaboration	Institutions should seek to collaborate with host country governments and NGOs to ensure that the global service-learning program fits within the host country's strategic healthcare framework. Additionally, this can be an avenue to obtaining (either formal or informal) ethical

	approval of any associated research, and ensuring that activities in the country are addressing any skills or knowledge gaps that may exist.
Reflection	Structured reflection exercises for students should take place during and after the visit, with the active involvement of members of faculty and the host community. Following their return, students should be provided with regular opportunities to reunite with each other, faculty and community partners, and to conduct local service.

6.3 Alternatives Models of Global Service-Learning

The interviewees consistently stated that students need not visit to have positive impact, and the results of this study indicate that if a responsibly designed and implemented GSL program is not available to the students, then this is exactly what should happen. Interviewees suggested initiatives including: fundraising for educational resources and/or medical equipment; and facilitation student-to-student and student-to-community relationships as alternative mechanisms for mutual benefit. This could be achieved by formalising online relationships and alternate strategies for communication. Innovative mechanisms, such as blended synchronous learning, require further exploration (Hastie, Hung, Chen & Kinshuk, 2010). These mechanisms have taken on increased importance during the COVID-19 pandemic where it is likely that mechanisms of student exchange will be delayed significantly. Moreover, the use of digital means has the potential to increase equity of access to GSL experiences. Regardless of whether digital or in-person, GSL programs should adhere to a sense of guiding principles. A scorecard developed to pre-emptively assist institutional measurement of GSL program adherence to guiding principles is at Table 6.3.1.

Table 6.3.1

Global service-learning best practice adherence scorecard

Principle	Question	Rubric	Score
Partnership	How long has your institution partnered with the host organisation	Less than 12 months (0 points); 13-36 months (1 point); 37+ months (2 points)	
	Is a memorandum of understanding (MOU) in place with the host organization?	No (0 points); Yes (2 points)	
	Was an in-person assessment of the host site conducted within 12 months of the short-term global service-learning experience	No (0 points); Yes (2 points)	
Preparation	How many students will participate in the short-term global service-learning experience?	11+ (0 points); 6-10 (1 point); 1-5 (2 points)	
	Will a member of faculty accompany them?	No (0 points); Yes (2 points)	
	How many of the following will the visiting students complete prior to departure? Cultural briefing; ethical briefing; safety briefing; literature/media from host region; team-building exercises	0 (0 points); 1-3 (1 point); 4-5 (2 points)	
Impact analysis	Will data on the impact of the global service-learning visit on the host community visit be collected, analysed and disseminated?	No (0 points); Yes (2 points)	
	Will members of the host organization be involved in the planning of this data collection, analysis and dissemination?	No (0 points); Yes (2 points)	
	Will this data be shared in full with at least one government agency or non-government	No (0 points); Yes (2 points)	

	organization within the host country?		
Collaboration	Are the goals of the global service-learning project aligned with the host country's health policy framework?	No or unsure (0 points); Yes (2 points)	
	Have you communicated with a government agency or non-government organization (that is not the host organization) in the host country to ensure that the global service-learning project is addressing an unmet need?	No (0 points); Yes (2 points)	
	Has the global service-learning project (and the associated research) received ethics approval from a university or government agency within the host country?	No (0 points); Yes (2 points)	
Reflection	Will reflection exercises (for example, journals, directed readings, structured discussions) be conducted during the course of the short-term global service-learning experience?	No (0 points); Yes, but members of the host community will not be present (1 point); Yes, and with members of the host community as collaborators (2 points)	
	Will reflection exercises (for example, journals, directed readings, structured discussions) be conducted following the completion of the short-term global service-learning experience?	No (0 points); Yes, but members of the host community will not be present (1 point); Yes, and with members of the host community as collaborators (2 points)	
	Following completion of the visit, will students be provided with regular opportunities to	No (0 points); Yes (2 points)	

	reunite with each other, faculty and community partners, and to conduct local service?		

Interpretation

Score range	Adherence level	Recommendation
0-5	Low	Pursue an alternative to global service-learning
6-14	Marginal	Delay implementation until scores on Partnership, Impact Analysis and Collaboration items can be improved
15-24	Acceptable	Proceed while endeavouring to improve scores on Partnership, Impact Analysis and Collaboration items
25-30	High	Proceed while ensuring adherence level is maintained

In order to provide guidance to those considering the development of a GSL program, a decision tree based on the results of this study and the literature review has been developed and should be considered within the framework of guiding principles outlined in Table 6.2.1.

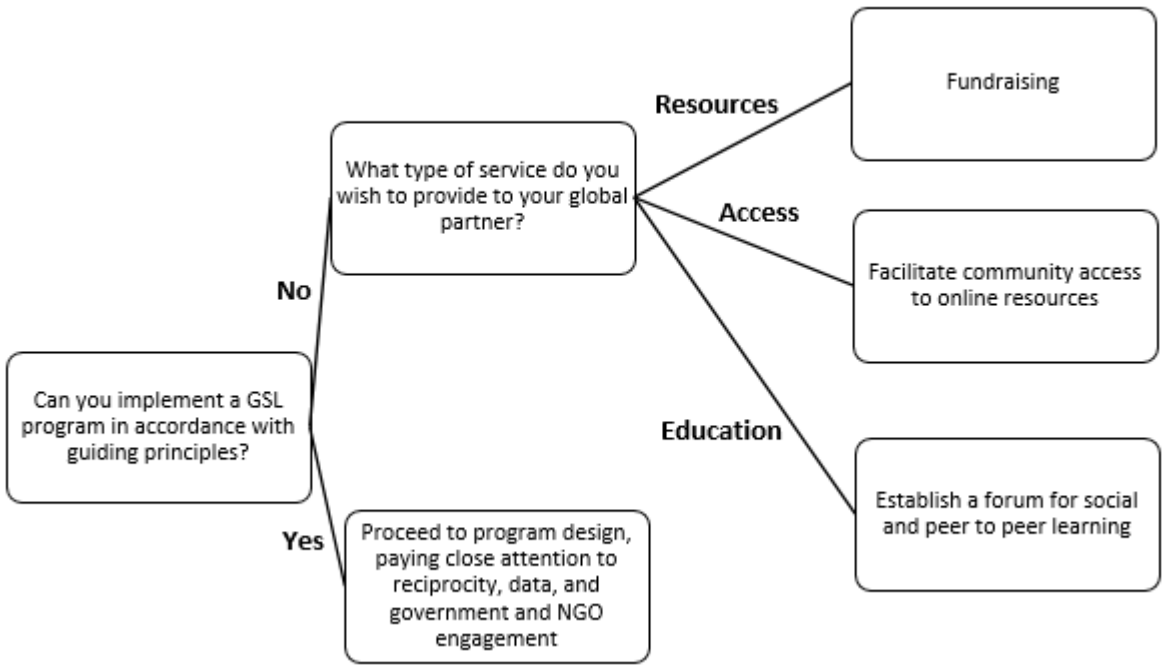

Figure 6.3.1. Decision tree to guide institutional global service-learning decision-making

6.3.1 Fundraising

Resourcing GSL and community based projects is critically important. However, it is important to note that this option could include the submission of grant funding to government foreign aid agencies such as AusAID in Australia and USAID in the United States. Through a mechanism such as this, resources can be provided to communities abroad, and collaborative research can take place on the impact and future use of such resources. This also provides a forum for developing long-term, sustainable partnerships and promoting cross-cultural learning and understanding. As emphasised in the guiding principles, any engagement with global partners should be built on a foundation of interdependence, characterised by constant and ongoing consideration of how the institution can help build the partner's capacity. The issues of fundraising and garnering resources is an important approach in any global health endeavour and therefore should be considered as part of the student and faculty experience.

6.3.2 Access to information and resources

Another recurring theme throughout key informant interviews was the thirst among global partners for access to information through online resources. Indeed the value of access to online resources has been demonstrated in previous studies (Walters, 2004). One pragmatic example here is the granting of an online library access under the terms of the memorandum of understanding between the higher education institution and community partner. The student service, then, could be for the student to demonstrate how to use the university's online library, including access to peer-reviewed literature. Moreover, students and community partners could collaborate on a literature review on topics such as the

demographics of the population they serve, and the latest clinical evidence in their field to guide practice improvements. The benefits of such an approach has been fostered as part of the open access movement. Countries including Germany and India are seeking to move towards models in which the federal government negotiates a contract with publishers, and is then able to make the content available throughout the country, free of charge (Naika & Pathak, 2020). Such an approach, if implemented correctly, also mitigates the risk of exploitation by predatory journals through exorbitant article processing charges. Should the need be identified, representatives from HIC universities could improve access to academic literature through policy and advocacy work on the open access movement in LMIC partner countries.

6.3.3 Education

A final sub-theme relating to GSL alternatives was online peer to peer and social learning. There are a range of existing platforms that offer opportunities for this to take place digitally. Braindate (2020) hosts virtual knowledge exchange events in which content plans are developed in advance of the event with an experience producer who leads the collaboration. Chat features are available before, during and after the event to strengthen relationships, and event data is analysed and reported on to provide insight into the event's performance against established objectives. One key informant proposed the idea of global, peer to peer clinical learning, and Braindate would appear to be an ideal avenue to pursue this (using resources from HIC partners to cover costs). Sessions could be arranged, where students and practitioners from different countries could engage in structured reflection exercises on their clinical experiences. There is significant opportunity in a mechanism like this to promote a shared understanding and knowledge of cultures, and health care

environments and systems. Employing strategies, such as augmented and virtual reality, have the potential to increase cross-cultural understanding and promote shared experiences (Hayes & Johnson, 2019; Recupero, Triberti, Modesti, & Talamo, 2018).

The FutureLearn platform is another means of providing social learning opportunities with global partners although it is not synchronous. On 18 May, 2020, the Johns Hopkins School of Nursing began offering a free, two week course on the FutureLearn platform, *Effective Nursing in Times of Crisis* (Johns Hopkins School of Nursing, 2020). Because it can be opened to the public, the platform offers the opportunity for enrolment and engagement by large numbers of people from any country in the world. The course was designed for nurses and other healthcare professionals working with COVID-19 patients who want to learn more about how to provide effective care with limited resources. Learners were able to interact with experts in the field and share their experiences using the principles of social learning. The course covers the key characteristics of COVID-19 and their effects on vulnerable populations, the role of leadership in responding to public health crises, what palliative care currently looks like, and how we might work towards recovery, looking specifically at what lessons can be learned from humanitarian and crisis settings. This course enables the full benefits of studying online free of charge to the learner. This means that learners get unlimited access to this course, access to any articles, videos, peer reviews and quizzes and a PDF Certificate of Achievement with the Johns Hopkins University logo. Although there are multiple MOOCs available understanding access from LIMC and determining the value of this form of building workforce capacity requires an investigation of process indicators and distribution across countries. The success of the program led to the Bangladesh government moving materials to their MuktoPaath platform as part of their COVID-19 response.

During a two month period 10,130 individuals from 156 countries enrolled in the course. The distribution of learners across Asia, Africa and Latin America are shown in Figures 6.3.3.1, 6.3.3.2 and 6.3.3.3 respectively. This representation of LIMC emphasises the potential utility of digital methods. We were encouraged to see the involvement from high population density countries including India, Indonesia, Pakistan, Brazil, Nigeria and Egypt where COVID-19 spread has been particularly problematic since the beginning of the pandemic. The majority of participants were in the 18 to 25 age range (36%), suggesting that early-career clinicians comprised an important proportion of the overall cohort.

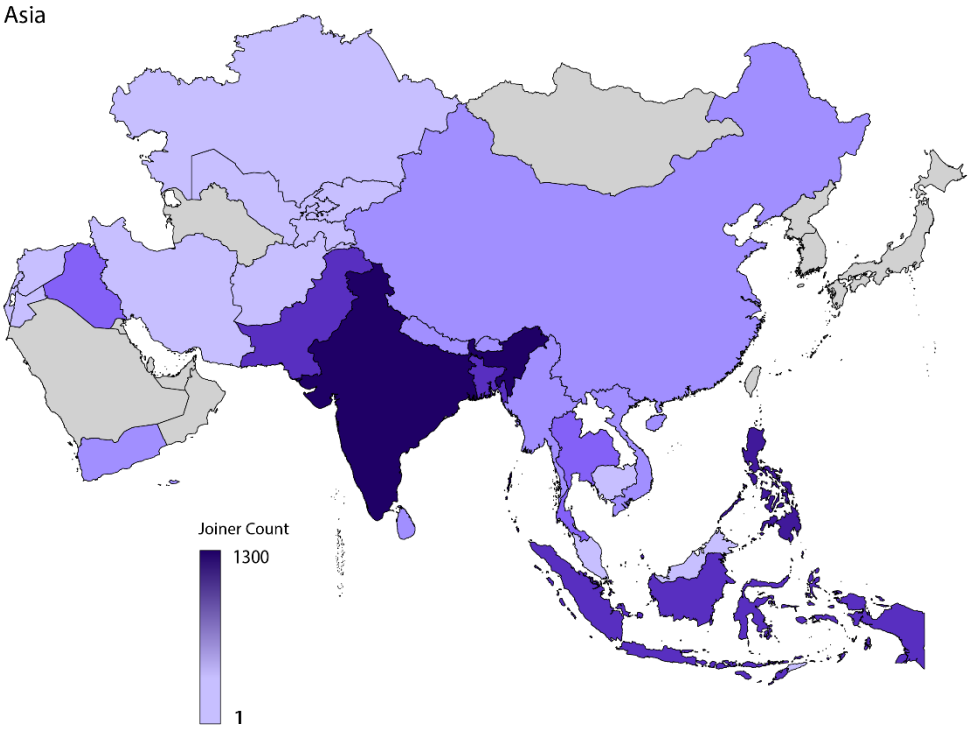

Figure 6.3.3.1. Distribution of FutureLearn joiners across Asia

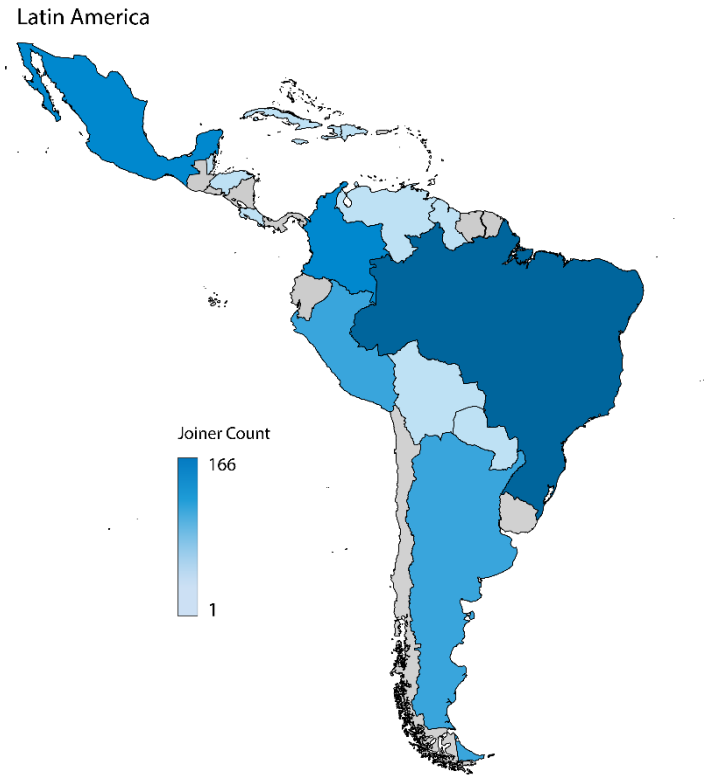

Figure 6.3.3.2. Distribution of FutureLearn joiners across Latin America

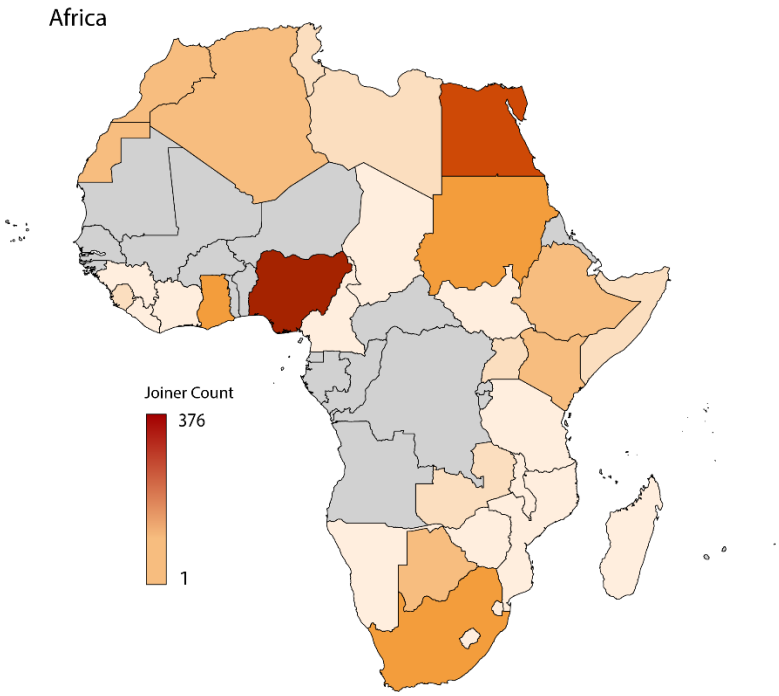

Figure 6.3.3.3. Distribution of FutureLearn joiners across the African continent

The below screenshot from the course, in which participants were asked to reflect on their country's policy response to the COVID-19 pandemic, demonstrates the global reach of the platform.

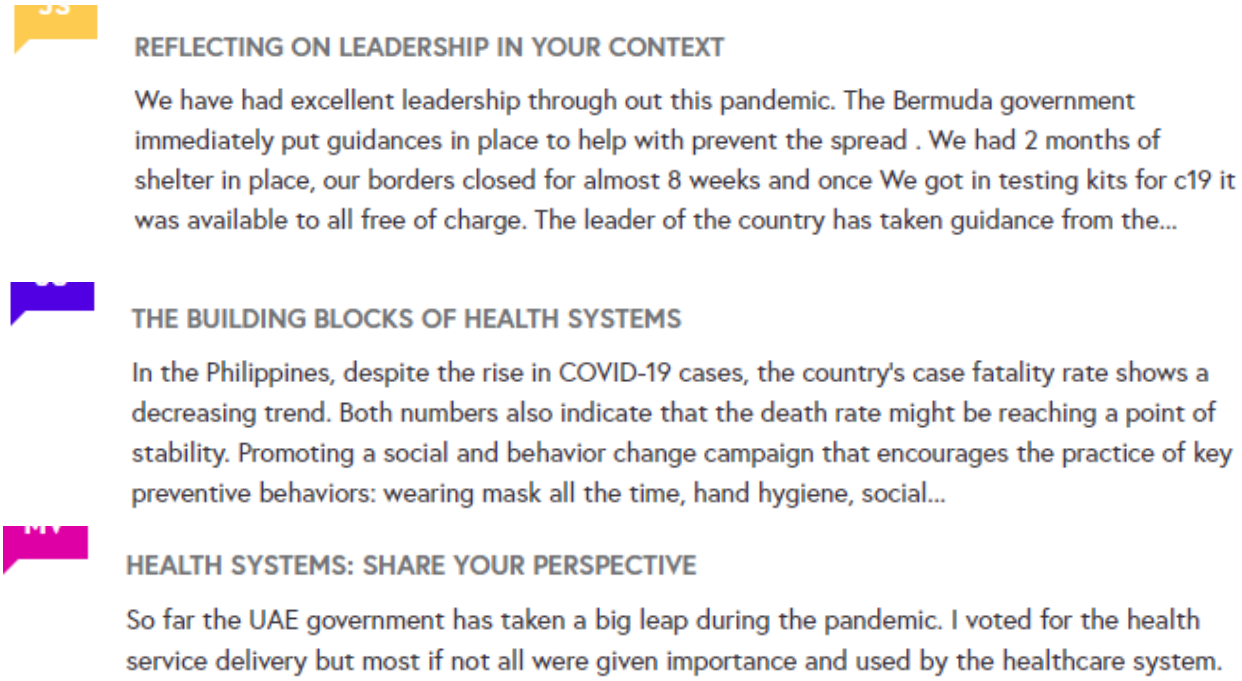

Figure 6.3.3.4. FutureLearn course participant's reflections on their country's policy response to the COVID-19 pandemic

Again the potential of this platform as a forum for social learning among students and clinicians from around the world is evident. Students and representatives from partner organisations could enrol in a course and use it as a way to begin collaborating on subjects identified as a need or interest. Alternatively, higher education institutions could themselves develop online courses that specifically address a need identified by the partner, and then have students and partner organisation representatives take the course together to facilitate social learning.

6.4 Limitations and Strengths

An aim of this study was to gain greater insight into the perspectives of the hosts on the impact of GSL visits. However, only six hosts completed the online survey; limiting generalisability. This may have been due in part to the fact that the survey was only available in English and online. Additionally, the concept of service-learning is more germane in the US lexicon than in other countries and this may have narrowed the inclusion criteria unnecessarily and thus prevented the collection of data that may have been useful within the context of this study.

In spite of these limitations this study has several strengths. Although there is an increased focus on GSL, few studies have examined outcomes for host communities and sponsoring organisations. This study has provided a discussion of theoretical and empirical research from the fields of international volunteerism, international service-learning, and international study abroad, this article proposes a set of guiding principles and presents opportunities for digitalisation which maybe an equalising factor in GSL. Applying the model of addressing issues of HSS has the potential to clearly link GSL to measurable and discernible outcomes that have the potential to leverage benefits not just for students but the host countries as well. In particular this study shows that motivations and outcomes for students, host communities, and universities vary and the need for generating a shared model to approach GSL.

6.5 Implications for Policy, Practice, Education and Research

While the quality and quantity of research on service-learning has increased considerably over recent decades there is a need for an increase in empirically and theoretically driven research. Advancing theoretical models as presented in this research may provide

elucidation of key constructs and fuel reflection for individual motivations to engage in GSL. This study has generated several areas for future research aimed at improving the impact of GSL on host country health systems. First, more practical guidance needs to be developed and communicated to the higher education sector on data collection and host country government engagement should be developed; and second, guidance be developed on the best ways to have students realise the important benefits of GSL programs, and simultaneously provide benefit to a community in need, without a physical presence should be refined. Such approaches also have the benefit of reduced carbon emissions associated with air travel. The increased emphasis on digitalisation and the pivoting of global relationships should be considered in developing GSL (Beaman & Davidson, 2020). Future studies should consider further validation of the principles in the tool outlined in Table 6.2.1.

This study has important implications for higher education institutions. Firstly, they need to be transparent in the agenda of internationalisation and the models of GSL. Secondly, if GSL has the pedagogical value and significance as outlined in the literature, access should be available to all students regardless of financial circumstances and thirdly, the pedagogical approach to curriculum design and evaluation of GSL approaches should be subject to scrutiny and evaluation. Finally, a key recommendation is that metrics and approaches of reciprocity be embedded in program planning, implementation and evaluation.

The challenges of the COVID-19 pandemic have underscored the need to increase global collaboration and dialogue as well as exposing the fragility of many health care systems. Moving forward models that promote the sharing of information are critically important. The COVID-19 pandemic has challenged health systems around the globe and

exposed cracks in many areas particularly in the healthcare supply chain. Sadly, fragmentation, scepticism and competition across nations is evident rather than collaboration (Davidson, Padula, Daly & Jackson, 2020). Moving forward in establishing a post-COVID world and moving to achieve the SDGs (United Nations, 2020), it would appear that fostering the competencies of GSL will be increasingly important. Universities, particularly collaborating with NGOs can be a transformative force in strengthening health systems globally.

6.6 Conclusions

The role of service-learning in higher education is increasingly valued and a tool for developing global citizenship. These programs have the opportunity to link theory and practice, promoted personal growth, while addressing pressing needs within the larger global community. As a consequence, this model of learning is particularly attractive to the health professionals. It is important that there be strong best practice recommendations in order to conduct ethical and respectful programs with appropriate learning outcomes linked to components of successful international service-learning programs. This study has provided support for the ongoing implementation of short-term GSL programs that are responsibly delivered, and that such programs may indeed be having their intended impact. It has also found that project planning, and collaborative data collection and monitoring need to play a more prominent role in GSL in order to achieve objectives. Moreover, if this model of education is considered to be truly transformative it should be available universally. Digital innovation and building on the increasing acceptance of online learning has the potential to promote equity. Finally, it has highlighted that there is a need within the

higher education sector for guidance on alternatives to GSL when a best practice program is not available to students.

6.7 References

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Appendix 1: Literature Search Methodology

Citation Totals
107 Total Citations
86 Remaining after Duplicates Removed

Search Strategies by Database

PubMed
("Community Health Planning"[Mesh] OR "Delivery of Health Care"[Mesh] OR "Health Care Economics and Organizations" [mh] OR "health system" OR "health systems" OR "host community" OR "host communities") AND ("service-learning" OR "service-learning") AND (global [tw] OR international [tw] OR overseas [tw] OR foreign [tw])
Searched 07/08/2017
49 citations

Embase

No.	Query	Results
#3	#1 AND #2	**19**
#2	'health care facility'/exp OR 'health care planning'/exp OR 'health care cost'/exp OR ((health NEAR/3 system*):ti,ab) OR ((host NEAR/3 communit*):ti,ab)	**1,791,937**
#1	(global OR international OR overseas OR foreign) NEAR/4 ('service-learning' OR 'service-learning')	**81**

Searched 07/08/2017

CINAHL

#	Query	Limiters/Expanders	Last Run Via	Results
S3	S1 AND S2	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	9
S2	(global OR international OR overseas OR foreign) N3 service N4 learning	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search	89

			Database - CINAHL Plus with Full Text	
S1	((MH "Health Facility Planning") OR (MH "Health and Welfare Planning") OR (MH "Health Services Needs and Demand+") OR (MH "Health Care Delivery+") OR (MH "Health Care Costs+")) OR ((health N3 system*) OR (host N3 communit*))	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL Plus with Full Text	317,584

Searched 07/08/2017

Web of Science
TOPIC: ((("service-learning" OR "service-learning") NEAR/3 (global OR international OR overseas OR foreign))) AND TOPIC: ((health NEAR/3 (economic* OR planning OR cost* OR system*)) OR (host NEAR/3 communit*))
Timespan: All years. Indexes: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC.
Searched 07/08/2017
5 citations

Scopus
((TITLE-ABS-KEY (global W/3 "service-learning") OR TITLE-ABS-KEY (global W/3 "service-learning") OR TITLE-ABS-KEY (international W/3 "service-learning") OR TITLE-ABS-KEY (international W/3 "service-learning") OR TITLE-ABS-KEY (overseas W/3 "service-learning") OR TITLE-ABS-KEY (overseas W/3 "service-learning") OR TITLE-ABS-KEY (foreign W/3 "service-learning") OR TITLE-ABS-KEY (foreign W/3 "service-learning"))) AND ((TITLE-ABS-KEY (health W/3 economic* OR health W/3 planning OR health W/3 cost* OR health W/3 system*) OR TITLE-ABS-KEY (host W/3 communit*)))
Searched 07/08/2017
20 citations
ERIC

#	Query	Limiters/Expanders	Last Run Via	Results
S3	S1 AND S2	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - ERIC	5
S2	DE "Community Health Services" OR DE "Health Care Costs" OR (health N3 system*) OR (host N3 communit*)	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - ERIC	4,613
S1	(global OR international OR overseas OR foreign) N3 service N4 learning	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - ERIC	142

Appendix 2: Ethics Approval

HREC Approval Granted - ETH18-2957

Research.Ethics@uts.edu.au
Tue 5/28/2019 2:25 AM
To: Patricia Davidson <PatriciaMary.Davidson@uts.edu.au>; Adam Beaman <Adam.Beaman@student.uts.edu.au>; Research Ethics <research.ethics@uts.edu.au>

Dear Applicant

Thank you for your response to the Committee's comments for your project titled, "Health Systems Strengthening in Global Service-learning: A Mixed-methods Investigation". The Committee agreed that this application now meets the requirements of the National Statement on Ethical Conduct in Human Research (2007) and has been approved on that basis. You are therefore authorised to commence activities as outlined in your application.

You are reminded that this letter constitutes ethics approval only. This research project must also be undertaken in accordance with all UTS policies and guidelines including the Research Management Policy (http://www.gsu.uts.edu.au/policies/research-management-policy.html).

Your approval number is UTS HREC REF NO. ETH18-2957.

Approval will be for a period of five (5) years from the date of this correspondence subject to the submission of annual progress reports.

The following standard conditions apply to your approval:
• The researcher is requested to provide a copy of the interview guide for the key informant interviews once developed and prior to interview data collection.

The following standard conditions apply to your approval:

• Your approval number must be included in all participant material and advertisements. Any advertisements on Staff Connect without an approval number will be removed.

• The Principal Investigator will immediately report anything that might warrant review of ethical approval of the project to the Ethics Secretariat (Research.Ethics@uts.edu.au).

• The Principal Investigator will notify the UTS HREC of any event that requires a modification to the protocol or other project documents, and submit any required amendments prior to implementation. Instructions can be found at https://staff.uts.edu.au/topichub/Pages/Researching/Research%20Ethics%20and%20Integrity/Human%20research%20ethics/Post-approval/post-approval.aspx#tab2.

• The Principal Investigator will promptly report adverse events to the Ethics Secretariat (Research.Ethics@uts.edu.au). An adverse event is any event (anticipated or otherwise) that has a negative impact on participants, researchers or the reputation of the University. Adverse events can also include privacy breaches, loss of data and damage to property.

• The Principal Investigator will report to the UTS HREC annually and notify the HREC when the project is completed at all sites. The Principal Investigator will notify the UTS HREC of any plan to extend the

duration of the project past the approval period listed above through the progress report.

• The Principal Investigator will obtain any additional approvals or authorisations as required (e.g. from other ethics committees, collaborating institutions, supporting organisations).

• The Principal Investigator will notify the UTS HREC of his or her inability to continue as Principal Investigator including the name of and contact information for a replacement.

I also refer you to the AVCC guidelines relating to the storage of data, which require that data be kept for a minimum of 5 years after publication of research. However, in NSW, longer retention requirements are required for research on human subjects with potential long-term effects, research with long-term environmental effects, or research considered of national or international significance, importance, or controversy. If the data from this research project falls into one of these categories, contact University Records for advice on long-term retention.

You should consider this your official letter of approval. If you require a hardcopy please contact Research.Ethics@uts.edu.au.

If you have any queries about your ethics approval, or require any amendments to your research in the future, please do not hesitate to contact Research.Ethics@uts.edu.au.

Yours sincerely,

A/Prof Beata Bajorek
Chairperson
UTS Human Research Ethics Committee
C/- Research Office
University of Technology Sydney
E: Research.Ethics@uts.edu.au

REF: E38

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Appendix 3: Survey Invitation Letter

Health Systems Strengthening in Global Service-learning: A Mixed-methods Investigation

Dear ……..

My name is Adam Beaman and I am a student at the University of Technology, Sydney (UTS).

I am conducting research into short-term global service-learning experiences in the health sciences and would welcome your assistance. The research will involve the completion of an online survey and should take no more than forty minutes of your time. I have asked you to participate because of the likelihood that you have been involved in a short-term global service-learning program in the last 12 months.

This research is being undertaken for my studies in global health at the University of Technology, Sydney

If you are interested in participating, I would be glad if you would contact me at Adam.Beaman@student.uts.edu.au.

You are under no obligation to participate in this research.

Yours sincerely,

Adam Beaman

PhD Candidate
UTS Faculty of Health
Adam.Beaman@student.uts.edu.au

NOTE:
This study has been approved by the University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Research Ethics Officer (ph: +61 2 9514 2478

Research.Ethics@uts.edu.au), and quote the UTS HREC reference number. Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

Appendix 4: Online Survey Information

INFORMATION SHEET AND CONSENT FORM FOR ONLINE SURVEYS

ETH18-2957: Health Systems Strengthening in Global Service-learning: A Mixed-methods Investigation

What is the research study about?
The purpose of this research/online survey is to inform the development of a new model for nursing student contributions to global health. It also forms part of Mr. Adam Beaman's PhD requirements at the University of Technology Sydney.

You have been invited to participate because of the likelihood that you have been involved in a short-term global service-learning program.

Who is conducting this research?
My name is Adam Beaman and I am a student at UTS. My supervisor is Prof. Patricia Davidson, Dean, Johns Hopkins School of Nursing, USA, patricia.davidson@uts.edu.au.

Inclusion/Exclusion Criteria
Before you decide to participate in this research study, we need to ensure that it is ok for you to take part. During the last 12 months, have you been in any way involved in the participation in or administration of short-term* global service-learning** experiences for nursing students?

For the purpose of this survey:
*"short-term" is defined as 3 weeks or less in duration
**"global service-learning" is defined as student travel to a foreign country for the primary purpose of experiential learning intended to benefit both the student and the community being visited. Activities such as sponsored research projects, clinical practicums and observerships are not included under this definition

Do I have to take part in this research study?
Participation in this study is voluntary. It is completely up to you whether or not you decide to take part.
If you decide to participate, I will invite you to

- Read the information carefully;
- Complete an online questionnaire.

You can change your mind at any time and stop completing the surveys without consequences.

Are there any risks/inconvenience?

We don't expect this questionnaire to cause any harm or discomfort, however if you experience feelings of distress as a result of participation in this study you can let the researcher know and they will provide you with assistance.

What will happen to information about me?
Access to the online questionnaire is via a generic web link. Submission of the online questionnaire/s is an indication of your consent. By clicking the web link you consent to the research team collecting and using personal information about you for the research project. All this information will be treated confidentially, on encrypted drives and servers. Your information will only be used for the purpose of this research project.

We plan to publish the results in a peer-reviewed, academic journal in the health sciences. No personally identifiable information will be included in any publication.

What if I have concerns or a complaint?
If you have concerns about the research that you think I or my supervisor can help you with, please feel free to contact us at adam.beaman@student.uts.edu.au or patricia.davidson@uts.edu.au

If you would like to talk to someone who is not connected with the research, you may contact the Research Ethics Officer on 02 9514 9772 or Research.ethics@uts.edu.au and quote this number ***ETH18-2957.***

Appendix 5: Online Survey

Start of Block: Confirmatory

Q1.1 Have you ever been involved in the participation in or administration of short-term* global service-learning** experiences for students in the health sciences?

For the purpose of this survey:
*"short-term" is defined as 3 weeks or less in duration
**"global service-learning" is defined as student travel to a foreign country for the primary purpose of experiential learning intended to benefit both the student and the community being visited. Activities such as sponsored research projects, clinical practicums and observerships are not included under this definition

- ○ Yes (1)
- ○ No (if you select this option you will not meet the inclusion criteria for the study, and will be sent to the end of survey) (2)

Skip To: End of Survey If Have you ever been involved in the participation in or administration of short-term global servi... = No (if you select this option you will not meet the inclusion criteria for the study, and will be sent to the end of survey)*

End of Block: Confirmatory

Start of Block: Group

Q2.1 What was your role in the short-term global service-learning experience?

- ○ Student participant (1)
- ○ Faculty or staff involved in arranging and/or delivering the student visit (2)
- ○ Member of the organization that hosted the student participants (3)
- ○ None of these (if you select this option you will not meet the inclusion criteria for the study, and will be sent to the end of survey) (4)

Skip To: End of Survey If What was your role in the short-term global service-learning experience? = None of these (if you select this option you will not meet the inclusion criteria for the study, and will be sent to the end of survey)

End of Block: Group

Start of Block: Faculty and staff

Q3.1 **Section 0 of 7: Demographics**

Q3.2 Please enter your age in years

_____

Q3.3 Please select your gender category

- ○ Male (1)
- ○ Female (2)
- ○ Non-binary (4)

Q3.4 Please select your country of residence

▼ Afghanistan (1) ... Zimbabwe (1357)

Q3.5 Please enter your number of years of professional experience

_____

Page Break

Q3.6 You will now begin the main part of the survey. You will be asked a series of questions about your experience with short-term global service-learning.

For the purpose of this survey, **only refer to the most recent global service-learning experience that you were involved in**. Enter the destination and year of this most recent global-service learning experience below.

Q3.7 Select the country that hosted the short-term global service-learning experience that you were most recently involved in.

▼ Afghanistan (1) ... Zimbabwe (1357)

Q3.8 Enter the year that this short-term global service-learning experience took place.

_____

Page Break

Q3.9 **Section 1 of 7: Pre-departure**

These questions relate to the period before the students departed for their short-term global service-learning experience in **$Q3.7/ChoiceGroup/SelectedChoices.**

Q3.10 At the time of the visit, what was the number of years that your institution had partnered with the host organization to provide short-term global service-learning experiences to students?

- ○ Less than 12 months (1)
- ○ 1-2 years (2)
- ○ 3-5 years (3)
- ○ 6-10 years (4)
- ○ 11+ years (5)
- ○ I don't know (6)

Q3.11 Was an in-person assessment of the host site conducted within 12 months of the short-term global service-learning experience?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Q3.12 What type(s) of preparation were students provided with prior to departure on their short-term global service-learning experience? Please select all that apply.

- [ ] Cultural (1)
- [ ] Ethical (2)
- [ ] Safety (3)
- [ ] Other (4)
- [ ] Literature and/or media from host region (5)
- [ ] Team-building exercises (6)
- [ ] Other (7)

Q3.13 Please enter the extent to which you agree with the following statements regarding global engagement and service at your institution at the time of the short-term global service-learning experience.

	Strongly disagree (8)	Disagree (9)	Neither agree nor disagree (10)	Agree (11)	Strongly agree (12)
Global service and partnership was a high priority at my institution (1)	○	○	○	○	○
A significant proportion of faculty at my institution had international research and teaching experience (2)	○	○	○	○	○
My role in administering global service-learning experiences for students was valued by my institution (4)	○	○	○	○	○
Host communities were equal partners in global service-learning program development and delivery (5)	○	○	○	○	○

Page Break

Q3.14 **Section 2 of 7: During**

These items relate to the period during which the students participated in their short-term global service-learning experience in **$Q3.7/ChoiceGroup/SelectedChoices**

Q3.15 Please select how many students participated in the short-term global service-learning experience

- ○ 1 (1)
- ○ 2-5 (2)
- ○ 6-9 (3)
- ○ 10+ (4)
- ○ I don't know (5)

Q3.16 Were reflection exercises (for example, journals, directed readings, structured discussions) conducted during the course of the short-term global service-learning experience?

- ○ Yes, for student to complete individually or among their peer group (5)
- ○ Yes, with students and faculty (1)
- ○ Yes, with students, faculty, and members of the host community (2)
- ○ No (3)
- ○ I don't know (4)

Q3.17 Were data collected to measure the impact of the experience on the host community?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Display This Question:

If Were data collected to measure the impact of the experience on the host community? = Yes

Q3.18 If you responded "Yes" to the previous question, please select the methods of data collection that were used. Please select all that apply.

- ☐ Interviews (1)
- ☐ Observations (2)
- ☐ Focus groups (3)
- ☐ Other (4)

Page Break

Q3.19 **Section 3 of 7: Post-trip**

These questions relate to the period immediately following the students' completion of the global service-learning experience in **$Q3.7/ChoiceGroup/SelectedChoices**

Q3.20 Were reflection exercises (for example, journals, directed readings, structured discussions) conducted with students following completion of the short-term global service-learning experience?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Q3.21 Following completion of the short-term global service-learning experience, were data analyzed to measure the impact of the visit on the host community?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Q3.22 If data were collected during the trip, were they disseminated through peer-reviewed publications?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Page Break

Q3.23 **Section 4 of 7: Service-learning typology**

This question is designed to gather your opinion on the ultimate beneficiaries of the short-term global service-learning experience in **$Q3.7/ChoiceGroup/SelectedChoices**

Q3.24 Sigmon (1994) provided four typologies of service-learning. Please select the typology below that you feel best describes this short-term global service-learning experience

- ○ Service-LEARNING: Learning goals primary; service outcome secondary (1)
- ○ SERVICE-learning: Service outcomes primary; learning goals secondary (2)
- ○ Service-Learning: Service and learning goals completely separate (3)
- ○ SERVICE-LEARNING: Service and learning goals of equal weight and each enhances the other for all participants (4)

Page Break

Q3.25 **Section 5 of 7: Outcomes**

This question is to determine the extent to which the short-term global service-learning experience in **$Q3.7/ChoiceGroup/SelectedChoices** achieved positive outcomes at your institution

Q3.26 To what extent do you agree with the following statements regarding the global service-learning visit:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
The visit expanded interest in global health issues at my institution (1)	○	○	○	○	○
The visit improved the ability of my institution to respond to global health issues (2)	○	○	○	○	○
The visit facilitated more global research activities and educational offerings at your institution (3)	○	○	○	○	○

Page Break

Q3.27 **Section 6 of 7: Local health system**

These questions are intended to measure your opinions on the impact of the short-term global service-learning experience on **$Q3.7/ChoiceGroup/SelectedChoices**'s health system

Q3.28 To what extent do you agree that the healthcare services provided by students during the short-term global service-learning experience were:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
effective (1)	○	○	○	○	○
safe (2)	○	○	○	○	○
high quality (3)	○	○	○	○	○
addressing an unmet need (4)	○	○	○	○	○

Q3.29 Regarding the work of the students themselves during the short-term global service-learning experience, to what extent do you agree that the students were:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
competent in performing assigned tasks (1)	○	○	○	○	○
responsive to the community's unique needs (2)	○	○	○	○	○
productive (3)	○	○	○	○	○

Q3.30 As part of the short-term global service-learning project, were data collected on behalf of and to be used by the local health system (that is, separate from your own research purposes) on any of the below?

	Yes (1)	No (2)	I don't know (3)
health status of the local population (1)	○	○	○
determinants of health for the local population (2)	○	○	○
the ability of the local health system to meet their needs (3)	○	○	○

Q3.31 Please select which of the following were used as part of the global service-learning experience. If none were used or if you are unsure, please do not select any of the below.

- ☐ Medical products (gloves, sanitizers, bandages, beds, rooms, etc.) (1)
- ☐ Vaccines (2)
- ☐ Medical technologies (prescription medications, electronic monitors, other electronic or battery-powered medical devices) (3)

Display This Question:

If Please select which of the following were used as part of the global service-learning experience.... = Medical products (gloves, sanitizers, bandages, beds, rooms, etc.)

Q3.32 Regarding the medical products used as part of the short-term global service-learning experience, to what extent do you agree that the **medical products** themselves (gloves, sanitizers, bandages, beds, rooms, etc.) were:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
high quality (1)	○	○	○	○	○
safe (2)	○	○	○	○	○
efficacious (3)	○	○	○	○	○
cost-effective (4)	○	○	○	○	○

Display This Question:

If Please select which of the following were used as part of the global service-learning experience.... = Medical products (gloves, sanitizers, bandages, beds, rooms, etc.)

Q3.33 Regarding the medical products used as part of the short-term global service-learning experience, to what extent do you agree that the **use of the medical products** (gloves, sanitizers, bandages, beds, rooms, etc.) was:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
scientifically sound (1)	○	○	○	○	○
cost-effective (2)	○	○	○	○	○

Display This Question:

If Please select which of the following were used as part of the global service-learning experience.... = Vaccines

Q3.34 Regarding the vaccines used as part of the short-term global service-learning experience, to what extent do you agree that the **vaccine itself** was:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
high quality (1)	○	○	○	○	○
safe (2)	○	○	○	○	○
efficacious (3)	○	○	○	○	○
cost-effective (4)	○	○	○	○	○

Display This Question:

If Please select which of the following were used as part of the global service-learning experience.... = Vaccines

Q3.35 Regarding the vaccines used as part of the short-term global service-learning experience, to what extent do you agree that the **use of the vaccine** was:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
scientifically sound (1)	○	○	○	○	○
cost-effective (2)	○	○	○	○	○

Display This Question:

If Please select which of the following were used as part of the global service-learning experience.... = Medical technologies (prescription medications, electronic monitors, other electronic or battery-powered medical devices)

Q3.36 Regarding the medical techonologies used as part of the short-term global service-learning experience, to what extent do you agree that the **medical technologies themselves** (medications, electronic monitors, other electronic or battery-powered medical devices) were:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
high quality (1)	○	○	○	○	○
safe (2)	○	○	○	○	○
efficacious (3)	○	○	○	○	○
cost-effective (4)	○	○	○	○	○

Display This Question:

If Please select which of the following were used as part of the global service-learning experience.... = Medical technologies (prescription medications, electronic monitors, other electronic or battery-powered medical devices)

Q3.37 Regarding the medical technologies used as part of the short-term global service-learning experience, to what extent do you agree that the **use of the medical technology** (medications, electronic monitors, other electronic or battery-powered medical devices) was:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
scientifically sound (1)	○	○	○	○	○
cost-effective (2)	○	○	○	○	○

Page Break

Q3.38 **Section 6 of 7: Local health system (continued)**

These questions are intended to measure your opinions on the impact of the short-term global service-learning experience on **$Q3.7/ChoiceGroup/SelectedChoices's** health system

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Q3.39 Were the services provided by the short-term global service-learning project done so at no cost to the community?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Q3.40 Were officials from local government healthcare agencies engaged to input into or oversee the short-term global service-learning project?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Q3.41 To what extent do you agree with the following statements as they relate to the short-term global service-learning project?

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
the project improved the efficiency of existing local healthcare services (1)	○	○	○	○	○
the project aligned with the host country's strategic policy framework for health (2)	○	○	○	○	○
the project built or strengthened relationships between local healthcare organizations (3)	○	○	○	○	○
the project adhered to local regulations (4)	○	○	○	○	○

Page Break

End of Block: Faculty and staff

Start of Block: Student

Q4.1 **Section 0 of 7: Demographics**

Q4.2 Enter your age in years

_____

Q4.3 Select your gender category

- ○ Male (1)
- ○ Female (2)
- ○ Non-binary (4)

Q4.4 Select your country of residence

▼ Afghanistan (1) ... Zimbabwe (1357)

Page Break

Q4.5 You will now begin the main part of the survey. You will be asked a series of questions about your experience with short-term global service-learning.

For the purpose of this survey, **only refer to the most recent global service-learning experience that you were involved in**. Please enter the destination and year of this most recent global-service learning experience below.

Q4.6 Select the country that hosted the short-term global service-learning experience that you most recently participated in:

▼ Afghanistan (1) ... Zimbabwe (1357)

Q4.7 Enter the year that this short-term global service-learning experience took place:

_____

Page Break

Page Break

Q4.8 **Section 1 of 7: Pre-departure**

These questions relate to the period before you arrived for your short-term global service-learning experience in **$Q4.6/ChoiceGroup/SelectedChoices.**

Q4.9 Was the short-term global service-learning experience part of a required or elective course?

- ○ Required (4)
- ○ Elective (5)
- ○ I don't know (7)

Q4.10 Was the short-term global service-learning experience your first multi-day service-learning or volunteering experience, either locally or globally?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (4)

Q4.11 Which of the below best describes your primary motivation to embark on the short-term global service-learning experience?

- ○ It was a compulsory educational requirement (1)
- ○ It provided an opportunity to travel and to help me grow as a person (2)
- ○ It provided me with an opportunity to help others (3)
- ○ Other (4)

Q4.12 What type(s) of preparation did your institution provide you with prior to departure on your short-term global service-learning experience? You may select more than one item.

- ☐ Cultural (1)
- ☐ Ethical (2)
- ☐ Safety (3)
- ☐ Language (5)
- ☐ Literature and/or media from host region (4)
- ☐ Self-reflection (7)
- ☐ Team-building exercises (8)
- ☐ Other (9)

Q4.13 Was the language spoken at the host site of your short-term global service-learning your native language?

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Was the language spoken at the host site of your short-term global service-learning your native l... = No

Q4.14 What was your level of knowledge of the primary language spoken at the host site?

- None (1)
- Beginner (2)
- Intermediate (3)
- Advanced (4)

Page Break

Q4.15 **Section 2 of 7: During trip**

These items relate to the period during your short-term global service-learning experience in **$Q4.6/ChoiceGroup/SelectedChoices.**

Q4.16 How many students participated in the short-term global service-learning experience?

- ○ 1 (1)
- ○ 2-5 (2)
- ○ 6-9 (3)
- ○ 10+ (4)
- ○ I don't know (5)

Q4.17 Were reflection exercises (for example, journals, directed readings, structured discussions) conducted during the course of the short-term global service-learning experience?

- ○ Yes, individually or with my peers (5)
- ○ Yes, with teaching faculty from my institution (1)
- ○ Yes, with teaching faculty from my institution and members of the host community (2)
- ○ No (3)
- ○ I don't know (4)

Q4.18 Were data collected to measure the impact of the experience on the host community?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Display This Question:

If Were data collected to measure the impact of the experience on the host community? = Yes

Q4.19 If you responded "Yes" to the previous question, please select the methods of data collection that were used. You may select more than one method.

- ☐ Interviews with community members (1)
- ☐ Observation of community members (2)
- ☐ Focus groups with community members (3)
- ☐ Other (4)

Page Break

Q4.20
Section 3 of 7: Post-trip

These questions relate to the period immediately following the completion of your short-term global service-learning experience in **$Q4.6/ChoiceGroup/SelectedChoices.**

Q4.21 Were reflection exercises (for example, journals, directed readings, structured discussions) conducted by teaching faculty following completion of the global service-learning experience?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Page Break

Q4.22 **Part 4 of 7: Service-learning typology**

This question is intended to gather your opinion on the ultimate beneficiaries of the short-term global service-learning experience in **$Q4.6/ChoiceGroup/SelectedChoices.**

Q4.23 Sigmon (1994) provided four typologies of service-learning. Select the typology below that you feel best describes your short-term global service-learning experience:

- ○ Service-LEARNING: Learning goals primary; service outcome secondary (1)
- ○ SERVICE-learning: Service outcomes primary; learning goals secondary (2)
- ○ Service-Learning: Service and learning goals completely separate (3)
- ○ SERVICE-LEARNING: Service and learning goals of equal weight and each enhances the other for all participants (4)

Page Break

Q4.24 Section 5 of 7: Outcomes

This question is to measure your opinion of the extent to which the short-term global service-learning experience in **$Q4.6/ChoiceGroup/SelectedChoices** achieved positive outcomes.

Q4.25 To what extent do you agree with the following statements regarding the outcomes of your short-term global service-learning experience:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
I experienced significant personal growth (1)	○	○	○	○	○
My foreign language skills improved (2)	○	○	○	○	○
My ability to understand the views of people from other countries and cultures improved (3)	○	○	○	○	○
My understanding of the global health environment improved (4)	○	○	○	○	○
I am more likely to seek out volunteer opportunities (5)	○	○	○	○	○
In my future career, I am more likely to seek to work with underserved populations (6)	○	○	○	○	○

Page Break

Q4.26 **Section 6 of 7: Local health system**

These questions are to measure your opinions on the impact of the short-term global service-learning project on **$Q4.6/ChoiceGroup/SelectedChoices**'s health system.

Q4.27 To what extent do you agree that the healthcare services you provided during the short-term global service-learning project were:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
effective (1)	○	○	○	○	○
safe (2)	○	○	○	○	○
high quality (3)	○	○	○	○	○
addressing an unmet need (4)	○	○	○	○	○

Q4.28 Regarding your work during the global short-term service-learning project, to what extent do you agree that the you were:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
competent in performing assigned tasks (1)	○	○	○	○	○
responsive to the community's unique needs (2)	○	○	○	○	○
productive (3)	○	○	○	○	○

Q4.30 Please select which of the following were used as part of the short-term global service-learning project. If none were used or if you are unsure, please do not select any of the below.

- ☐ Medical products (gloves, sanitizers, bandages, beds, rooms, etc.) (1)
- ☐ Vaccines (2)
- ☐ Medical technologies (prescription medications, electronic monitors, other electronic or battery-powered medical devices) (3)

Display This Question:

If Please select which of the following were used as part of the short-term global service-learning... = Medical products (gloves, sanitizers, bandages, beds, rooms, etc.)

Q4.31 Regarding the medical products used as part of the short-term global service-learning project, to what extent do you agree that the **medical products themselves** (gloves, sanitizers, bandages, beds, rooms, etc.) were:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
high quality (1)	○	○	○	○	○
safe (2)	○	○	○	○	○
effective (3)	○	○	○	○	○
cost-effective (4)	○	○	○	○	○

Display This Question:

If Please select which of the following were used as part of the short-term global service-learning... = Medical products (gloves, sanitizers, bandages, beds, rooms, etc.)

Q4.32 Regarding the medical products used as part of the short-term global service-learning project, to what extent do you agree that the **use of the medical products** (gloves, sanitizers, bandages, beds, rooms, etc.) was:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
scientifically sound (1)	○	○	○	○	○
cost-effective (2)	○	○	○	○	○

Page Break

Display This Question:

If Please select which of the following were used as part of the short-term global service-learning... = Vaccines

Q4.33 Regarding the medical products used as part of the short-term global service-learning project, to what extent do you agree that the **vaccine itself** was:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
high quality (1)	○	○	○	○	○
safe (2)	○	○	○	○	○
effective (3)	○	○	○	○	○
cost-effective (4)	○	○	○	○	○

Display This Question:

If Please select which of the following were used as part of the short-term global service-learning... = Vaccines

Q4.34 Regarding the medical products used as part of the short-term global service-learning project, to what extent do you agree that the **use of the vaccine** was:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
scientifically sound (1)	○	○	○	○	○
cost-effective (2)	○	○	○	○	○

Page Break

Display This Question:

If Please select which of the following were used as part of the short-term global service-learning... = Medical technologies (prescription medications, electronic monitors, other electronic or battery-powered medical devices)

Q4.35 Regarding the medical technologies used as part of the short-term global service-learning project, to what extent do you agree that the **medical technologies** themselves (medications, electronic monitors, other electronic or battery-powered medical devices) were:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
high quality (1)	○	○	○	○	○
safe (2)	○	○	○	○	○
effective (3)	○	○	○	○	○
cost-effective (4)	○	○	○	○	○

Display This Question:

If Please select which of the following were used as part of the short-term global service-learning... = Medical technologies (prescription medications, electronic monitors, other electronic or battery-powered medical devices)

Q4.36 Regarding the medical technologies used as part of the short-term global service-learning project, to what extent do you agree that the **use of the medical**

technologies (medications, electronic monitors, other electronic or battery-powered medical devices) was:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
scientifically sound (1)	○	○	○	○	○
cost-effective (2)	○	○	○	○	○

Page Break

Q4.37 Section 6 of 7: Local health system (continued)

These questions are to measure your opinions on the impact of the short-term global service-learning experience on **$Q4.6/ChoiceGroup/SelectedChoices**'s health system.

Q4.38 Were the services provided by the short-term global service-learning project done so at no cost to the community?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Q4.39 Was the short-term global service-learning project overseen by officials from local government healthcare agencies?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Q4.40 To what extent do you agree with the following statements as they relate to the short-term global service-learning project?

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
the project improved the efficiency of existing local healthcare services (1)	○	○	○	○	○
the project built or strengthened relationships between local healthcare organizations (2)	○	○	○	○	○

Page Break

Start of Block: Hosts

Q5.1 **Section 0 of 7: Demographics**

Q5.2 Please enter your age in years

_____

Q5.3 Please select your gender category

- ○ Male (1)
- ○ Female (2)
- ○ Non-binary (4)

Q5.4 Please select your country of residence

▼ Afghanistan (1) ... Zimbabwe (1357)

Q5.5 Please enter your number of years of work experience

_____

Page Break

Q5.6 You will now begin the main part of the survey. You will be asked a series of questions about your experience hosting students from other countries.

For the purpose of this survey, **please only refer to the most recent student visit that you hosted**. Please enter the country that the visiting students were from, and the year that this visit took place, below.

Q5.7 Select the country that the visiting students were from

▼ Afghanistan (1) ... Zimbabwe (1357)

Q5.8 Enter the year that this visit took place

_____

Page Break

Q5.9 **Section 1 of 7: Pre-departure**

These questions relate to the period before the students
from **$Q5.7/ChoiceGroup/SelectedChoices** arrived for their visit.

Q5.10 What is the number of years that your organization had partnered with the students' institution prior to the student visit?

- ○ Less than 1 year (1)
- ○ 1-2 years (2)
- ○ 3-5 years (3)
- ○ 6-10 years (4)
- ○ 11+ years (5)
- ○ I don't know (6)

Q5.11 Was an in-person visit made by representatives from the students' institution no more than 12 months prior to the student visit?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Q5.12 Were you or someone from your organization asked to provide information on any of the below topics that would be provided to students prior to their arrival? Select all that apply.

- [ ] Cultural (1)
- [ ] Ethical (2)
- [ ] Safety (3)
- [ ] Other (4)

Q5.13 Indicate the extent to which you agree with the following statements regarding your organization and your community

	Strongly disagree (8)	Disagree (9)	Neither agree nor disagree (10)	Agree (11)	Strongly agree (12)
My organization has a strong connection with the local community (4)	○	○	○	○	○
Members of the local community had a role in designing the student visitors' program of work (5)	○	○	○	○	○
Members of my community felt prepared for the student visitors (1)	○	○	○	○	○
My organization had adequate staff to manage the student visitors (2)	○	○	○	○	○
Staff at my organization had an understanding of the strengths and weaknesses of the student visitors (3)	○	○	○	○	○

Page Break

Q5.14 **Section 2 of 7: During**

These items relate to the period during which the students from **$Q5.7/ChoiceGroup/SelectedChoices** visited.

Q5.15 How many students visited?

- ○ 1 (1)
- ○ 2-5 (2)
- ○ 6-9 (3)
- ○ 10+ (4)
- ○ I don't know (5)

Q5.16 Were members of your organization involved in structured discussions with students that allowed the students to reflect on their experience?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Q5.17 Did visiting faculty and/or students collect data from your community to measure the impact of the service-learning experience on the host community?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Display This Question:

If Did visiting faculty and/or students collect data from your community to measure the impact of th... = Yes

Q5.18 If you responded "Yes" to the previous question, please select the methods of data collection that were used. You may select more than one method.

- ☐ Interviews with members of the community (1)
- ☐ Observations of members of the community (2)
- ☐ Focus groups with members of the community (3)
- ☐ Other (4)

Page Break

Q5.19 **Section 3 of 7: Post-trip**

These questions relate to the period immediately following the students' completion of their visit from **$Q5.7/ChoiceGroup/SelectedChoices**.

Q5.20 Did another visit by students from the same institution to your community take place within 12 months of the visit's completion?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Q5.21 Has anyone from your organization ever visited the visiting students' institution?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Page Break

Q5.22 **Part 4 of 7: Service-learning typology**

This question is to measure your opinion on the ultimate beneficiaries of the student visit from **$Q5.7/ChoiceGroup/SelectedChoices**.

Q5.23 Please select the item below that you feel best describes the student visit. The term "service" refers to the activities the students conducted in order to serve the local community. The term "learning" refers to the educational outcomes for the visiting students.

- ○ Service-LEARNING: Learning goals primary; service outcome secondary (1)
- ○ SERVICE-learning: Service outcomes primary; learning goals secondary (2)
- ○ Service-Learning: Service and learning goals completely separate (3)
- ○ SERVICE-LEARNING: Service and learning goals of equal weight and each enhances the other for all participants (4)

Page Break

Q5.24 **Section 5 of 7: Outcomes**

This question is to measure your opinion of the extent to which the student visit from **$Q5.7/ChoiceGroup/SelectedChoices** generated positive outcomes.

Q5.25 To what extent do you agree with the following statements regarding the student visit:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
The visit strengthened our local healthcare workforce (1)	○	○	○	○	○
The visit improved the capacity of our local health system to meet the needs of the local population (2)	○	○	○	○	○
The visit improved our local communities understanding of the culture of people from the visiting country (3)	○	○	○	○	○

Page Break

Q5.26 **Section 6 of 7: Local health system**

These questions are to measure your opinions on the impact of the student visit from **$Q5.7/ChoiceGroup/SelectedChoices** on your country's health system.

Q5.27 To what extent do you agree that the healthcare services provided by students during the global service-learning experience were:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
effective (1)	○	○	○	○	○
safe (2)	○	○	○	○	○
high quality (3)	○	○	○	○	○
addressing an unmet need (4)	○	○	○	○	○

Q5.28 Regarding the work of the students themselves during the project, to what extent do you agree that the students were:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
competent in performing assigned tasks (1)	○	○	○	○	○
responsive to the community's unique needs (2)	○	○	○	○	○
productive (3)	○	○	○	○	○

Q5.29 As part of the student project, were data collected for use by the your local health system on any of the below?

	Yes (1)	No (2)	I don't know (3)
health status of the local population (1)	○	○	○
determinants of health for the local population (2)	○	○	○
the ability of the local health system to meet their needs (3)	○	○	○

Q5.30 Please select which of the following were used as part of the student project. If none were used or if you are unsure, please do not select any of the below.

- ☐ Medical products (gloves, sanitizers, bandages, beds, rooms, etc.) (1)
- ☐ Vaccines (2)
- ☐ Medical technologies (3)

Display This Question:

If Please select which of the following were used as part of the student project. If none were used... = Medical products (gloves, sanitizers, bandages, beds, rooms, etc.)

Q5.31 Regarding the medical products used as part of the student project, to what extent do you agree that the **medical products themselves** (gloves, sanitizers, bandages, beds, rooms, etc.) were:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
high quality (1)	○	○	○	○	○
safe (2)	○	○	○	○	○
effective (3)	○	○	○	○	○
cost-effective (4)	○	○	○	○	○

Display This Question:

If Please select which of the following were used as part of the student project. If none were used... = Medical products (gloves, sanitizers, bandages, beds, rooms, etc.)

Q5.32 Regarding the medical products used as part of the student project, to what extent do you agree that the **use of the medical products** (gloves, sanitizers, bandages, beds, rooms, etc.) was:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
scientifically sound (1)	○	○	○	○	○
cost-effective (2)	○	○	○	○	○

Page Break

Display This Question:

If Please select which of the following were used as part of the student project. If none were used... = Vaccines

Q5.33 Regarding the vaccines used as part of the student project, to what extent do you agree that the **vaccine itself** was:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
high quality (1)	○	○	○	○	○
safe (2)	○	○	○	○	○
effective (3)	○	○	○	○	○
cost-effective (4)	○	○	○	○	○

Display This Question:

If Please select which of the following were used as part of the student project. If none were used... = Vaccines

Q5.34 Regarding the vaccines used as part of the student project, to what extent do you agree that the **use of the vaccine** was:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
scientifically sound (1)	○	○	○	○	○
cost-effective (2)	○	○	○	○	○

Page Break

Display This Question:

If Please select which of the following were used as part of the student project. If none were used... = Medical technologies

Q5.35 Regarding the medical technologies used as part of the student project, to what extent do you agree that the **medical technologies themselves** (prescription medications, electronic monitors, other electronic or battery-powered medical devices) were:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
high quality (1)	○	○	○	○	○
safe (2)	○	○	○	○	○
effective (3)	○	○	○	○	○
cost-effective (4)	○	○	○	○	○

Display This Question:

If Please select which of the following were used as part of the student project. If none were used... = Medical technologies

Q5.36 Regarding the medical technologies used as part of the student project, to what extent do you agree that the **use of the medical technology** (medications, electronic monitors, other electronic or battery-powered medical devices) was:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
scientifically sound (1)	○	○	○	○	○
cost-effective (2)	○	○	○	○	○

Page Break

Q248 **Section 6 of 7: Local health system (continued)**

These questions are to measure your opinions on the impact of the student visit from **$Q5.7/ChoiceGroup/SelectedChoices** on your country's health system.

Q5.38 Was the student project overseen by officials from local government healthcare agencies?

- ○ Yes (1)
- ○ No (2)
- ○ I don't know (3)

Q5.39 To what extent do you agree with the following statements as they relate to the student project?

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
the project improved the effectiveness of our existing local healthcare services (1)	○	○	○	○	○
the project built or strengthened relationships between local healthcare organizations (3)	○	○	○	○	○
the project adhered to our local regulations (4)	○	○	○	○	○

Page Break

Appendix 6: Semi-Structured Interview Guide

Introduction

- I am interested in hearing about your experiences in delivering global health experiences for higher education students in which they travel to another country.

Consent

- Seek participant's consent to record the interview

Background

- Invite the interviewee to talk about his/her experience in delivering global health experiences for higher education students in which they travel to another country.

Preparation of students

- What have been the most effective activities to prepare students, faculty and hosts for the visit?

Length of visit

- How long did students on the experiences you oversaw stay in the foreign country?
- Was this long enough?
- Is there a minimum period of time for the hosts to have benefit along with the students?

Engaging government

- Was there any engagement between the visiting student's institution and local governments?

Impact of visit

- How did the visit impact students, faculty and hosts?
- If appropriate, probe about host organizations and communities. Was the overall experience positive or negative for them? Why?
- If appropriate, probe about impact on local health system

Alternatives to student visits

- If students are not able to visit a foreign community in-person, are there other ways that they may be able to positively contribute to the health system?

Appendix 7: World Bank Country and Lending Groups

GroupName	CountryName
High income	Aruba
High income	Andorra
High income	United Arab Emirates
High income	Antigua and Barbuda
High income	Australia
High income	Austria
High income	Belgium
High income	Bahrain
High income	Bahamas, The
High income	Bermuda
High income	Barbados
High income	Brunei Darussalam
High income	Canada
High income	Switzerland
High income	Channel Islands
High income	Chile
High income	Curacao
High income	Cayman Islands
High income	Cyprus
High income	Czech Republic
High income	Germany
High income	Denmark
High income	Spain
High income	Estonia
High income	Finland
High income	France
High income	Faroe Islands
High income	United Kingdom
High income	Gibraltar
High income	Greece
High income	Greenland
High income	Guam
High income	Hong Kong SAR, China
High income	Croatia
High income	Hungary
High income	Isle of Man
High income	Ireland
High income	Iceland

High income	Israel
High income	Italy
High income	Japan
High income	St. Kitts and Nevis
High income	Korea, Rep.
High income	Kuwait
High income	Liechtenstein
High income	Lithuania
High income	Luxembourg
High income	Latvia
High income	Macao SAR, China
High income	St. Martin (French part)
High income	Monaco
High income	Malta
High income	Northern Mariana Islands
High income	New Caledonia
High income	Netherlands
High income	Norway
High income	New Zealand
High income	Oman
High income	Panama
High income	Palau
High income	Poland
High income	Puerto Rico
High income	Portugal
High income	French Polynesia
High income	Qatar
High income	Saudi Arabia
High income	Singapore
High income	San Marino
High income	Slovak Republic
High income	Slovenia
High income	Sweden
High income	Sint Maarten (Dutch part)
High income	Seychelles
High income	Turks and Caicos Islands
High income	Trinidad and Tobago
High income	Taiwan, China
High income	Uruguay
High income	United States
High income	British Virgin Islands
High income	Virgin Islands (U.S.)
Low & middle income	Afghanistan
Low & middle income	Angola
Low & middle income	Albania
Low & middle income	Argentina
Low & middle income	Armenia

Low & middle income	American Samoa
Low & middle income	Azerbaijan
Low & middle income	Burundi
Low & middle income	Benin
Low & middle income	Burkina Faso
Low & middle income	Bangladesh
Low & middle income	Bulgaria
Low & middle income	Bosnia and Herzegovina
Low & middle income	Belarus
Low & middle income	Belize
Low & middle income	Bolivia
Low & middle income	Brazil
Low & middle income	Bhutan
Low & middle income	Botswana
Low & middle income	Central African Republic
Low & middle income	China
Low & middle income	Cote d'Ivoire
Low & middle income	Cameroon
Low & middle income	Congo, Dem. Rep.
Low & middle income	Congo, Rep.
Low & middle income	Colombia
Low & middle income	Comoros
Low & middle income	Cabo Verde
Low & middle income	Costa Rica
Low & middle income	Cuba
Low & middle income	Djibouti
Low & middle income	Dominica
Low & middle income	Dominican Republic
Low & middle income	Algeria
Low & middle income	Ecuador
Low & middle income	Egypt, Arab Rep.
Low & middle income	Eritrea
Low & middle income	Ethiopia
Low & middle income	Fiji
Low & middle income	Micronesia, Fed. Sts.
Low & middle income	Gabon
Low & middle income	Georgia
Low & middle income	Ghana
Low & middle income	Guinea
Low & middle income	Gambia, The
Low & middle income	Guinea-Bissau
Low & middle income	Equatorial Guinea
Low & middle income	Grenada
Low & middle income	Guatemala
Low & middle income	Guyana
Low & middle income	Honduras
Low & middle income	Haiti

Low & middle income	Indonesia
Low & middle income	India
Low & middle income	Iran, Islamic Rep.
Low & middle income	Iraq
Low & middle income	Jamaica
Low & middle income	Jordan
Low & middle income	Kazakhstan
Low & middle income	Kenya
Low & middle income	Kyrgyz Republic
Low & middle income	Cambodia
Low & middle income	Kiribati
Low & middle income	Lao PDR
Low & middle income	Lebanon
Low & middle income	Liberia
Low & middle income	Libya
Low & middle income	St. Lucia
Low & middle income	Sri Lanka
Low & middle income	Lesotho
Low & middle income	Morocco
Low & middle income	Moldova
Low & middle income	Madagascar
Low & middle income	Maldives
Low & middle income	Mexico
Low & middle income	Marshall Islands
Low & middle income	North Macedonia
Low & middle income	Mali
Low & middle income	Myanmar
Low & middle income	Montenegro
Low & middle income	Mongolia
Low & middle income	Mozambique
Low & middle income	Mauritania
Low & middle income	Mauritius
Low & middle income	Malawi
Low & middle income	Malaysia
Low & middle income	Namibia
Low & middle income	Niger
Low & middle income	Nigeria
Low & middle income	Nicaragua
Low & middle income	Nepal
Low & middle income	Nauru
Low & middle income	Pakistan
Low & middle income	Peru
Low & middle income	Philippines
Low & middle income	Papua New Guinea
Low & middle income	Korea, Dem. People's Rep.
Low & middle income	Paraguay
Low & middle income	West Bank and Gaza

Low & middle income	Romania
Low & middle income	Russian Federation
Low & middle income	Rwanda
Low & middle income	Sudan
Low & middle income	Senegal
Low & middle income	Solomon Islands
Low & middle income	Sierra Leone
Low & middle income	El Salvador
Low & middle income	Somalia
Low & middle income	Serbia
Low & middle income	South Sudan
Low & middle income	Sao Tome and Principe
Low & middle income	Suriname
Low & middle income	Eswatini
Low & middle income	Syrian Arab Republic
Low & middle income	Chad
Low & middle income	Togo
Low & middle income	Thailand
Low & middle income	Tajikistan
Low & middle income	Turkmenistan
Low & middle income	Timor-Leste
Low & middle income	Tonga
Low & middle income	Tunisia
Low & middle income	Turkey
Low & middle income	Tuvalu
Low & middle income	Tanzania
Low & middle income	Uganda
Low & middle income	Ukraine
Low & middle income	Uzbekistan
Low & middle income	St. Vincent and the Grenadines
Low & middle income	Venezuela, RB
Low & middle income	Vietnam
Low & middle income	Vanuatu
Low & middle income	Samoa
Low & middle income	Kosovo
Low & middle income	Yemen, Rep.
Low & middle income	South Africa
Low & middle income	Zambia
Low & middle income	Zimbabwe

Appendix 8: Manuscripts Published or Under Review as Part of the Thesis (full manuscripts included in PDF version of thesis)

Beaman, A., Asano, R., Sibbritt, D., Newton, P. J., & Davidson, P. M. (2018). Global service learning and health systems strengthening: An integrative literature review. *Heliyon, 4*(8). Status = published (citations = 5)

Beaman, A. & Davidson, P. M. (2020.) Service learning and COVID-19 – what the future might look like? [Editorial] *Journal of Clinical Nursing*. Status = published (citations = 1)

Beaman, A., Koirala, B., Sibbritt, D., Newton, P. J., Davidson, P.M. Global service-learning and the impact on host countries: a mixed methods study. *Heliyon.* Status = submitted on 7 Aug 2020, currently under review.

Beaman, A., Newton, P. J., Reynolds, N., Rowthorn, V., Sibbritt, D., Davidson, P.M. The internationalization of higher education: origins and charting a future for mutual benefit in a new world order. *Journal of Studies in International Education*. Status = submitted on 17 Jun 2020, currently under review.

Davidson P.M., Lin C.J., **Beaman, A.,** Jackson D., Reynolds N.R., Padula W.F. *Global digital social learning as a strategy to promote engagement and understanding in the COVID-19 era*. Journal of Clinical Nursing. Status = submitted on 23 Aug 2020.

Heliyon

ELSEVIER

Received:
30 May 2018
Revised:
30 July 2018
Accepted:
30 July 2018

Cite as: Adam Beaman, Reiko Asano, David Sibbritt, Phillip J. Newton, Patricia M. Davidson. Global service learning and health systems strengthening: An integrative literature review. Heliyon 4 (2018) e00713. doi: 10.1016/j.heliyon.2018.e00713

Review Article

Global service learning and health systems strengthening: An integrative literature review

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Abstract

Introduction: The sustainability of many global interventions, in the absence of adequate local financial and human resources to sustain them in the long term, is questioned. In response, there has been a shift in focus among global health actors towards the strengthening of local health systems via global service learning to effectively, efficiently and sustainably deliver healthcare and build capacity. There has been considerable research examining the benefits of global service learning experiences for students, but limited research has been conducted to determine the impact that health sciences global service learning experiences are having on the host country health systems.

Main text: An integrative review of the literature was conducted to examine the linkages between global service-learning and health systems strengthening. A comprehensive search of international literature from 2005 to 2017 in PubMed, CINAHL, Embase, ERIC, Scopus and Web of Science databases was conducted. The search was limited to peer-reviewed articles published in English language. Thematic analysis revealed three key themes: a dominant service-LEARNING

https://doi.org/10.1016/j.heliyon.2018.e00713

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Received: 18 May 2020 | Accepted: 28 May 2020
DOI: 10.1111/jocn.15369

EDITORIAL

Journal of Clinical Nursing WILEY

Global service-learning and COVID-19—What the future might look like?

The novel coronavirus disease (COVID-19) pandemic has disrupted travel and caused marked death and disability globally. The economic impact of this change has forced universities to operate differently in how they conduct their operations and deliver education to students (Jackson et al., 2020). Leveraging digital modalities has been crucial in achieving business continuity.

Service-learning is an experiential approach to learning which, when implemented effectively, provides benefit to both the community—which is receiving a needed service—and students, who are delivering the service as part of their education. There is growing demand among nursing students for global service-learning programmes fuelled by the internationalisation strategies of universities. However, while the students invariably enjoy an enriching global service-learning experience, the net impact of these programmes on the host communities or the broader educational experience is less certain (Beaman, Asano, Sibbritt, Newton, & Davidson, 2018).

Much research has been done on the topic of responsible implementation of global service-learning experiences. Universities in the Global North have a responsibility to deliver experiences that avoid the pitfalls of "voluntourism" and provide as much benefit as possible to the host community. Anecdotally many universities continue experts have looked to countries experienced in infectious diseases. Rwanda has an aggressive COVID-19 strategy and has been successful in reducing transmission with public health strategies (Davis, 2020).

The COVID-19 pandemic has evoked many new existential questions in respect of global governance and healthcare relationships (Davidson, Padula, Daly, & Jackson, 2020). Supporting nurses and other health professionals to work in this new world order is of critical importance and perhaps this abrupt halt in travel will drive us to think of more inclusive and equitable strategies to achieve the goals of internationalisation and global collaboration. Research and development in the private sector on the use of virtual and augmented reality (VR/AR) technology in education is already well advanced (Ferguson, Davidson, Scott, Jackson, & Hickman, 2015). The benefits to students interested in global service-learning here are obvious; allow technology to simulate an experience without using the resources to travel, and potentially having an adverse impact on the host community. Moreover, the resources of private sector VR/AR companies may be able to be leveraged to compensate host communities for their contribution to the development of virtual educational material.

Heliyon

Global service-learning and the impact on host countries: a mixed methods study

--Manuscript Draft--

Manuscript Number:	HELIYON-D-20-05729
Article Type:	Original Research Article
Section/Category:	Education
Keywords:	internationalization; service-learning; health systems; global health; health workforce
Manuscript Classifications:	130.100: Public Health; 130.510.130: Health Promotion; 140.140.120: Evaluation in Education; 140.140.140: Health Education; 140.160.110.120: Health Services
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	Binu Koirala
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	Patricia Davidson
Abstract:	This study sought to determine how global service-learning programs are: being implemented and perceived; adhering to best practices; and leveraging health systems strengthening principles. A total of 69 online survey responses and twelve in-depth key informant interviews were completed. Analysis of the online survey revealed that stronger adherence to global service-learning best practices was associated with more positive perceptions of impact on local health workforce, and on quality and use of medical products, vaccines and technologies. Key informant interviews yielded four themes: preparation, processing, learning and understanding; funding and time is a challenge; respect, understanding, resources and relationships; and reconsidering international student visits. Data collection needs to play a more prominent role in global service-learning, and alternatives should be explored.

Journal of Studies in International Education

The internationalization of higher education: origins and charting a future for mutual benefit in a new world order

Journal:	*Journal of Studies in International Education*
Manuscript ID	JSIE-20-0178
Manuscript Type:	Review
Keywords:	Internationalization of academic profession < Topic keywords, Internationalization of research < Topic keywords, Internationalization of the disciplines < Topic keywords, Internationalization of the student experience < Topic keywords, International service learning < Topic keywords
Abstract:	Universities have always been a beacon for information exchange and bridging of ideas. Over recent decades the value and prominence of post-secondary education has increased, leading to an increased demand for education internationally. Low- and middle-income countries have traditionally looked to established economies for collaboration with universities. Social, political and economic factors have led to the internationalization of higher education, fueled by the forces of globalization, internal markets, universities, and information technology. The internationalization of higher education refers to the process of student and faculty movement to build skills, capacity and knowledge exchange at the global level. Beyond this version of idealism of edification, higher education has become big business with international competition for the recruitment of students, placement of regional campuses, student and faculty exchange, service learning and formal partnerships for teaching and research. Understanding the role of the university within a context of geopolitical instability and trends towards nationalism and populism is important. Global challenges require collaboration and is a strong motivator for internationalization of higher education. Ensuring transparency of agendas and operation within ethical frameworks is an important focus for developing universities of the future.

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Manuscripts

JCN Journal of Clinical Nursing

Global digital social learning as a strategy to promote engagement in the era of COVID-19

Journal:	*Journal of Clinical Nursing*
Manuscript ID	Draft
Manuscript Type:	Original Article
Keywords:	Healthcare Worker, Information Needs, International Health

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