

# SILLIMAN JOURNAL

VOLUME 62 NUMBER 2  
JULY TO DECEMBER 2021



A JOURNAL DEVOTED TO DISCUSSION  
AND INVESTIGATION IN THE HUMANITIES AND SCIENCES

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Ruth Ann Entea

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Mark Ronald Genove

Marrieta Guanzon

Ka Hing Lau

Jeffrey Ching To Keung

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All articles must be accompanied by an abstract of 200 words and keywords of not more than ten words, and must use gender-fair language.

SILLIMAN JOURNAL likewise welcomes submissions of “Notes,” which generally are briefer and more tentative than full-length articles. Reports on work-in-progress, queries, updates, reports of impressions rather than research, responses to the works of others, even reminiscences are appropriate here.

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SILLIMAN  
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## Editorial Notes

*"For the things we have to learn before we can  
do them, we learn by doing them."*  
- **Aristotle**

*"Tell me and I forget, teach me and I may  
remember, involve me and I learn."*  
- **Benjamin Franklin**

Welcome to another issue of Silliman Journal! This is a special issue, as all the articles here were presented during the 8th Asia-Pacific Virtual Conference on Service Learning, which Silliman University hosted on July 28-29, 2021.

Service learning (SL) has been an important educational approach used by many universities around the world. It has been found to foster meaningful learning because students not only learn theories; they are also engaged in community work and reflective activities, allowing them to heighten their understanding of concepts.

This issue is devoted to the discussion of service learning initiatives and insights of service learning practitioners from different universities in the Asian region.

The discussion opens with an article written by a group of SL practitioners from the Silliman University Nutrition and Dietetics Program. In their work, Mark Ronald Genove, Ruth Ann Entea, Alvyn Klein Man-ay, and Jin Genove explore how their department's SL has contributed to the strengthening of their students' attributes that are aligned with the university's whole person education approach.

In the second article, Darryl Robinson and Michele Naranjo write about the experience and reflections of psychology students who interacted with female residents in a community in Dumaguete City. The focus of this initiative was on the women's mental health.

Next is Ka Hing Lau's exploration of a conceptual framework that adopts a multi-stakeholder approach. Specifically, she discusses how a university in Hong Kong applied it and explicates how SL can be a winning collaborative effort by the faculty and students.

The pandemic has made service learning more challenging. However, it can be done as illustrated by the fourth article. Marietta Guanzon writes about their partner organizations during the pandemic and identifies electronic service learning initiatives done by their university.

How can service learning be measured? The Service-learning Outcomes Measurement Scale in English, a valid and reliable scale, was developed in Hong Kong. Since there are big Chinese speaking regions, the instrument was translated to Chinese. In the last article, Ka Hing Lau, Robin Stanley Snell, and Jeffrey Ching To Keung elaborate on the process of translation and validation done.

Happy reading!

The cover art is courtesy of visual artist and fashion designer Dan Ryan Duran. It is part of a painting called "Pulang Yuta," an homage to the old artisan tradition of pottery using red clay in Dumaguete City

**Warlito S. Caturay Jr., PhD**

*Editor*



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# Whole-Person Education Through an Integrated Silliman University Nutrition and Dietetics Service- Learning Program

Mark Ronald C. Genove, Ruth Ann S. Entea,  
Alvyn Klein A. Mana-ay, and Jin H. Genove  
*HE-Nutrition and Dietetics Department  
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The education of the whole person is education for total human development. While the BSND curriculum is aligned with the competency-based standards, it is also aligned with the WPE approach of the University. This paper discusses how the SUND S-L program strengthened the students' competence, character, and faith – attributes of Silliman University's Whole-Person Education approach. This qualitative-descriptive design follows the implementation of the S-L program of SUND. Pre S-L activities were conducted, such as an S-L seminar and workshop on journal-writing. Following their exposure in the partner community, guided student reflections were performed, and students' responses were processed. Results of the thematic review of the students' reflections showed that students found the experience to have elevated their learning and appreciated the concepts, principles, and the application of the skills in nutrition and dietetics in real-world situations. The students felt that they were more empathetic and developed a better understanding and ability to recognize the value of social responsibility. Also, the students found that the activities helped them become more humble and caring for others in need. Furthermore, the SUND S-L's integrated approach promoted the enriched learning experience of the students and, therefore, to whole-person education. Based on the students' responses, the S-L program was able to reinforce the WPE attributes of competence, character, and faith. It is recommended that an integrated S-L approach be formally incorporated in the BSND curriculum to nurture the philosophy and practice of whole-person education.

**Keywords:** WPE, competence, character, faith, nutrition and dietetics

## INTRODUCTION

Silliman University (SU), a Christian higher education institution in the Philippines, derives its motto – “Via Veritas Vita” – from John 14:16, which emphasizes Jesus Christ as the way, the truth, and the life. In a speech during the opening worship service for the 114th Founding Anniversary of the University, former SU Vice President for Academic Affairs, Dr. Everett L. Mendoza (2015), said that students who study in Silliman become experts in their field of choice and persons of character by teaching the student the way of God. Dr. Mendoza added that Silliman seeks to ensure that its students are armed with God’s Veritas or truth and not be swayed by propaganda disguised as truth. Furthermore, Mendoza (2015) defined Vita as life-in-God, promoting a person’s God-given freedom to serve others. Serving others can be done through the various community activities through SU’s brand of whole-person education.

Whole-person education (WPE) is an educational model focused on complete Christian formation and involves the student’s mental, physical, social, and spiritual attributes (Legg, 2019). In other words, to make the whole-person Christian education possible, it is essential to involve several dimensions founded on transforming the human spirit that conforms to God’s image (Chandler, 2015). The United Board for Christian Higher Education in Asia (UBCHEA) sees WPE as a connection with academics and values through developing a person intellectually, spiritually, and ethically (UBCHEA, 2019).

In an interview with the UBCHEA (2016), former SU President, Dr. Ben S. Malayang III, defined SU’s WPE “as an education that builds competence, character, and faith in God.” Dr. Malayang further explained that the essence of WPE at Silliman is “elevating and transforming a person to have a higher ability to learn, a higher capacity to live, a higher ability to serve others, and a higher ability to serve and to see God” (UBCHEA, 2016). Silliman’s approach to WPE is reflected in the University’s Five C’s of education, which includes the classroom, the church, the cultural center, the court, and the community.

The HE-Nutrition and Dietetics Department (SUND), a unit of SU which offers the BS Nutrition and Dietetics (BSND) program, has continuously employed service-learning (S-L) as a pedagogy to achieve WPE. Recently, the SUND formally integrated its service-learning program, entitled “Mitigating

the Burden of Malnutrition through Service-Learning: An Integrated Approach,” into the various professional courses of the BSND curriculum through activities that involved students enrolled across the three areas of the nutrition and dietetics education.

While several studies have been published about how S-L was used in delivering course content for allied health programs (Chabot & Holben, 2003; Gonzales et al., 2020; Holston & O’Neil, 2007; Horning et al., 2020; Merkey & Palombi, 2020; Zinger & Sinclair, 2008), few to none have looked into how an integrated S-L teaches the whole person, especially in the context of BSND education.

This study aims to discuss how SUND’s S-L program strengthened students’ competence, character, and faith – attributes of SU’s WPE approach. It sought to determine whether knowledge acquisition, skills development, empathy, social responsibility, humility, and care for others have manifested in the students’ participation in the various S-L activities of the SUND.

## LITERATURE REVIEW

### Whole-Person Education

The concept of “teaching the whole person” is a relatively new approach, particularly to higher education. In an article published in the *Christian Higher Education Journal* in 2019, Brian Legg discussed the origins of the concept of whole-person education. This concept can be traced back to Neo-Scholasticism, an updated version of the scholastic method of education in medieval times. It directly conflicted with emerging secular humanist teachings of the nineteenth century. The author further explains that while Neo-Scholasticism attempted to counter the emerging secular philosophies of the time by engaging the student to learn on stretching the mind and intellect as well as using Scripture and doctrine as the basis for educational applications, it eventually failed to teach the whole person because it did not involve other attributes of Christian formation (Legg, 2019).

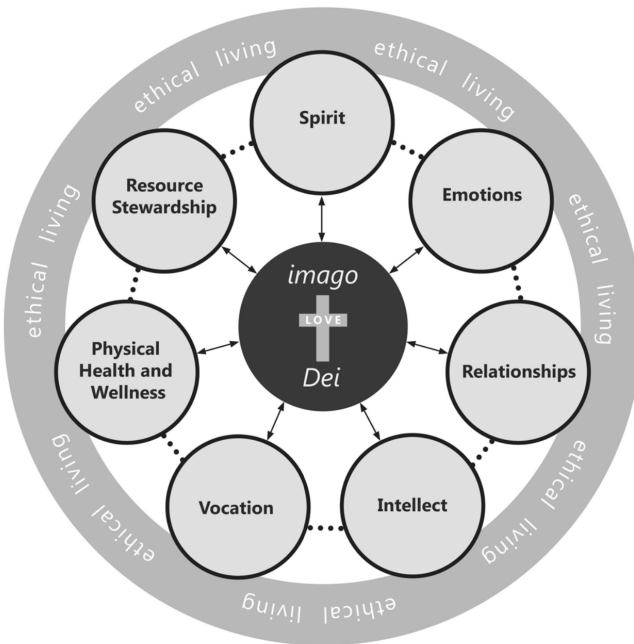
Wolterstorff (2002, cited in Chandler, 2015, p. 318) asserts that “The curriculum for Christian education is for the Christian life.” This requires an integrated and well-rounded approach that provides an intentional opportunity for personal growth and development (Chandler, 2015). Figure 1 illustrates the whole-person Christian formation model, which involves

several dimensions, the foundation of which is the transformation of the human spirit that conforms to the imago Dei or the image of God.

For Christian higher education institutions seeking to educate the whole person, “the Christian Educator is called upon to creatively combine and integrate insights from various disciplines in the thought and practice of education” (Pazmiño, 2008, cited in Chandler, 2015, p. 327). The United Board for Christian Higher Education in Asia (UBCHEA), an organization that champions whole-person education among its partner institutions, provides a working definition for whole-person education as “a philosophy and practice of education that seeks to develop the whole-person intellectually, spiritually, and ethically” (UBCHEA, 2019).

### Figure 1

*The Whole-Person Christian formation model by Chandler (2015).*



## Service-Learning

For a higher education institution to teach the whole person, it must strive to provide its learners with opportunities for intellectual, spiritual, and ethical growth and development. S-L is one such opportunity where students’

knowledge meets the community's needs (UBCHEA, n.d.).

S-L can be summed up as a pedagogy or learning methodology that allows students or learners to engage or interact with members of the community such that the students can further learn while the community is being served (Gonzales et al., 2020; Horninet et al., 2020). What sets S-L apart from other forms of experiential learning is the prospect of reciprocal relationships between the students, faculty, and the community they serve (Ferillo, 2020). Additionally, S-L is deemed more valuable to students than volunteer service as the latter is not designed to discuss experiences concerning course content (Chabot & Holben, 2003). S-L can also balance service and academic learning in an environment where students apply theoretical knowledge in real-world situations (Rodríguez-Nogueira et al., 2020).

The use of S-L as pedagogy is not uncommon in allied health education programs, including in nutrition and dietetics education (Gonzales et al., 2007; Horning et al., 2020; Merkey & Palombi, 2020; Zinger & Sinclair, 2008). Discussing the merits of S-L in the nutrition and dietetics program, Chabot and Holben (2003) eloquently write:

Integrating service-learning into the dietetics and nutrition curricula can transform learning experiences and give students the opportunity to develop communication, collaboration, problem-solving, and critical thinking skills while providing relevant experience and promoting citizenship. While faculty are required to invest resources into the development of these learning experiences that integrate academics with community service, reflective, culturally aware citizens will result and undoubtedly improve outcomes for all involved in the service-learning models. (pp. 189-190)

### **How S-L Educates the Whole Person in terms of Building Competence, Character, and Faith**

*On improving knowledge and skills as qualities of competence.* In a study by Zinger and Sinclair (2008), which follows an S-L project on community nutrition education, the authors reported success in applying the knowledge and skills that students learned in the classroom in their respective partner communities. In a similar study by Cooke and Goodell (2011), which sought

to determine the students' ability to apply their knowledge and skills from a community nutrition course, the authors concluded that course instructors improved overall student learning outcomes. Several other studies also report improvements in knowledge acquisition and an increase in skills development among students using S-L as a pedagogy in the other allied health education programs (Gonzales et al., 2020; Horning et al., 2020; Rodríguez-Nogueira et al., 2020; Stagg & McCarthy, 2020).

*On empathy and social responsibility as qualities of character.* While S-L has been shown to increase the knowledge and skills of learners, it has also been shown to increase compassion and self-sacrifice (Dinour & Kuscin, 2020). A systematic review of the literature conducted by Dart et al. (2019), which looked into the conceptualization and defining professionalism for nutrition and dietetics education, found that empathy was the most recurring personal quality of the nutrition and dietetics professional. Empathy is vital in the health context where the individual can comprehend another person and put himself in that individual's place (Rodríguez-Nogueira et al., 2020). An article by Stagg and McCarthy (2020), which discussed the value of integrating S-L as a method of instruction for community health content, explained that the students involved were able to empathize with the participants in the community. Furthermore, students who participated in S-L activities were found to be more socially responsible owing to their increased awareness of the needs of others (Merkey & Palombi, 2020; Zinger & Sinclair, 2008).

*On humility and caring for others as qualities of faith.* Merkey and Palombi (2020) described how their students have come to realize the value of humility following their participation in an S-L activity. S-L activities and the experiences they bring, particularly for Christian universities, have provided unique opportunities to incorporate and, therefore, build in the students the value of serving with humility (Matthew et al., 2019). Another study, a quasi-experimental design that measured professional values among students who participated in an international S-L activity, found that the more the students interacted with their participants, the more they valued caring for others (Ferillo, 2020). Further still, compassion, as an attribute developed by students who participated in S-L activities, can help the students learn care for others, especially if they are exposed to situations that allow them to understand the difficulties that other people are faced with (Brown, 2013).

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## METHODS

Considered by Lambert and Lambert (2012) as a design that can provide a concise description of a phenomenon, the qualitative-descriptive method was employed in this study. This design, which is also used in many health-related studies, is characterized to allow for an in-depth understanding of a phenomenon and commit participants' viewpoints, among others (Vaismoradi et al., 2013).

Study participants included Level II, III, and IV students of the Bachelor of Science in Nutrition and Dietetics program at Silliman University enrolled in the second semester of the school year 2018-2019 and the first semester of the school year 2019-2020.

Prior to the deployment to the partner community, an orientation seminar was conducted to educate the students on the nature and expectations of the S-L activities. This was facilitated by the Director of the Institute for Service-Learning of the University, who also discussed the value of and manner of writing the students' reflective journals.

In addition to the general orientation, several team meetings were held for logistical planning and coordination between the participating groups. These meetings also provided opportunities to further enhance the activities of the S-L program before the actual visits to the community.

The SUND has had a number of S-L programs in the past. However, the first formal program was the "SUND Community Health, Nutrition, and Food Preparation Development: Practical Applications to Challenges in the Environment" in early 2010 and was followed by the "Indigenous Food Security for High-Risk Calamity Areas in Dumaguete City and Tacloban City: Silliman University Nutrition Intervention" in 2015.

However, it was not until recently that the Department formalized its S-L Program to become a more permanent and organized pedagogy. In 2018, the current S-L of SUND, entitled "Mitigating the Burden of Malnutrition through Service-Learning: An Integrated Approach," was formally introduced. The program aimed to institutionalize service learning in the SL-able courses of the BSND curriculum where students can implement activities meant to address a malnutrition problem following UNICEF's Conceptual Framework of the Determinants of Undernutrition (2015). Under this program, the "Nutrition in the First 1,000 Days of Life" was implemented in the second semester of 2018-2019 until the first semester of 2019-2020. The courses and



students involved and the various activities of the plan are outlined in Table 1 below.

**Table 1**  
*Summary of SUND S-L Activities*

Course	Activity Title	Year-Level of Students Involved
Assessment of Nutritional Status	Assessment of Infants and Mothers	IV
Nutritional Assessment	Reassessment of Mothers and Infants (6-12 months)	II
Nutrition Therapy II	Health Issues During Infancy	IV
Nutrition Therapy I	Complementary Nutrition and Food Safety	III
Meal Management	Livelihood Education for Mothers	II
Fundamentals of Food Technology	Complementary Nutrition	II
Nutrition in the Life Stages	Nutrition Education for Lactating Mothers	III
Nutrition in the Life Stages I	Infant and Young Child Feeding Practices	II

At the outset, just before the start of the first activity of the S-L program in the second semester of the school year 2018-2019, orientation meetings were conducted for the students to inform them about the study and that the primary data will come from their journal entries. Only journal entries of students who returned their signed informed consent forms were included in the study. Students' names were removed when entries were used in the paper to ensure anonymity.

All qualitative data were collected during the implementation of the S-L Program, that is, during the second semester of 2018-2019 and the first semester of 2019-2020. At the end of each activity, the students were asked to write their reflective journals following the recommended format and submit them to their respective faculty-in-charge. The students' journals followed the Three-Part Journal format where entries are divided into three separate issues, namely 1) a description of what transpired during S-L activity, which includes accomplishments, events that were puzzling or confusing to students, their interactions with classmates and other people involved in the activity, decisions they made, and plans that were developed,

2) an analysis of how the course content relates to the S-L experience, and 3) a discussion on how the course materials and the S-L experience can be applied to their personal life (Bringle & Hatcher, 1999). The journal entries were then subsequently assembled for analysis.

The participants’ reflective journal entries were subjected to thematic analysis following the suggested procedure by Braun and Clarke (2006, cited in Vaismoradi et al., 2013, p. 42). Responses were then categorized based on the themes identified. Sample excerpts from the participants’ journals categorized per theme and subtheme are shown in Table 2.

**Table 2**  
*Sample Excerpts of Students’ Reflections by Theme and Subtheme*

Theme	Subtheme	Sample Reflection
Building competence	Learning of concepts and principles	“[S-L] enabled us to share our knowledge and understanding on the nutrient needs of pregnant women.”
	Application of skills	“S-L helped me [to]overcome my stage fright in delivering lectures.”
Building character	Empathy	Through S-L “I learned to appreciate the people around us and to help [them] regardless of their health problems and lifestyle[s].”
	Social responsibility	“...as future health workers, we can use this [S-L] experience as a source of motivation to serve my community.”
Building faith	Humility	S-L activities “made me realize how privileged I am.”
	Care for others	“I felt love and respect towards others, and it motivated me to do more and help more.”

**RESULTS AND DISCUSSION**

The collective experience of the students is presented according to the themes of SU’s WPE, namely, Building Competence, Building Character, and Building Faith.

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## Building Competence

Silliman University aspires to produce graduates who are competent in their fields of study. Ideally, students are developed to become proficient in their chosen profession throughout their undergraduate studies. Becoming professionally skillful and adept can be achieved through training and experience.

Nutrition and Dietetics professionals are expected to be proficient in promoting the role of nutrition and dietetics for human well-being in relation to the needs, resources, and potentials of individuals, groups, and families. Mainly, a student enrolled in a nutrition and dietetics education program is taught to become experts in nutrition and dietetics information and communication and critically apply the knowledge gained in appropriate situations. As one student reflected in the S-L journal, “it is very important to apply food safety, especially for pregnant women.” The concept of food safety cannot be stressed enough in its importance in sustaining life and promoting good health (World Health Organization, n.d.). This generalization is also grasped by another student who wrote that “applying proper sanitation in our homes [is important] to avoid food poisoning.” Indeed, didactic learning on food safety was reinforced through the S-L.

Further reinforcement of knowledge gained in the classroom, numerous research studies have concluded the various roles of nutrients and their specific functions in the human body. Maternal nutrient requirements are more critical than in any other stage of life. A student reflected that the S-L activity “enabled us to share our knowledge and understanding on the nutrient needs of pregnant women.” Another parallel thought expressed is that “nutrient needs are important during pregnancy to reduce the risk of malnutrition.” To fully support optimum fetal growth and development, optimal nutrition status should be maintained from pre-conception throughout pregnancy (Ho et al., 2016). One student stated that “it is better to teach the mothers during the early stages of pregnancy so that they will be aware of the do’s and don’ts of their nutrient needs.” Gaining the knowledge in the classroom and supporting such gains with meaningful experiences shows a direct positive impact of the S-L activity on the students’ level of knowledge in promoting optimal nutrition during pregnancy.

Applying comprehensive nutritional care for the wellness of individuals in a multidisciplinary and multi-cultural setting is an essential outcome of

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a BSND graduate. As a pedagogical approach, S-L highlights the critical-thinking skills of would-be nutritionist-dietitians. A student likened the S-L activity to a case study methodology and wrote that they were able to conduct “interviews, assess the patients’ [needs] and make a Nutrition Care [Plan] and give nutrition intervention and counseling.” This systematic approach, known as the Nutrition Care Process, outlines the steps in providing high-quality nutrition care. The framework allows the Registered Nutritionist-Dietitian (RND) to make effective and rational decisions for highly individualized nutritional care (Academy of Nutrition and Dietetics, n.d.). Because of the experience brought about by S-L, one student reflected on the application of skills in NCP that they were able to “[analyze] the data from others, went through the process of identifying the problems, gave interventions, provided a sample diet plan, and nutrition counseling.”

One of the essential skills in the nutrition and dietetics profession is educating the community on proper nutrition effectively. SUND’s S-L program aims to ensure that students have an opportunity to become effective communicators. This was exemplified by one student reflecting that “through this S-L activity, I have learned to apply my skills and abilities in providing lectures to the community,” which is also felt by other students where one claimed “that I can use this experience to improve on our nutrition education skills” and another who stated that “S-L helped me [to] overcome my stage fright in delivering lectures.” Undoubtedly, S-L provided significant opportunities for the students to build their skills in nutrition education, with one articulating that S-L “taught us many things beyond the four corners of our classroom and applied what we learned to the real world.” Another student concluded that “through the S-L experience, we were able to practice the lessons learned through our previous subjects,” which is, in fact, a [practical] way to enhance and improve a skill through participation in an activity that uses them. Such a method, therefore, builds confidence and professional skills.

In actuality, S-L reinforced the students’ appreciation of the profession they hope to join. One student fondly thought, “through S-L, we are gaining a deeper understanding of our course,” while another believed that “we were able to value our course and future profession more deeply.” As a future RND who will promote nutritional well-being to individuals, groups, and families, it is noteworthy that one student expressed that “the experience strengthened my desire to be in community nutrition in the future.” Supporting students’

personal growth can be done through self-reflection (Stanton, 2014). Indeed, the “S-L experience helped me [to] grow more and love the course I [chose],” another student added.

## **Building Character**

The experience of reaching out to others in a community creates an opportunity for a student’s personal and social transformation, making them more compassionate individuals (Meyers, 2009). Through self-reflection, students were able to gain perspective in practicing empathy, such as putting themselves in the same shoes like those in need. A student reflected that “I learned to appreciate the people around us and to help other people regardless of their health problems and lifestyle[s].” The experience clarified the value of benevolence, which is one of the ethical standards of the nutrition and dietetics profession.

Exposing and involving the students in community engagement influences an active involvement in social responsibility (Chandler et al., 2011). The realization of the value of a sense of community and helping to improve the community’s nutritional problems is an expression of how S-L has made the students more sensitive and responsive to societal needs. A student realized that “public health is a field that would likely fulfill your heart in serving others and contributing to their progress.” The idea of service and the bettering of the lives of others is reflected in how theoretical knowledge can help the community. “As future health workers, we can use this experience as a source of motivation to serve my community,” exclaimed one student.

## **Building Faith**

The use of S-L allowed the students to reflect on their own lives. It is through the process of self-reflection that students grasp the value of gratitude, such as one learner who said that “I should be grateful for what I have in my life from now on.” Statements such as “...[participating in S-L activities] made me realize how privileged I am” and “I am thankful and content with what I have now” show the transformational significance of S-L. The students who have stepped out of their comfort zones and immersed themselves in the community have realized the happiness that one experiences when they help others. S-L also allowed students to share what they had learned with

the community, making them feel blessed and humbled. Similar studies have shown that S-L activities have led students to realize the value of humility borne from the service of others (Matthew et al., 2019; Merkey & Palombi, 2020).

The final category of reflection by the students was the ability of the S-L activity to foster a promise within themselves to care for others. When students are exposed to situations that allow them to see firsthand the difficulties challenging others, they begin to learn to care more for other people (Brown, 2013). A sentiment expressed by a student who said, “I felt love and respect towards others, and it motivated me to do more and help more.” As the students looked back on the S-L activity, the awareness it brought them in caring for others is for a greater good. Their sentiments indicated embracing such roles as serving the community and helping them acquire a healthy lifestyle.

## CONCLUSION

Institutions of higher learning, particularly for Christian universities such as Silliman University, must strive to educate the whole person by integrating teaching methodologies that allow learners to become intellectually, ethically, and spiritually aware individuals in their chosen fields. S-L is one such pedagogy that provides students an avenue to engage communities through service-oriented activities aligned to course outcomes.

The SUND’s S-L program, which integrated the various S-L activities from the different courses of the BSND curriculum, was designed to allow students from across multiple year levels to apply theoretical knowledge gained in the classroom to real-life situations in the partner community.

Results of the thematic analysis of the students’ reflective journals indicate that learners have indeed developed in them the qualities of knowledge acquisition, skills development, empathy, social responsibility, humility, and caring for others, which are attributes of Silliman’s WPE approach of building competence, character, and faith.

While the current S-L program integrates the various S-L activities from the different courses, the fact that S-L is not officially embedded in the BSND curriculum means that, as a proven methodology that delivers not just competence but also character and faith, it remains to be less permanent and therefore, subject to arbitrary change. Consequently, it is recommended

that S-L be formally incorporated into the BSND curriculum to nurture the philosophy and practice of whole-person education. Additionally, other non-allied health disciplines are encouraged to employ and integrate S-L into their curricula to promote the education of the whole person.

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# A Service-Learning Reflection of Psychology Students on Mental Health Issues among Selected Female Residents of Barangay Cantil-e

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Service-learning as community engagement enables students to become aware of their life stories and people. Valuable knowledge and skills obtained are obtained beyond the classroom. The broad range of mental health issues combined with marital/partner domestic interactions created a complex and socially unstable home environment for women. The lack of mental health resources for marginalized communities has driven Silliman University Service-Learning (S-L) to consider the women's mental health challenges on the family's success. This study is a descriptive research that uses the four stages of service-learning. The data were gained from class assessment methods and in-depth interviews of female residents of Barangay Cantil-e, Dumaguete City, Philippines. The findings revealed that communication amongst spouses/partners ideally focused on lack of financial means, influencing family harmony and resulting in verbal and physical altercations. Although Psychology students who are doing service-learning can actively participate and contribute to the community's developments, it is recommended that local government agencies establish mental health awareness and services for their overall residence well-being.

**Keywords:** Mental Health, Family Discourse, Health Awareness, Service-Learning, Reflection

## INTRODUCTION

In early 2019, students of the Silliman University Psychology Department enrolled in the Service-Learning (S-L) coordinated an S-L outreach with local officials in Barangay Cantil-e, Dumaguete City, Philippines. It

is an opportunity to engage with residents of the university's surrounding areas and apply and practice classroom-taught theories and psychological approaches to understand their use better. Conducting such experiences allowed the students to appreciate a common approach to learning that will instill the essence of providing for one's community to build a better society. In psychology, there are four primary goals significant to the field: to describe, explain, predict, and change or control behaviors. These goals are the substance of most theories and studies to understand the cognitive, emotional, and behavioral processes that people face in their daily lives (Kalat, 2017). With psychology's goals as the premise of the outreach, the students had sought to explore the mental well-being of women living in marginalized communities by searching for local areas with limited resources to conduct group therapy-style interventions.

According to the World Health Organization (WHO), an issue arising from mental health now plays a significant role in achieving global development goals. Included in its Sustainable Development Goals is mental health. Although developing countries are progressing, people with mental health conditions experience human rights violations and stigma. It can significantly affect individuals' total well-being, including their family and capacity to participate in community activities (WHO, n.d.). Furthermore, mental health is a global area of research and practice that emphasizes enhancing health and reaching equity to all community members (Castillo, 2019). The broad range of mental health issues combined with spousal/partner domestic interactions has created a complex and socially unstable home environment for women residents of Barangay Cantil-e. These women who are housewives perform several functions to achieve family cohesiveness. The scarcity of mental health resources for marginalized communities has driven Silliman University Service-Learning (S-L) to consider the effects of women's mental health well-being on the family's success. Social support has long been considered to impact the mental health of women.

A study carried out by Coker et al. (2003) to find out the mental health status of women found that good social support was associated with a significantly reduced risk of a range of adverse mental health outcomes. Moreover, further higher levels of emotional support can modify the effect of intimate partner violence on health. Issues in psycho-social outreach include the idea of service-learning as one of the methods for students to explore. Considering the need for enhanced mental health awareness

for marginalized communities as part of the teaching and learning goals, service-learning is an effective method. This method is like a double-edged sword, psychology which, like many other courses, employs S-L to achieve the primary teaching goal of students' understanding of specific theories in psychology and community awareness. It may further impact students' leadership skills and critical thinking through the rising sense of social care because "service-learning translates theory into practice, statistics into real people, and ideas into action" (Community Service Center Mary Graydon Center, 2005).

As a pedagogical strategy, service-learning allows students to be involved in community outreach. It enables them to participate in real-life problem solving that strengthens their knowledge in connecting lessons learned from the classroom and their service in the community (Warren, 2012). Service-learning as a teaching method involves students interacting with the community through social projects and/or activities. Social projects/activities are conducted in line with classroom-taught material that prepares students to coordinate, organize, and execute a reciprocal learning experience amongst the students and community participants. This learning approach provides an opportunity for the students to learn while conducting actual activities in society. A study done by Oracion (2007) stated that community engagement enables the students to become aware of the community's life story and its people. Students obtain valuable knowledge and skills that are not learned inside the classroom.

Another benefit of service-learning is promoting social awareness of the millennial generation. The millennial generation is more immersed in social media and technology and has less direct contact with their community since they interact more digitally. If their learning process is also exclusively conducted away from the community or social life, it will encourage the missing sense of social awareness. Thus, service-learning is seen as a bridge to empower students to see and solve problems in their communities, where students could learn about a particular issue or problem, then discover how to take action in a positive way (Farber, 2011). Unlike social media, which is more attractive to millennials, social awareness needs encouragement to be created for them to learn it by themselves.

According to WHO, an issue arising from mental health now plays a significant role in achieving global development goals. Mental health is integrated into the Sustainable Development Goals, and although countries

are progressing developed, people with mental health conditions undergo human rights violations and stigma. It can significantly affect individuals' total well-being, including their family and capacity to participate in the community actively (WHO, n.d.).

Service-learning has significant aspects of being applied, in this case, psychology students observing the phenomenon of mental well-being. The mental well-being of an individual or group can certainly be connected to any social issue. However, the critical missing part is the interaction with society itself during the process of learning. Applying service-learning with their psychology course provides students with essential tools and knowledge related to the given issues and a deeper awareness of the community's dire problems. Furthermore, service-learning provides reciprocal experiences where both the academic institution and the community needs are met. It is a collaborative effort that reduces social inequities in challenging situations (Aclaró-Naranjo et al., 2018).

Issues surrounding mental health and women's domestic violence protection are two major global social issues today (Tutty et al., 2021; Knight & Hester, 2016). The student's ability to pursue a community outreach project regarding mental health and domestic violence would enhance their first-hand experience of the significant impact in a community. Inserting the two themes through a service-learning outreach raised the students' understanding of recent social problems. The students were required to do a community project on helping a marginalized sector in the community. The platform was to send them to meet the society bringing the issues they have learned into actual activities to empower the society in a community project conducted in a group. More specifically, "students can deepen their understanding of individual leadership, systemic change, and social responsibility in the context of a local, national, and global multicultural society" (Community Service Center Mary Graydon Center, 2005).

It is essential that local communities, health professionals, volunteers, and other stakeholders effectively collaborate because mental health can significantly contribute to total well-being and human development. WHO advocates the government to make strategic plans to utilize available community resources, strengthen the mental health care in the community and provide cost-effective delivery of mental health care services to disadvantaged groups (Venkateswaran & Vincent, 2018). The students who are also stakeholders are required to set the idea of the activities and execute

it within the society by doing a “direct Service, a type of service engaging students face-to-face with people” (Community Service Center Mary Graydon Center, 2005). Students enrolled in Silliman University’s Designing and Managing a Service-Learning Program course do this type of service. Once they have done the activities, they must submit a personal reflection paper highlighting their experience to the teacher, how the S-L outreach enhanced their learning needs, and the importance of community outreach.

This paper aims to describe the conduct of Service-Learning activity by the students of Silliman University in Barangay Cantil-e among female residents in Dumaguete City. Specifically, it looked into how the various stages of the S-L were able to help students further develop knowledge and apply skills in the community and how the community benefited from the students’ engagements with them.

## METHODS

This study is a qualitative descriptive research done by describing the actual observation by the students of their experience outside the classroom. The students studied Psychology and enrolled in the S-L certificate program as an enhanced learning opportunity with their undergraduate studies. The students enrolled were required to complete 18 credit hours to obtain the S-L certification. This study’s course requirement is classified as Designing and Managing a Service-Learning Program. Students conducted a community project during the semester, and the students decided on mental health status as a course requirement. Participants of the study were the selected female residents of Barangay Cantil-e, Dumaguete City, Philippines. Consent forms were given to all participants for their approval to be part of the S-L activity before starting the activity.

The data needed to answer this study’s mentioned problems were gathered from class assessment methods and in-depth interviews with the participants. The first method, class assessment, was done by conducting direct observation to determine the severity of the mental health problems in the barangay. The assessment was conducted utilizing a needs assessment questionnaire to discover the urgent need of barangay regarding their overall mental health status. Interviews were conducted to pinpoint specific mental health topics that would benefit the residents, leading to domestic spousal welfare.



The data were analyzed using the four stages of service-learning, which are as follows, (1) preparing an idea of service-learning activity, (2) determining and surveying the site to do community projects, (3) conducting community projects, and (4) reflections. “Reflection” functions as the essential stage of every service-learning activity, as it connects the classroom studies with community implementation to present holistic learning for the students.

## RESULTS AND DISCUSSION

This community outreach examined how the impact of limited mental health initiatives created family discourse. Through in-depth interviews, commonalities were discovered amongst the participants, resulting in a free flow of ideas, and thematic analysis was employed. Additionally, mental health disorder tendencies were apparent, addressed through progressive mental health initiatives.

This section describes the four steps employed by the students, which can be briefly explained as follows:

### Step 1: Preparing an idea

Before working as a group to discuss a sub-topic relevant to the main given topic, the students were encouraged to understand the project they would conduct. Defining and understanding the concept is very important to lead the students to stick to the project’s goal. For example, in the project, the students described the meaning of “mental health” and the importance of doing a project to “assist community members,” elicited their answers and discussed them to quickly bring them to determine the sub-topic of their community project activity. They then discussed choosing the best sub-topic to target what community demographic they would help. Furthermore, the specific actions they set to allow the recipients—preparing ideas functions to encourage them to express their opinions and trigger their awareness of social issues within their surrounding communities. Within this step of preparing ideas, some students mentioned they could learn how to plan and run a program, respect other group members’ opinions, and distribute equal jobs for each group member. Others admitted that they became more confident and more active in making the right decision for their group,

including anticipating unexpected things that might happen when the project is running.

### **Step 2: Determining and surveying the site to do the project**

This step aims to involve the students in fundamental small-scale research. They surveyed the community target demographic by looking into the established measures utilized by barangay officials and interviewing them. Some data of the prospective recipient's identity, address, house condition, and job were gained, leading them to decide whether the students would help them. After the decision had been made, students conducted another visit and agreed on a day to perform their helping activity. Two key points in this step are enhancing the students' ability to gather information, which is the basis of research skills, and providing them an opportunity to discuss and execute their ideas, which is the essence of leadership.

### **Step 3: Conducting the community project**

Executing the plans is the most awaited moment for the students since they would be facing an actual dynamic condition of the society directly, where unpredictable things can happen. This third step functions to implement the students' planning, in which the experience of Service-Learning happens and where the students translate ideas into action. When meeting the community directly, they did activities as planned, practiced note-taking of their problems and solutions, and recorded their activities through pictures. During the in-depth interviews, a gap between what had been planned and what was happening in the service surfaced. The students discovered that not all participants gave positive responses as they first expected. The student's face in the environmental campaign is probably a good example of such a gap. A group that invited participants to group discussions found difficulties persuading them to join the discussions, even though they were offered refreshments.

The common problem was that participants brought children to the discussions, and although there were activities for the kids, the participants were reluctant to allow their kids to participate. That

problem made the group think a solution to encourage and comfort the participants that their children were in safe hands and safe conditions while in group discussions. It shows how the students can work well with others, where communication skill is hoped to develop (Center for Public Service, 2015).

The added activities such as the open forum and dialogue allowed the students to listen to women with varying issues. Commonalities were discovered among the participants, resulting in a free flow of ideas and suggested solutions to the problems. The common challenges, such as marital/partner domestic interactions, suppress the housewives' communication. The findings revealed that most of these women are economically challenged. Communication amongst spouses/partners focused on lack of financial means, directly impacting family harmony and resulting in verbal and physical altercations. Moreover, these housewives perform several functions and are bombarded with voluminous tasks yet keep silent to achieve family cohesiveness.

Additionally, mental health disorder tendencies were apparent. These women's struggles are assumed by most but are rarely discussed outside of the family setting, thus impacting their mental status and family disturbances. As the S-L Psychology students listened, they gathered information from the participants and asked them their possible solutions to the problem at hand. The women themselves could figure out some possible solutions to their problem, but some can be addressed through progressive mental health initiatives.

#### **Step 4: Reflections**

As designed in the syllabus, community project activities need to be reported through written reflections. "Following Reflection Service" is a term used to refer to a process in which students can start to see the depth and meaning of their engagement. Furthermore, the written responses thoroughly discussed their change of their emotional knowledge towards the service (Center for Public Service, 2015; Community Service Center Mary Graydon Center, 2005).

This exposure made the Psychology students realize the valuable rewards of Service-Learning through reflection and sharing of knowledge as evident in their note-worthy S-L journal entries such as

the following: “Service-Learning encourages people to be the solution in their communities, and it allows participants to develop skills in critical thinking, problem-solving, leadership, decision making, collaboration, and communication. Most importantly, it builds positive relationships with community members, connects their experiences to academic subjects, develops a deeper understanding of themselves and empathy and respect for others, and increases public awareness of mental health as a social issue.”

The students believe that they have successfully achieved their engagement objectives to a certain extent. This excerpt from student reflection is a manifestation of such success:

Service-learning is experiential learning where I get a concrete experience. As a student, I can learn easily since service-learning also focuses on the community’s problems; its teaching method is one of the best ways to teach students about humanity. It teaches students not just to empathize but also to sympathize. Service-learning programs guided students on how to become more responsible citizens. It also trains students how to make strategic plans to solve the problem of the community they were exposed to.

A reflection is a bridge between activities in the community and the content of the course subject in education (Bringel & Hatcher, 1999). Based on the the students’ quotes above, it is apparent that they could connect between their past actions made or achieved and their future actions.

## CONCLUSION

Service-learning as experiential-based learning increases social awareness and academic enhancement of students’ practicing psychological functions in their community. The effectiveness is concluded at how each of the four steps functions to achieve the learning goals. The S-L students developed a fostering social interaction with communities and learned the value of a positive mental health climate. Service-learning conducted through community projects is an interactive method in promoting mental health

awareness. Furthermore, service-learning achieved through the community projects guided by the mentioned four steps has encouraged the psychology students to improve their leadership qualities as service leaders. The students' excerpts reflected this leadership competence (intrapersonal and interpersonal competencies), moral character, caring disposition, self-leadership, continuous self-improvement, and self-reflection (Shek & Leung, 2015).

Engagement in community-based experiential learning activities exposed students to factors and opportunities known to mediate academic achievement, including opportunities for students to act autonomously, develop collegial relationships with adults and peers, and boost their self-esteem and sense of self-efficacy (Furco & Root, 2010). The students also admitted that the community project was an excellent method to see the classroom lectures be put to good use. They stated that they enjoyed each step as a fun way to learn. It means that the students positively respond to the project and the knowledge and experience through the project.

## RECOMMENDATION

Service-learning allowed the students to engage in community issues which included mental health. Mental health is essential because it can help one cope with the stresses of life, be physically healthy, have good relationships, make meaningful contributions to one's community, and realize one's full potential. Although Psychology students who are doing Service-Learning can actively participate and contribute to community's developments, it is recommended that local government agencies establish mental health awareness and services for their overall residence well-being.

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# A Win-Win Faculty–Student Collaboration: Exploring An Undergraduate Research-Type Service-Learning under COVID-19

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Implementing undergraduate (UG) research in service-learning can facilitate scholarship for faculty members and enhance student developmental outcomes. This study proposes a conceptual framework with a multi-stakeholder approach integrating faculty research initiatives in research-type service-learning projects based on self-determination theory. The model comprises a focused research project, a dedicated research team, institutional supportive infrastructure, a discrete focus on the project, and an emphasis on academic and community impacts. As a result, different stakeholders can achieve benefits, including students, faculty members, and community partners. Benefits include better research skills for students, progress on faculty research initiatives, new insights and ideas for community partners, and facilitation of community development. The study evaluated the model with a Hong Kong university service-learning course, which was forced to move online due to the COVID-19 outbreak. The evaluation employed in-depth individual interviews with the course instructor, service-learning coordinators, and community partners, and a focus group interview with students. The results showed that, with adequate training in research skills and support for students, research-type service-learning projects could generate quality research outputs, support faculty scholarship, and create community impacts. Moreover, students gain developmental outcomes and acquire research skills and experience.

**Keywords:** research-type service-learning, undergraduate, training in research skills, student developmental outcomes, faculty scholarship, community impact



## INTRODUCTION

Service-learning is “a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities intentionally designed to promote student learning and development” (Jacoby, 1996, p. 5). Past literature has shown that all stakeholders, including students, community partners, the community, faculty members, and educational institutions, can gain from service-learning (Clarke, 2003; Eyler et al., 2001; Lau & Snell, 2020; Seigel, 1997; Snell & Lau, 2020).

Despite the benefits and rapid growth of service-learning, its adoption in Hong Kong universities has never been as easy as it might have been. One major obstacle has been persuading faculty members to invest extra time and effort in service-learning. For decades, promotion and tenure for faculty members have been primarily based on research excellence and publications rather than teaching and service (Green, 2008; Reardon, 1994; Schimanski & Alperin, 2018). As a pedagogy that requires time to be devoted to teaching and service, service-learning seems to be a burden, rather than an attraction, to faculty members. For example, Ma and Law’s (2019) faculty engagement study revealed that the limited impact of service-learning on faculty research and professional development has been among the top barriers to faculty engagement with it.

Research is by no means new in service-learning. In research-type service-learning, students receive training in research skills and implement research studies for community partners on various topics. As a result, students can develop essential capabilities for performing research, such as problem-solving and critical thinking (Chan et al., 2009). Other studies have found that training in research skills helps students develop communication and cognitive skills and improve their chance of postgraduate study (Woolf, 2014). Many of these skills are important university graduate attributes, in high demand among employers, and currently valued in the job market (Burning Glass Technologies, 2015; Chan, 2012; Murtonen & Lehtinen, 2005).

Research-type service-learning also greatly benefits faculty members by providing excellent opportunities to materialize faculty research initiatives in the community, with trained students offering additional workforce. In this view, research can be an excellent service-learning element that benefits all stakeholders and motivates faculty members to engage with this pedagogy.

Therefore, this study proposes and evaluates a model of integrating faculty research studies into service-learning. This paper comprises two parts. The first part reviews the prior relevant literature to develop the model, while the second part evaluates the model through a Hong Kong university service-learning course.

## MODEL DEVELOPMENT

### Integrating Training in Research Skills into Service-Learning

Although the benefits of training undergraduate (UG) students in research skills are manifest (Reardon, 1994), studies of integrating service-learning and training in research skills nonetheless remain limited. The earliest example identified was an article by Reardon (1994), which presented two participatory action research projects conducted by UG students in service-learning courses. The projects achieved significant community impact, the students gained various learning outcomes, and the importance of planning with and in connection to the community in designing service-learning was recognized. In another article, Peterson and Schaffer (1999) shared how to develop research skills with service-learning projects, in which students received training in research skills before engaging in research projects for community partners. The evaluation showed that students had enjoyed the research process and that the projects had enabled them to develop their research interests by exposing them to experience. However, attention was needed about managing stakeholders' expectations.

Keyton (2001) also illustrated how service-learning could be implemented by integrating applied communication research and training in research methods. The model for teaching research methods was developed, with several prerequisites, and some key success factors were identified. The case studies demonstrated that the growth in research capacity and other learning outcomes for students were more significant than their expectations. Lastly, Machtmes et al. (2009) reported on how to teach qualitative research methods to graduate students through problem-based service-learning, which led to various benefits for students. The research project also generated operational benefits for the community partner, which developed insights by working with the prestigious university partner.

Table 1 summarizes the benefits and key success factors revealed by the

above literature review. To conclude, students can draw extensive benefits from research-type service-learning. These include learning research skills, gaining research experience, developing professional perspectives and a passion for research, acquiring community knowledge, caring for the community, and having a sense of achievement. Moreover, research-type service-learning can impact the community by influencing social and economic development policies, providing information and insights for community partners and letting the latter establish ties with academia. The key success factors include a realistic research scope and duration, considering community needs in design, sufficient preparation and training, and a joint commitment among all stakeholders.

**Table 1**

*The Benefits and Key Success Factors of Integrating Training in Research Skills into Service-Learning*

Study	Benefits	Key Factors to Success
Reardon (1994)	<p><b>To students:</b></p> <ul style="list-style-type: none"> <li>■ Gaining firsthand community knowledge</li> <li>■ Deeper understanding of social/political dynamics</li> <li>■ Applying knowledge in real situations</li> <li>■ Acquiring new knowledge and skills</li> <li>■ Developing as self-directed problem solvers</li> <li>■ Higher level of self-confidence</li> </ul> <p><b>To the community/community partners:</b></p> <ul style="list-style-type: none"> <li>■ Affecting economic development</li> <li>■ Influencing government policies</li> </ul>	<ul style="list-style-type: none"> <li>■ Managing research scope realistically according to time and resources available to students</li> <li>■ Linking research and planning efforts to the community situation and development</li> <li>■ Designing projects that students and faculty members can work on for a long time (e.g., several semesters)</li> <li>■ Structuring service-learning projects with sufficient time for community engagement</li> </ul>
Peterson & Schaffer (1999)	<p><b>To students:</b></p> <ul style="list-style-type: none"> <li>■ Acquiring research knowledge and skills</li> <li>■ Developing an interest in research</li> <li>■ Witnessing the power of research</li> </ul>	<ul style="list-style-type: none"> <li>■ Demonstrating a clear relationship between service-learning and research to students beforehand</li> <li>■ Assistance with research tasks (e.g., literature review)</li> <li>■ Quality assurance over work quality</li> <li>■ Communication among stakeholders on managing expectations</li> <li>■ Stakeholder dedication</li> <li>■ Longer project period</li> </ul>

Keyton (2001)	<p><b>To students:</b></p> <ul style="list-style-type: none"><li>■ Applying research knowledge</li><li>■ Witnessing research as a meaningful tool to solve real-life problems</li><li>■ Deeper understanding of the community</li><li>■ Impacting the community (e.g., on policy and procedural decisions)</li><li>■ More and continual reflection on the research process</li></ul> <p><b>To the community/community partners:</b></p> <ul style="list-style-type: none"><li>■ Creating impacts on policy and procedural decisions</li></ul>	<ul style="list-style-type: none"><li>■ Research courses have to be experientially based to allow students to experience all steps in a research project</li><li>■ Research projects have an applied nature</li><li>■ Feasible within reasonable timeline and students' abilities</li><li>■ Ensuring a joint student-faculty commitment</li></ul>
Machtmes et al. (2009)	<p><b>To students:</b></p> <ul style="list-style-type: none"><li>■ Gaining qualitative research experience</li><li>■ Changing the impression of qualitative research</li><li>■ Development of community of practice</li><li>■ Professional development by research practice</li></ul> <p><b>To the community/community partners:</b></p> <ul style="list-style-type: none"><li>■ Providing useful information for program development and management purposes</li><li>■ Extra manpower to assist the community partner's service</li><li>■ Access to prestigious university partners</li><li>■ Linking practice with theory</li></ul>	

Integrating Faculty Research Projects into Undergraduate Training in Research Skills

The first relevant study integrating service-learning into faculty community-based research was carried out by Marston and Nelson (2014), who reported on students engaging in a service-learning project by interviewing refugee migrants, followed by critical reflection. This project was part of broader faculty research. The community partner offered an information session to support the project, and the instructors provided training to the students on interview etiquette and professionalism. As a result, professional and scholarly analyses

were shared with the community, and students experienced transformative learning through participating in research. On the other hand, the instructors underscored the importance of institutional support and resources, careful planning, and collaboration with community partners.

A second study, conducted by Koehler et al. (2015), translated the projects of faculty-student research collaboration into a model consisting of three phases. The middle process phase is collaborative research by faculty members and UG students. The preceding phase focuses on various requirements, including a dedicated research team, a focused research program, a discrete focus on student projects, supportive infrastructure, high academic standards, and result dissemination. As a result, different benefits can be achieved for stakeholders. Students can enhance their research skills, develop professional perspectives, gain a sense of achievement, and cultivate a passion for research. Faculty members, meanwhile, can make research progress while polishing their research supervision skills.

The above model is highly relevant, and the author argues that it can be applied in the research-type service-learning context with the following modifications. First, the author removes the required component of accepting students with high academic standards into a faculty-student research collaboration because this is not congruent with the service-learning principle of educating students from different backgrounds and academic abilities. Second, community impacts are added to the emphasis on the impacts, as these are also important outcomes of service-learning (Cruz & Giles, 2000; Driscoll et al., 1996; Snell & Lau, 2021).

Third, the author suggests including partner organization representatives of community partners in the dedicated research team, given their indispensable roles in service-learning (Eyler & Giles, 1999; Holland & Gelmon, 1998; Jacoby, 2003; McCathy et al., 2002; Wade, 1997) to achieve student developmental outcomes and successfully implement service-learning projects. Such representatives should play an active role in every stage of the research project, including formulating research topics and supporting research implementation (e.g., providing access to the studied population, involvement in data analysis to ensure the findings are useful, and assisting in results dissemination to maximize community impact). As a result, their participation can ensure that service-learning projects respond to real community needs.

Fourth, community partners should also put a discrete focus on service-

learning projects so that students and instructors can consider the views and constraints of the community in research design and execution. Fifth, the model should include the community-related benefits presented in Table 1. As Keyton (2001) concludes, “it is impossible [for students] to report research results without talking about the students’ community, its social service needs, and agency successes and failures” (p. 209). Students can gain community knowledge through research, such as challenges faced by disadvantaged groups and the social dynamic of the community. Moreover, students’ level of civic orientation and, therefore, engagement can be enhanced through service-learning (Bringle & Clayton, 2012; Richard et al., 2017).

Sixth, research-type service-learning projects establish an ideal context for students to perform continual reflection, as a key foundation and benefit of service-learning (Godfrey et al., 2005). Seventh, a separate category focusing on the impacts on community partners and the community is created in response to the findings revealed in Table 1 and other studies (such as Lau et al., 2021; Lau & Snell, 2020). In summary, the model should accentuate more of the community elements and impacts.

Apart from incorporating the reference to the original model by Koehler et al. (2015), the model proposed above is also guided by human motivation and personality theories, particularly self-determination theory (SDT). SDT theory assumes that people are inclined toward psychological growth and learning when three basic psychological needs are supported: autonomy, competence, and relatedness. Fulfilling these needs is key to success in teaching and learning. In the educational context, SDT argues that more autonomous and intrinsic motivation (such as students’ inherent interest, enjoyment, and sense of value) results in students’ engagement and learning. Well-structured learning atmospheres conducive to optimal challenges, constructive feedback, and growth opportunities can develop one’s competence. Good relatedness between faculty members and students will lead to higher engagement on both sides, resulting in better learning outcomes. In a similar vein, if faculty members can fulfill the above needs, they can also enhance teaching engagement and outcomes (Ryan & Deci, 2020).

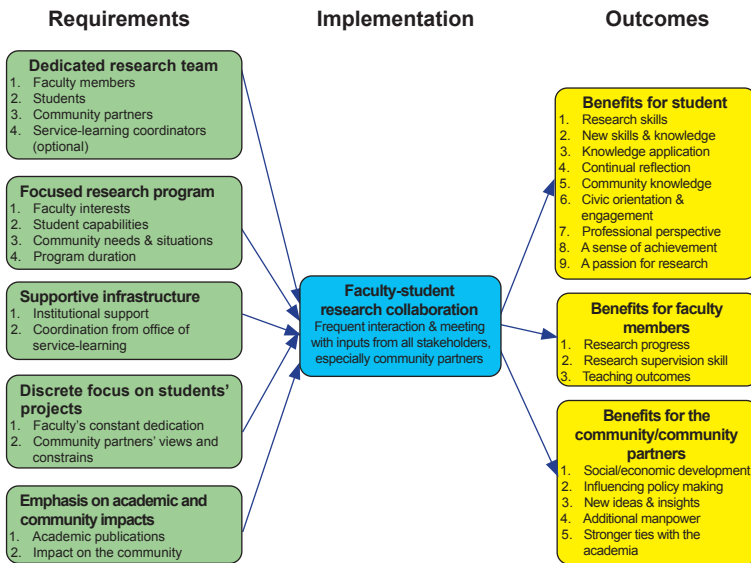
In this light, the faculty–student collaboration in research-type service-learning provides an excellent platform for both faculty members and students to fulfill these psychological needs to achieve better teaching and learning outcomes. The model advocates a dedicated research team with a supportive

infrastructure and a discrete focus for service-learning projects, establishing a well-structured and conducive learning environment to ensure a high level of participation for all stakeholders on that competence concerning the feeling of mastery develops. The focus research program considers faculty interests, student capabilities, and community needs and situations, further enhancing intrinsic motivation and autonomy for all collaborating stakeholders. The emphasis on community impact and as academic achievement, provides values to and motivates all stakeholders to work for the public good together. During project implementation, frequent interaction between stakeholders can enhance their degree of relatedness, particularly between faculty members and students, further facilitating teaching and learning.

To conclude, SDT underpins the proposed model. The community elements as a requirement are attenuated on the roles of community partners in preparation and implementation. Finally, community impact is underscored as the outcome in the model. The second part of this paper evaluates the model through a pilot service-learning course and reports the results.

**Figure 1**

*The Proposed Model of Integrating Faculty Research into Research-type Service-Learning*



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## **EVALUATING THE PROPOSED MODEL WITH A SERVICE- LEARNING COURSE**

### **The Service-Learning Course**

The course used for evaluating the model was “Leadership and Teamwork” (hereafter “the tested course”) from the Faculty of Business of Lingnan University, taught in the fall semester of 2020. Most students in the tested course studied business and had little background or training in research. A total of 32 students were enrolled, and six groups were formed on different service-learning projects, of which four groups engaged in direct community services. The other two groups, with a total of 12 students (hereafter “the research students”) engaged in a research-type service-learning project (hereafter “the research project”).

Due to the COVID-19 outbreak, the instructor (who played the role of the faculty member in the model) taught the course online. Moreover, she led the two research project teams. In the research project, students needed to transcribe, code, and analyze data provided by the instructor, obtained from her ongoing work-from-home (WFH) research study, and report findings on how the WFH mode impacted work performance and learning outcomes in a summer internship. Students were given extensive training in qualitative research skills and methods beforehand and applied them when carrying out the research.

The deliverables included interview-coding tables and infographics in conveying the research findings to the public. Given the project’s short duration (13 weeks) and the fact that the students were inexperienced and unskilled in research, the instructor collaborated in the analysis and reporting stage to enhance student learning outcomes and output quality. Moreover, as the supporting unit, the Office of Service-Learning (OSL) of Lingnan University arranged a two-hour lecture on qualitative research skills and methods. During implementation, two research associates of the faculty research team met with the students regularly (weekly or fortnightly) to discuss progress and provide advice. Two milestones were set: 1) the interim presentation on research findings and how to publicize them, and 2) the final presentation on infographics and reflection on what they had learned during the research project.



Apart from the research students, the research project involved two more stakeholders. The first was the OSL, which served as both a community partner and supporting infrastructure. The OSL engaged in the former role because its staff members were interested in designing and implementing summer service-learning internships with the WFH mode. Regarding the second role, two staff members were assigned as coordinators to assist the instructor and support project implementation. The second stakeholder was the faculty research team, comprising the instructor and two research associates responsible for training in research skills, supervision, and consultation.

## Model Evaluation

The evaluation aimed to test the extent to which the model can be applied in a research-type service-learning project in terms of requirements, implementation, and outcomes by employing qualitative research methods to collect different stakeholders' feedback. The author interviewed the instructor, the OSL coordinators, and the community partner. A focus group was also conducted with five of the students randomly invited from the two research project groups (12 students); students from both groups were included to ensure their opinions were represented. Using Zoom, the author conducted the interviews and focus groups, with the former lasting around 30 minutes and the latter around 1.5 hours. Prior consent was obtained from all the interviewees. The interviews and focus group were audio recorded with the interviewees' consent and followed a pre-designed protocol. Specifically, the protocol included questions about the preparation for and implementation of the research project, challenges faced in the process, benefits gained, and room for improvement. The interview and focus group records were transcribed and coded by a research assistant. The author analyzed the coding data and used a constant comparative method to identify and categorize themes and patterns according to similarities and differences (Merriam, 2009). The themes and patterns were then compared against the model. Apart from the interviews and focus groups, the author also examined the research outputs generated by the research project.

## Findings

**Measures for Preparation and Implementation.** One major measure within the preparation and implementation undertaken by the instructor and OSL coordinators was illustrating to the research students how the research project could generate community impact and learning outcomes. This measure was necessary because the value of the research project lay in its community impact; thus, students were intrinsically motivated to engage and achieve in it, according to SDT. For example, the instructor used the extra time to elaborate on the meaning and potential benefits of the research project:

“They [the research students] knew there were benefits, yet did not understand what exactly they were... So, I needed to brief them on the purpose.”

The OSL coordinators had also noticed the necessity of motivating the research students by illuminating the community impact and learning benefits for them:

In preparation... we focused on explaining to the [research] students about how the deliverables were meaningful to the public, and created a community impact... [the research students] were not just helping the professor as research assistants without gaining any benefits themselves.

**Challenges Faced in the Process.** The problem of connecting the research project and community impact was also seen inside the OSL. In preparation, there was a debate among OSL staff members on whether the research project should be regarded as service-learning, given its community impact could not be explicitly illustrated:

“The main challenge was to decide whether this research project could be regarded as service-learning at the beginning.”

This point was crucial, because unmotivated staff members, who have

no sense of ownership of the research project, cannot motivate students to engage. To resolve this issue, the instructor discussed and clarified it with OSL staff members to gain their support.

Another challenge to the OSL was providing training in research skills. Good training can equip inexperienced students with the necessary skills and knowledge to undertake the research project. A coordinator admitted that they would not have considered the research project without support and training from professional research team members:

“If [the research team had not been] professional, we would have hesitated to collaborate with them on this project.”

“Some training in research skills required professional experts and was beyond the OSL’s abilities.”

For the instructor, the challenge came from the university regulation that course instructors can only teach, thereby restricting her engagement in the research project:

“I could not be involved [in the research project]. In this course, I was the one teaching leadership and teamwork; I could only input into the project from this perspective.”

To offset the negative consequences caused by the above restriction, the instructor had to rely on the research team members for support:

“The other tutors [from the research team] were able to guide and support [the research students].”

For the research students, the major challenges occurred in implementation. As most of them had no prior research background, they found it challenging to manage the coding task, even after receiving training:

“I thought the teamwork on deriving the coding table was quite difficult.”

The workload and short project duration were other challenges exaggerated by online communication in the virtual learning environment:

“The workload for this research project was really heavy, within a pressing timeline... and the online mode made our collaboration much more difficult.”

**Benefits Gained.** *Faculty Scholarship.* The research project generated salient research outputs. Upon completion, the research team saved over 150 hours transcribing the interview clips and coding, which spared more time for the analysis and publication process. Moreover, the students’ input accelerated the research progress. The raw data had been translated into one presentation at an academic conference, one journal paper under review, and one paper under development within three months.

*Community Impact.* As the community partner, the OSL recognized the community impact created by the research students’ infographics, even though they were indirect and delayed. The OSL found the research findings useful in engaging other potential internship partners utilizing the WFH mode in the future:

“[The findings] can help us plan, and they provide information when engaging internship organizations...so we can better manage the internship.”

This view was shared by the instructor:

“Some internship organizations have no money for research, yet they want to know how [the WFH mode] affected them. I think... if we release [the findings], they would be interested in knowing more.”

The students were also aware of the community impact that they had created but were concerned about how to further leverage it:

“I think there was a community impact, but I am dubious about the degree.”

“I think the promotional channel [of putting infographics onto the university website] was a bit passive.”

*Student Learning Outcomes.* All interviewees agreed that the research project was a very valuable experience for the research students. Benefits mentioned by the research students included learning research skills, applying knowledge, developing a professional perspective, personal growth, and a sense of achievement:

“I am very happy that I was able to learn these [research] skills.”

“I never expected that I needed to do an infographic [and use my marketing skills] in a human resources management course.”

“I think through working online, I have learned how to establish relationships and engage someone I did not know toward a common goal.”

“[I learned] that doing research has to be very meticulous... and how to be professional in uncovering essential results through data analysis.”

“When I saw that we finally finished a neat infographic after a few days’ work, I felt a sense of achievement.”

“I understood more about the leadership taught by the professor... and practiced that in the project.”

*Benefits for the OSL Coordinators.* Interestingly, a benefit for the OSL staff members and coordinators was that the research project inspired them to revisit the meaning of service-learning and how research connects with community impact. The coordinators shared that this positive project experience opened up more possibilities for them in future service-learning design:

“I think [this experience] let me see a lot of possibilities in service-learning design.”

**Room for Improvement.** Several areas of improvement were identified. First, the OSL coordinators wanted to expose students to a more complete research cycle:

“Could students be involved more in the future?... I understand two months are very short, but it would be better if students could... learn the entire research process.”

The instructor commented that the research project would have achieved more if they had been able to hold face-to-face meetings, as she found it hard to monitor the research students’ work online:

“The teacher could not see [how the research students came up with the coding categories], and this might create problems in the process... it would have been better if there had been more face-to-face meetings.”

Moreover, the community partner pointed out that integrating the two groups’ analysis results would be more useful.

“I think it would be better if we...combine the two groups’ results... as that is more useful and more complete.”

The community partner also suggested supervising both groups together to save workforce and time.

“If supervised [the two groups] together, manpower and time could be saved.”

The research students’ principal recommendations included workload, task structure, and course design. They would have preferred a more succinct design to avoid doing similar tasks multiple times:

“[The assessment was] duplicated in many parts...and could be simplified.”

**Retention and Recommendation.** The instructors, the OSL coordinators, and the community partner all saw this research project as a success and would engage in it again or recommend it to others:

“If there are opportunities in the future, I [the instructor] will do it again...and OSL should have more research-type service-learning projects like this one by extending it to other subjects.”

“Of course, I [the OSL coordinator] am willing to do it again... I think both OSL and the university want to promote more training in research skills to undergraduate students...and let them acquire more research experience.”

“I [the community partner] would recommend this to other organizations.”

After the research project, the research students had not developed a very keen passion for research. This lukewarm attitude may have been caused by the heavy workload and high demand for quality. Nonetheless, they maintained a positive view toward research and appreciated its merits. They claimed that they would engage in research again if necessary and recommend it to others:

“If research can bring benefits to my work, I will do it.”

“If my fellow classmates want to learn research skills, I will recommend this course to them.”

## CONCLUSIONS

This paper proposes a faculty-student research collaboration model by integrating faculty research into training UGs in research skills via research-type service-learning, underpinned by SDT and built on the model developed by Koehler et al. (2015). The three phases of the model emphasize the inputs required by collaborative implementation taken by and benefits created for different stakeholders. The requirements and collaborative implementation

establish the foundation to fulfill the three basic psychological needs in SDT, namely autonomy, competence, and relatedness, for positive teaching and learning outcomes.

The model was evaluated in a service-learning course, in which students performed a research-type service-learning project and achieved the research and publicity outputs of the high value expected by the instructor. Although the instructor did not state the benefits concerning teaching and research supervision skills, she did reflect on the challenges she had faced and suggested possible solutions. Speeding up the research progress with tangible outputs has met the instructor's research interests. The author believes that the benefits mentioned above can be attributed to the instructor's intrinsic motivation in the research project to achieve better teaching and research performance. Moreover, the community partner received the research findings and infographics well.

On the other hand, stronger ties with academia and an influence on social/economic development could not be shown in the results, given that the OSL, as an entity, belongs to the university. The benefits of facilitating social and economic development may not be realized until the university shares the infographics with the public. Moreover, the nature of the research topic could not guarantee an immediate community impact.

The research students achieved various developmental outcomes. They acquired research skills, experience, and a professional perspective, apart from applying knowledge with a sense of achievement. They also connected course content with service and understood how teamwork and leadership theories are displayed in the workplace. The author argues that these benefits resulted from the instructor's conducive learning environment, the instructor, the community partner, and the OSL, under a well-structured research project with clear objectives, which responded to genuine community needs to create community impact and connect with course content. The research students thus gained a sense of autonomy and competence, which motivated them to learn. Furthermore, frequent interaction between the research students and the other stakeholders when reporting progress and discussing findings built strong relationship. It promoted relatedness, letting the research students feel the commitment of the instructor and the community partner and further motivating them to achieve more.



Although the research students did not develop a keen passion for research, they witnessed its power in action. Consequently, they maintained a positive view toward research, which could not have been achieved without intrinsic motivation and a genuine appreciation of research. Besides, the students did not mention much continual reflection as a learning outcome. This can be ascribed to being mainly engaged in data coding, analysis, and reporting. As the instructor had laid down the research framework, they were not expected to play roles in research design, which requires more critical thinking and reflection. In this light, a well-designed research project might confine students, causing a loss of autonomy and undermining their intrinsic motivation and reflection. Contrarily, giving too much freedom to inexperienced students would not achieve the intended learning outcomes. Therefore, a balance needs to be achieved.

Furthermore, the research students did not seem to show significant civic orientation enhancement and engagement with community knowledge for several possible reasons. First, the students might not easily connect the data coding and analysis task to the broader community. Second, the goal of investigating the WFH influence might not be highly associated with typical community scenarios, as in direct service in service-learning. Third, the online learning mode further increased psychological distance from the community. Previous research has highlighted that schools and the community context are essential in cultivating students' civic-mindedness (Revell, 2008), remarkably lacking in the online learning environment.

The small enhancement in civic orientation and engagement also echoed the OSL's concern over whether research-type service-learning could demonstrate community impact. The community impact generated by research-type service-learning is not easily demonstrated directly at the operational level. Take this project as an example: The community impact created by the infographics was indirect and will take time to emerge. The infographics will not be shared with the public until the university's next public activity or the next round of OSL internship recruitment.

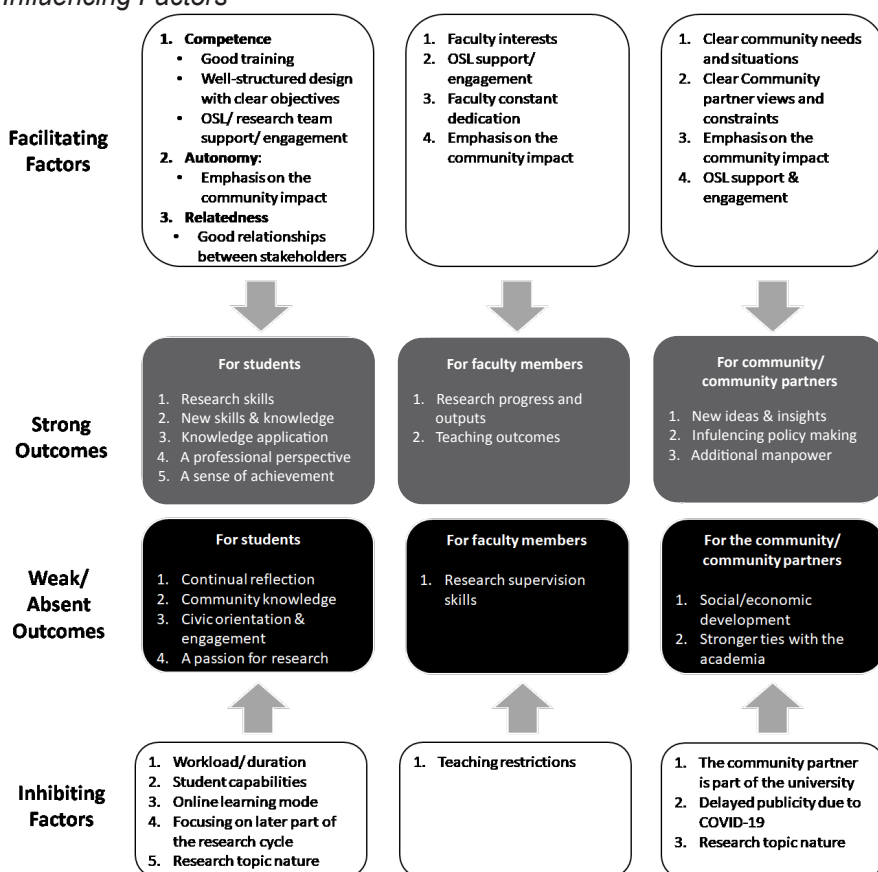
In addition, the project's success proves the critical role of the community partner and institutional infrastructure in research-type service-learning, which is in alignment with the findings of previous studies (Marston & Nelson, 2014). The students could not have succeeded without the research team's dedication to supervision and training. Together with the

coordination supported by the OSL, they constituted a conducive learning environment to develop students' competence. The community partner's involvement in research design and active consultation with students ensured that the research project carried value and real community impacts.

To conclude, this evaluation has essentially confirmed the proposed model through empirical evidence. Figure 2 summarizes the findings and possible influencing factors.

**Figure 2**

*The Outcomes Arising from the Research Projects and Possible Influencing Factors*



## Implications, Limitations, and Further Research

This study draws several implications for the service-learning community. Theoretically, the model of research-type service-learning in this study supported SDT and demonstrated how it could satisfy the three basic psychological needs of intrinsic motivation to achieve teaching and learning benefits. Students' interest was increased by the value of impacting the community by applying their knowledge in real-life situations, which fulfills the need of autonomy. This finding is consistent with previous studies showing that meaningful and valuable service motivated students to be more committed with greater control over service and achieve the most significant learning outcomes. In contrast, meaningless service lowered their feelings of empowerment and undermined learning outcomes (Billig et al., 2005; Furco, 2002). A well-structured learning environment designed and supported by all stakeholders is conducive to developing students' sense of competence, as supported by past research findings (Law, 2012). Lastly, the reciprocal nature of service-learning between students, community partners, and instructors promotes relatedness. Reciprocity is advocated in service-learning such that all parties are both servers and served as regards teaching and learning, resulting in mutual benefits (Godfrey et al., 2005; Jacoby, 1996; Kendall, 1990). Past research has reported that genuine relationships fostered in service-learning between students and the community have helped students achieve various learning outcomes (Au Yeung et al., 2019; Khiatani & Liu, 2020; Lai, 2009). In this light, how the service-learning process and benefits can be theorized and affected by SDT can be further explored in future research.

The model and evaluation also offer several practical implications. First, by integrating faculty research and UG training in research skills, the evaluation illustrated that research-type service-learning created benefits for all stakeholders and was especially useful to engage faculty members by facilitating their research progress. Second, if research-type service-learning projects match course content, students can better apply their knowledge and strengthen developmental outcomes. Third, research-type service-learning has demonstrated its edge during the pandemic, as performing direct service becomes difficult. It may still be a good alternative in the post-COVID-19 era. Fourth, the evaluation reminded us of the importance of the community

in research-type service-learning; therefore, measuring community impact becomes critical. Fifth, given that service-learning is usually limited to a short duration (Tryon et al., 2008), such as one semester, it is recommended that stakeholders set out the research project goals within resources obtainable or consider a longer project period, as recommended by previous studies (Peterson & Schaffer, 1999; Reardon, 1994). Further research can explore how project duration affects the fulfillment of the psychological needs in SDT. For example, previous studies have indicated that students found it difficult to build good work relations within a short period (Lai Yeung, 2013).

Sixth, in a similar vein, the challenges mentioned by the stakeholders remind us of common obstacles in service-learning, including workload, workforce, and project difficulty level, consistent with past findings (e.g., Ma & Law, 2019; Lai Yeung, 2013). This challenge is particularly acute for students, as they must perform advanced research without a research background. As discussed, it is necessary to address and further explore how to achieve the right balance between workload, stakeholders' abilities and intended outcomes in designing service-learning.

This study has added value to the evidence-based service-learning practice and a new basis for faculty engagement. Several limitations should be noted. First, the model was evaluated on a single course with few participants, compromising its generalizability. Further research should test the model on larger and more heterogeneous samples, such as a diverse range of course subjects, research topics, student abilities, and types of community partners.

The second limitation lies in the type of community partner. As the OSL professionally supports service-learning, unknown benefits and challenges may emerge when research-type service-learning is extended to other community partners. Further studies should address this with community partners outside the university.

The third limitation arises because research projects are usually longer than regular service-learning courses. This leaves room for an investigation into how research projects benefit from more extended service-learning programs, such as a year or more.

## ACKNOWLEDGEMENT

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# Reaching Out to Partner Organizations during the Pandemic through E-Service Learning

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The unprecedented closure of schools in the Philippines amidst the COVID-19 pandemic has forced educational institutions to transition from conventional learning to online learning.

The DLSU partner organizations belonging to the poor and marginalized sectors of society were heavily affected by the community quarantines that the national government imposed in the entire Metro Manila. Mindful of its role in society, the DLSU continues to learn while pursuing social engagement through electronic Service-Learning (e-SL). The e-SL allowed the students to reach out to these partner organizations through online delivery of service.

The purpose of this study is to 1) describe the situation of the select partner organizations and their members during the lockdowns caused by the pandemic; 2) identify the e-SL activities extended by the students to select partner organizations. To answer these research questions, a quantitative and qualitative research design was employed by administering an online survey to partner organization representatives.

Results of the study revealed that most members of the partner organizations lost their jobs and sources of livelihood. In response, the DLSU students conducted a donation drive to raise funds to purchase food packs, medicines, and hygiene supplies for the immediate need of the members of the organizations. Community leaders' participation in the entire e-SL project activities resulted in developing a more sustainable projects such as capacity building, development of educational materials, and organizational development activities.

**Keywords:** electronic service-learning; e-service-learning; community outreach; COVID 19 pandemic; online learning

## INTRODUCTION

When the COVID-19 pandemic hit the Philippines in March 2020, the entire Metro Manila was placed in a strict enhanced community quarantine resulting in a temporary work stoppage, restricted operation of many commercial establishments, cancellation of big events to avoid mass gathering, limited transport operations, and closure of schools. The national government imposed these measures to stop the spread of the coronavirus and ensure the health and safety of everyone.

In response to these restrictions on movement, the DLSU transitioned from face-to-face learning into remote learning. It is facilitated by a learning management system (LMS) accessed through the internet. Various online communication platforms and tools were used to continue with the learning process through synchronous and asynchronous learning methods. These digital tools and platforms are Canvas (Animospace), Zoom application, electronic mail, Facebook, and others. In the online learning format, the use of technologies such as smartphones, computers, tablets, and internet connections is paramount.

However, at the onset of the lockdowns, the courses with Service-Learning (SL) components were discontinued as they highly depend on in-person interaction with the people from the community. Service-Learning is defined as a

course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs, and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility (Bringle & Hatcher, 1999, p. 113).

DLSU uses service-learning as a teaching and learning methodology applied in select courses (or subjects). As stipulated in the DLSU Strategic Plan of 2011, all colleges are required to integrate Service-Learning in all their undergraduate and graduate academic programs. In response to this mandate and to support the university vision and mission, the Center for Social Concern and Action (COSCA), the social development arm of DLSU, formed the Service-Learning Program (SLP) as one of its major programs.

Being mindful of the role of Lasallians in society and pursuing S-L despite the pandemic, the SLP team offered the faculty members to recalibrate their syllabus and adopt electronic-service-learning or e-SL starting Term 3 of Academic Year 2019-2020.

The application of e-SL in the syllabus proves that the pandemic does not impede students' continuous learning, gaining experience, and civic engagement. Inspired by the constructivism principles, students continue to learn outside their homes and create reflections and ideas based on their virtual experiences. The constructivism learning theory means that people actively construct or make their knowledge and that reality is determined by their experiences as a learner. Learners use their previous knowledge as a foundation and build on it with new things that they learn (Western Governors University, 2020).

### **From Face-to-Face Service-Learning to E-Service-Learning**

According to Waldner et al. (2012), E-service-learning occurs when the instructional component, the service component or both are conducted online. The development of e-SL evolved due to the proliferation of the online learning mode in many universities abroad (p.125). He emphasizes that online learning has grown significantly in the last decade, particularly in the United States. Nonetheless, e-service-learning remains rare. The pace of growth of service-learning offerings online has not kept pace with the online student population growth. Because few schools or instructors are using e-service-learning, most online students do not receive service-learning benefits. Dailey-Hebert et al. (2008 cited in Waldner et al., 2012) suggested that a movement to electronic-service learning may force some service-learning practitioners to abandon their service-learning endeavors if they cannot transition successfully online.

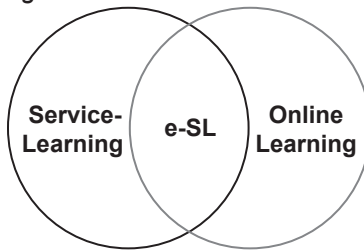
Furthermore, Waldner et al. (2012) argued that online learning is a facilitator rather than a barrier to service-learning. E-service learning holds the potential to transform service-learning and online learning by freeing service-learning from geographical constraints and equipping online learning with a tool to promote engagement. Thus, e-service-learning is not a mere pedagogical curiosity; instead, it is a key to the future of service-learning (pp.123-124).

Waldner et al. (2010) explained that online service-learning is important because

Service-learning may be particularly useful for adult learners often found online because it engages their life experiences and ability to learn from hands-on. Moreover, E-service learning may compensate for the lack of interaction that can occur in traditional distance learning courses. Combining service learning with internet instruction may introduce a new motivation to e-learning while applying knowledge in a real-world setting. A third reason involves the viability of service-learning itself. With so many courses and students increasingly online, service learning itself must go online to remain relevant and viable. Additionally, e-service learning courses open up the world of service-learning to students that would otherwise have limited access to it due to disabilities, rural location, or work or family schedule conflicts (p. 3).

To illustrate e-SL, Figure 1 shows the intersection of service-learning and online learning, describing the focus of most literature on e-S-L.

**Figure 1**  
*E-Service Learning Diagram*

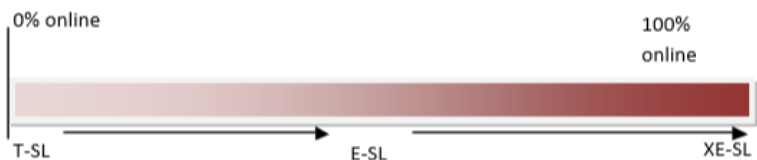


## An Emerging E-Service-Learning Typology

Figure 2 shows the continuum implying that service-learning is constantly evolving. From the left of the spectrum is the traditional service-learning, with both the instruction and service on-site or 0% online. At the other end of the spectrum lies extreme e-service-learning with 100% of both the instruction and service online. The nascent forms of e-service-learning

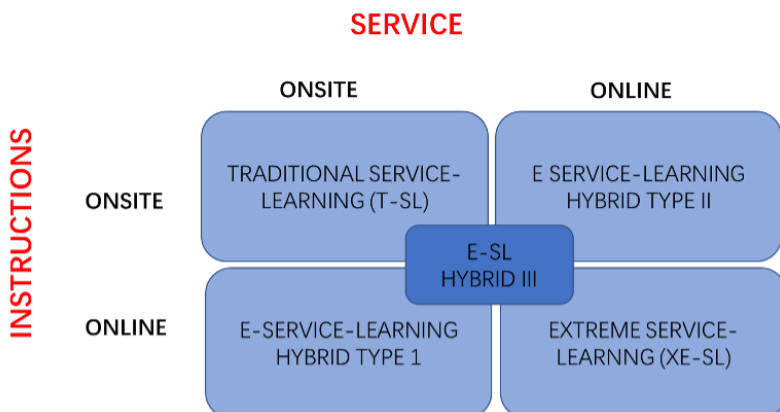
that lie between the extremes of traditional service-learning and extreme e-service-learning have been neither characterized nor rigorously studied (Waldner et al., 2012, p. 133)

**Figure 2**  
*The Continuum of Service-Learning*



According to Waldner et al. (2012, p. 133), the literature review suggested that e-service-learning generally occurs in a hybrid model, with some aspect of instruction and/or service occurring online. The e-SL typology shown in Figure 3 provides a starting point for characterizing different forms of service-learning. The literature review revealed four types of e-service-learning: Hybrid Type I (service fully on-site with teaching fully online), Hybrid Type II (service fully online with teaching fully on-site), Hybrid Type III (a blended format with instruction and service partially online and partially on-site), and extreme e-service-learning (100% of the instruction and service online). Users should be sensitive to these differences among the four types because each type features different products, partners, and limitations.

**Figure 3**  
*Types of E-Service-Learning*



Because of the pandemic, courses with SL components in DLSU are conducted 100% online or extreme SL. The extreme e-SL was implemented to sustain students' active social engagement with partner communities, especially those heavily affected by the pandemic, through pure online delivery of service.

Before implementing e-SL, the first step was to conduct an online survey among the 15 SL partner organizations to assess their current situation. The online survey was administered by the COSCA -Partnership, Network and Development Program (PNDP). Based on the results of this survey, the key officers and community leaders revealed that they lost their sources of income due to the prolonged lockdowns. Several organizations temporarily stopped their operation. Some are working from home. Life became more difficult, and many of them depended on government assistance. Many are fearful of the virus. However, despite their current circumstances, most partner organizations are still willing to continue their partnership with the students even through online mode. Online learning requires stable and secure technologies that are crucial for efficient communications and interpersonal exchange. The partners' involvement in e-SL was based on their capacities and familiarity with the technology, such as basic email, conferencing platforms (i.e., Zoom, Google, Facebook), threaded discussions, or real-time chat and instant messaging.

In this context, these research questions are raised: What is the current situation of the S-L partner organizations during the COVID-19 pandemic? What e-SL activities were extended by the students to select partner organizations? This research attempts to contribute to understanding the community situation in times of the pandemic. It also intends to provide information on the use of electronic service-learning as a teaching pedagogy and a useful method for remote learning. This study serves as a reference in developing guidelines for online service-learning of the university. It could also be used to develop programs and services for the community as a social response to the COVID-19 pandemic. Various organizations can use the results to facilitate remote community engagement activities and find an effective approach to strengthen their partnership with educational institutions. Furthermore, this research can also be used by the students and faculty members looking to broaden their community outreach strategy through online delivery.

The primary expected users of this study are the DLSU-COSCA staff, faculty members, students, partner organizations, and the community. Concurrently, the secondary users include the various stakeholders from the Philippines and abroad.

## **Objectives**

The objectives of this research are to:

1. Describe the situation of the select partner organizations and their members during the lockdowns and government restrictions caused by the COVID -19 pandemic.
2. Identify the e-SL activities and projects extended by the students to select partner organizations.

## **METHODOLOGY**

This research employed a quantitative and qualitative research design that involved using an online survey. This study selected convenience in distributing the tool providing ease of distribution and retrieval. However, the results cannot be generalized as convenience sampling was used.

Purposeful sampling was utilized in the selection of participants for this study. Purposeful sampling is a method that allows the researcher to select a sample population based on prior information (Fraenkel et al., 2012.). This means that respondents are selected based on the defined selection criteria. In this sampling method, all respondents to the online survey are DLSU-COSCA partner organizations involved in the S-L activities of the students.

On the students' part, data were gathered from their project documents, e-journals, and project outputs submitted to COSCA SLP coordinators and partner organizations.

## **Participants**

### **Community Partners**

The DLSU-COSCA community partners are from people's organizations, non-governmental organizations, faith-based organizations, and



foundations. For more than five years, most of them have been involved in various curricular and co-curricular social engagement activities with the Lasallians.

The total number of respondents in this survey is 275 from 64 partner organizations and communities. For this study, only those partner organizations involved in the service-learning program were included. This covers 24 respondents from 15 SL partner organizations located in seven (7) cities in Metro Manila (Manila, Pasay, Caloocan, Malabon, San Juan, Quezon, Muntinlupa). The respondents' positions in their respective organizations are head of the organizations, program staff, key officers and members, parent volunteers. Of the total respondents, 11% are male, and 89% are female.

## **Students**

There were 405 students involved in this study taking the Corporate Social Responsibility (CSR) class in Term 3, AY 2019-2020. This comprised eleven (11) sections with five (5) faculty in charge. This course is co-managed by the SLP team; thus, they have access to all the e-SL program documents. There are two types of CSR classes, the CSR and Governance (CSRGOVE) taken by third-year and graduating students. The other type is College of Business CSR and Governance (COBCSRG), taken by mostly first- and second-year students. Three hundred eighteen (318) COBCSRG students participated in e-SL, while 87 CSRGOVE students participated.

## **Instruments**

The coordinators of the COSCA Partnership, Network and Development Program (PNDP) initiated the assessment of the situation of its partner communities during the community quarantines imposed by the national government in the entire Metro Manila. The online survey was administered using Google Forms from June 13 to June 29, 2020. The objectives of the survey are 1) to determine the current state of partner organizations and how pandemic has impacted their organization and the clients/community they serve; 2) to determine the top priority needs of the partner organizations; 3) to determine the capacity of partners in telecommunications. Only the first and second question of the survey were aligned with the research objectives and result of the analysis.

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## RESULTS

The succeeding discussion presents the result of an online survey of the partner organizations. It also presents the projects extended by the CSR students in the new normal.

The members of these partner organizations and communities were severely affected economically, financially, physically, and mentally due to the pandemic. The COSCA-PNDP team reached out to these partners by regularly communicating with the key officers to know about their situation. An emergency relief operation was launched to respond to partners' immediate needs.

The PNDP team conducted an online survey to learn more about the local condition. The survey was made to engage in conversation with community organizations to understand how the pandemic has impacted their organization and the clients/community they serve. The result of the survey provided a basis for the students' social response and the kind of S-L project needed by the organization.

### Results of Online Survey of Partners

The Google form is divided into three parts: Part 1 on the Community Situation, Part 2 Partner's digital connectivity, Part 3 Readiness of partners for virtual social engagement. Parts 1 and 2 answer the research question: What is the current situation of the S-L partner organizations during the COVID-19 pandemic?

#### Part 1 Community Situation

The respondents were asked about the assistance they received during the enhanced community quarantine. The top three responses are relief assistance through food packs, financial assistance, and personal protection supplies (i.e., Face masks). The agencies that assisted are the Barangay (village), local government unit (LGU), and Department of Social Welfare and Development (DSWD).

When asked about the situation of the community in terms of health, the respondents mentioned that some felt generally good and safe. Some confirmed that there are increasing COVID cases in their community. Many

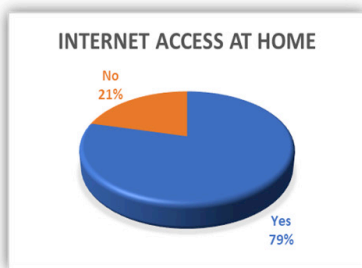
are very fearful of the virus. Others mentioned that they were running out of food and hygiene supplies. In terms of livelihood, a few mentioned that life is more difficult these days; some have lost their jobs; thus, they have no income, and they depend highly on government assistance. Others were lucky to continue their work remotely. There is limited transportation resulting in restricted mobility. In terms of education, schools are closed, and their children have difficulty with their blended learning. In terms of organizational operations, some organizations stopped their operations temporarily while the other organizations' personnel were working from home.

When asked about how Lasallian can respond to the needs of the organization or community, these were the common answers: development of issue advocacies and information materials (i.e., health, education), provision of relief assistance (i.e., food, medicines, milk, vitamins, PPE, etc.), development of e-learning strategies and materials, financial assistance, the conduct of webinars, and livelihood assistance/program.

## Part 2 Partner's Digital Connectivity.

The respondents were also asked if they were using the internet. About 87% of the respondents said "yes," while 13% said "no." On the reasons they are using the internet, the top three answers are communication, work, and coordination tasks.

**Figure 4**  
*Internet Access at Home*



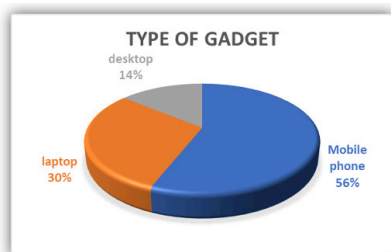
**Figure 5**  
*Use of Email*



When asked if they have internet access at home. About 79% of the respondents said "yes," while 21% said they "do not have internet access." Those with internet access were asked how they gained access, and the

answers are through postpaid Wi-Fi, prepaid Wi-Fi, and mobile data. All or 100% of the respondents said they have an active email address. When asked how often they use their email, 75% said they use it “every day,” 21% only “if needed,” and 4% only “2-3 times a week.”

**Figure 6**  
*Type of Gadget*



**Figure 7**  
*Best way to Reach*



On the gadgets or devices they use for the internet, 56% use mobile phones, 30% use a laptop, and 14% use computer desktops. The top three answers on the commonly used communication applications are Facebook, Facebook Messenger, Gmail/Yahoo mail, and YouTube. When asked about the best way to reach them through an online platform, 47% said they could be reached through Facebook messenger, 29% via Zoom, 11% through Google Meet.

### Part 3 Readiness of Partners for Virtual Social Engagement

**Figure 8**  
*Readines for Virtual Engagement*



The respondents were asked about their readiness for virtual engagement. About 75% of the respondents said they are “willing to participate in virtual meetings and online classes” through various online platforms. Twenty-five

percent (25%) of the respondents said they are “not familiar” but willing to learn. About 71% of the respondents are “familiar with webinars or online seminars,” while 29% are not.

The respondents were asked about possible challenges they might experience during online activities. Common responses are the “lack of devices for online work,” “poor internet connection,” lack of “knowledge and experience on online learning,” lack of “readiness,” and “additional cost” this may entail. For the PWD sector, the respondents confirm that it will be difficult to perform online tasks due to their multi-disability conditions.

When asked about their openness to continue online service-learning and virtual coordination with COSCA personnel, 100% said “yes.” On ensuring their participation in virtual social engagement and online communication, the respondents said they could be reached through email, social media, and video calls. Proper orientation on their responsibilities and schedule of activities is vital to ensure their participation. Regular coordination and advance notice are also vital for preparing them for online activities.

## **Students’ e-SL Projects**

This section describes the CSR students’ e-SL projects extended to their partner organizations. It also answers research question number two: What e-SL activities were extended by the students to select partner organizations?

Students who participated in the e-SL class are taking Corporate and Social Responsibility (CSR) from the College of Business. For better classroom management and to ensure student participation, each section, depending on the class size, was divided into three (3) to six (6) groups with three to five members. Each group came up with a project addressing the identified need of their partner community/organization using the rights-based approach. The elements of the rights-based approach to development include expressing linkage to rights, accountability, empowerment, participation, non-discrimination, and attention to vulnerable groups (Khadka, 2012). Applying the rights-based approach in project development, the students implemented 53 projects with the partner organizations either members of or caters to the vulnerable and marginalized groups. Table 1 presents the list of students’ partner organizations.

**Table 1***List of e-SL Partner Organizations*

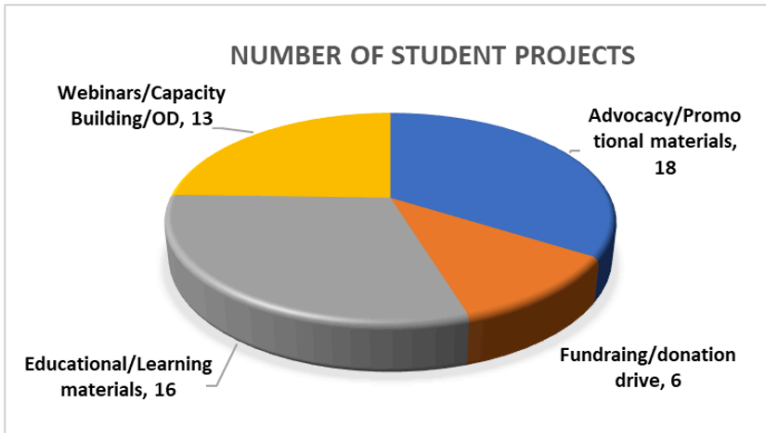
<b>NAME OF ORGANIZATION</b>	<b>NATURE OF ORGANIZATION</b>
Educational Research and Development Assistance Foundation (ERDA)	An NGO that promotes the improvement of the quality of life of marginalized Filipino children and youth through education and support programs in partnership with their families, schools, and communities.
P. Valenzuela Elementary School (PVES)	Public elementary school in Valenzuela City, Metro Manila
Handicapped Lourdes Center, Inc. (HCL)	An NGO that brings the love of Jesus Christ into the multiple-handicapped individuals through residential daycare, physical therapy, and advocacy programs.
Ministry for Children's Education and Catechesis (MCEC)	A church-based organization composed of volunteer catechists that provide values formation, academic assistance, and ecclesiastical activities for children in the surrounding urban poor community.
Mission Ministries Philippines (MMP)	An NGO that focuses on an early child development program
Kapisanan Ng Mga Kamag-Anak At Migranteng Manggagawang Pilipino, Inc. (KAKAMPI)	An NGO that aims to empower overseas Filipino workers (OFWs) and their families through organizing, advocacy, campaign, gender responsiveness, and partnership projects.
GEMS Heart Outreach Development Inc.	An NGO that supports urban poor children's education, families, and communities with sustainable projects and services
Motortrade Life and Livelihood Assistance Foundation (MLALAF)	An NGO that aims to empower individuals, families, and community with knowledge, skills, and biblical values producing quality life and responsible citizen. It is also a service provider of the Alternative Learning System (ALS) in partnership with the Department of Education for the out-of-school youth.
Tahanan Outreach Programs and Services (TOPS)	An NGO that provides an educational program with a focus on music, arts, and technology to the underprivileged children as well as those with learning disabilities

Based on the needs of the partner organizations identified during the partner's virtual orientation, the CSR students extended e-SL projects

such as advocacy and promotional materials, development of educational and learning materials, the conduct of webinar/ capacity building, and organizational development activities, and fundraising. Figure 9 shows the type and the number of community development projects done by the students.

**Figure 9**

*Types and Number of Students' e-SL Projects Extended by the Students*



As described in Figure 9, 18 advocacy and promotional materials were developed by the students. These online advocacy materials focused on the sectoral issues to which the partner organization would like the public to bring awareness. These issues are related to the plight of the PWDs (persons with disabilities), OFWs (Overseas Filipino Workers), underprivileged school children, and urban low-income families. There are also several materials done to promote online programs and services of the partner organization.

The student prepared 16 digital education/learning materials for the public school children and ALS (Alternative Learning System) learners who were attending online classes. These materials were prepared for public-school teachers and ALS instructors as visual aids during virtual class.

There were 13 capacity-building activities and webinars to address specific training topics that the partner organizations identified. Moreover, because there is no face-to-face activity, the training or lecture-discussion and demonstrations were pre-recorded, and video tutorials were produced on business leadership, cooking, gardening, livelihood, and digital marketing. A

webinar on OFWs was also organized where a speaker was invited to deliver the talk.

Furthermore, six (6) donation drives were conducted to solicit educational materials, relief goods, and hygiene supplies for the partner beneficiaries. A detailed list of e-SL projects done by the CSR students is shown in Table 2.

**Table 2**

*Type of Projects and List of e-SL Projects*

TYPE OF PROJECT	LIST OF E-SL PROJECTS
Promotional/Advocacy materials	<ul style="list-style-type: none"> <li>▪ Creation of social media pages to boost the popularity of local school</li> <li>▪ Promotion of artworks of kids to be sold for fundraising.</li> <li>▪ Online campaign to promote proper hygiene and sanitation through video tutorials for school children</li> <li>▪ Online awareness campaign on the plight of the PWDs</li> <li>▪ Awareness campaign on COVID-19</li> <li>▪ Online self-care materials on mental health issues of OFWs</li> <li>▪ Infographics on the plight of OFWs for posting on the organizations' Facebook page</li> <li>▪ Improvement of Facebook page and organizational website</li> <li>▪ Organizational promotional videos (thrusts, programs, objectives, structure, situation during a pandemic) for posting on the organizational Facebook page</li> <li>▪ Infographics on voters' education and voters rights</li> <li>▪ Digital organizational primer (organizational profile)</li> </ul>
Fundraising/donation	<ul style="list-style-type: none"> <li>▪ Donation drive/Fundraising for the following:</li> <li>▪ Education materials (braille books, school supplies, crutches, wheelchair, installation of ramps) for children with multiple disabilities</li> <li>▪ Hygiene kits (face masks, alcohol, wipes, vitamins) for children with printed brochures on proper handwashing, use, and disposal of masks</li> <li>▪ School supplies and old books</li> <li>▪ Relief goods</li> <li>▪ An open platform for one-time solicitation project</li> </ul>



Educational/Learning Materials	<p>Development of digital education and learning materials on the following:</p> <ul style="list-style-type: none"> <li>▪ Interactive virtual field trip for school children</li> <li>▪ Interactive digital magazine on COVID awareness for children</li> <li>▪ Video tutorials on stress management</li> <li>▪ Informative videos on drugs</li> <li>▪ E-learning activity for small business development</li> <li>▪ Ecosystem conservation for ALS students</li> <li>▪ Arts and crafts materials and videos</li> <li>▪ Useful life's lesson</li> <li>▪ Alternative Learning System high school modules</li> <li>▪ Recycling for ALS learners</li> </ul>
Webinars/ Capacity building/ Organizational Development	<ul style="list-style-type: none"> <li>▪ Upcycling of clothes to make marketable and effective PPEs and facemask.</li> <li>▪ Video materials on livelihood development</li> <li>▪ Digital marketing workshop</li> <li>▪ Livelihood infection control workshop (soap and alcohol making)</li> <li>▪ Cooking tutorials for children's meals</li> <li>▪ Webinar on basic rights of OFWs during COVID crises</li> <li>▪ Step by step braille and sign language workshop</li> <li>▪ Container gardening</li> <li>▪ Webinar on business leadership</li> <li>▪ Technological education video tutorials</li> </ul>

## Applying the Lasallian Reflection Framework in e-SL

All social engagement activities in the university are guided by the Lasallian Reflection Framework (LRF): a continuous process of seeing-experiencing (Masid-Danas), analyzing- reflecting (Suri-Nilay), and acting-committing (Taya-Kilos) to manifest Lasallian core values of faith, zeal for service, and communion in mission (COSCA, 2012). Inspired by this, service-learning activities engaged students to understand community situations better, analyze the root problems, and address community needs through meaningful service and learning activities.

In the absence of in-person interaction with the people from the community, the SLP team reimaged the delivery of LRF without compromising the very essence of students' social engagement. Instead of an actual community tour, the class received an online partner's orientation via Zoom meeting in the see-experience stage. , Some partners presented a virtual tour of their community to appreciate the community situation better. The students identified possible projects based on the needs of the partner organization through their online interactions. In the analysis-reflection

stage, the students analyzed the community concerns through virtual consultation meetings with the key community leaders. The organization's profile and organizational webpage helped the students better understand their programs, services, situation, and needs.

Moreover, the students implemented projects through synchronous and asynchronous methods for the commitment-action stage. As shown in Table 2, some projects that emerged as a response to the COVID 19 pandemic. Table 3 shows how LRF was conducted, the e-SL process, and the applied online adaptation strategies and methods.

**Table 3**

*Online Strategies/Methods (Guanzon, 2021)*

LRF	E-SL Process	Online Strategies/Methods	
		Synchronous (Online, Real-time)	Asynchronous (Offline, Self-paced)
See-Experience (Masid-Danas)	Orientation <ul style="list-style-type: none"> <li>▪ E-SL</li> <li>▪ Partner organization</li> </ul>	Video conference of presentation (PowerPoint presentation) and virtual community tour	Presentation materials, pre-recorded videos, and related literature are uploaded in Canvas (Animospace)/Google drive/Cloud storage
Analysis-Reflection (Suri-Nilay)	Project identification and Development	Virtual discussion between students and partner organization  Online project proposal presentation of students to partners	Preparation of project proposal using a template as a guide
	Project Coordination and Feedbacking	Online consultation meeting  Group chats (ie. Viber, FB messenger, text messaging, etc.)	Email
	Reflection	Group reflection/sharing using reflection guide through video conference  Guided class online discussion  Pre-recorded group reflection	Uploading of reflection guide and rubrics in Canvas/Google drive/Cloud storage  Reflection is done in the form of e-journals, blogs, video blogs, photo essays, written essay

Commitment- Action (Taya-Kilos)	Project Implementation	Online project activity implementation such as a webinar, tutorials, Facebook/YouTube account creation tutorials, etc.	Uploading of project outputs in Canvas, Google drive (i.e., marketing materials, video tutorials, infographics, learning materials, etc.)
	Project Turn-over and Presentation	Oral presentation through video conference of the class and with the partner organization	Uploading of project outputs and video recording of presentation in Canvas/Google drive
		Questions are sent through chats or discussion boards	Recorded presentations are shared and distributed to the partner organization
	Evaluation	Live video conference discussion using evaluation guide	Uploading of project evaluation rubric Canvas/Google drive
			Online evaluation using Google Form
			Pre-recorded group evaluation using evaluation guide

## DISCUSSIONS

This research highlights the immediate impact of the pandemic on the COSCA-SLP partner organizations. The CSR students, in response, worked with the community leaders and members in the implementation of online projects, which helped alleviate their current situation.

*Integrative Pedagogy.* With the restrictions in mobility because of the pandemic, the COSCA SLP successfully applied Waldner's pedagogy of extreme SL, wherein 100% of the instruction and service are done online. Various synchronous and asynchronous methods were used to ensure students' and community partners' engagement. However, Waldner & Hunter's (2008) study revealed that extreme SL occurs in client-based courses, with students producing a limited product, such as a grant or policy analysis for the community partner. This research proved that online projects/products were not limited to grant and policy analysis only. The CSR students explored and have effectively executed various online projects such as the development of promotional/advocacy materials, donation drive, educational/learning materials, conduct of webinars, and capacity-building

activities. Limitations were surmounted because of the 1) openness of the students to explore new strategies to reach out to the communities, 2) high level of internet connectivity of both the students and community, and 3) readiness of partners for virtual social engagement.

Additionally, some literature would argue that extreme SL produces less civic engagement, which is also shared by the CSR students based on their anecdotal reflections that e-SL has less social engagement. This may be because social engagement is traditionally done in person and with interpersonal interactions. However, e-SL has paved the way for a new civic engagement using digital technology. The experiential learning principles of SL have been achieved since the students could see the community situation virtually, interact with community leaders through online meetings, and were actively involved from the planning, coordination, implementation, until the evaluation phase of the project.

It is important to note that this research supports the study made by Dailey-Hebert, Donnelly-Sallee, & DiPadova-Stocks (2008) that service-eLearning is “an integrative pedagogy that engages learners through technology in civic inquiry, service, reflection and action” (p.1). This research proved that CSR students use digital technology to learn about the situation of their partner organization, analyze the issues besetting them, and act by extending projects.

*Rights-based Approach.* The rights-based approach in community development has been promoted and applied in this university and community partnership. This is evident in the following: 1) partner communities/organizations participation in addressing their issues and needs, 2) inclusion of key stakeholders in the identification, planning, and implementation of e-SL projects, 3) capacity-building activities extended by the students contributed to enhancing the key leaders’ skills in sustaining these projects, and 4) as moral duty bearers, students took responsibility to support, promote and respect human rights and dignity through their social engagement.

Despite the pandemic, the community’s participation and continuous engagement in their development support the sustainable solution to the current situation.

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## CONCLUSION AND RECOMMENDATION

It can be concluded that the COVID-19 pandemic, which is still wreaking havoc in the country, has severely affected low-income families, especially those belonging to the poor and marginalized sectors. The COSCA-SLP partner organizations and communities are not spared from this situation. Many of the members and leaders of these partner organizations suffered from the loss of jobs with no alternative sources of income. They depend mostly on government assistance. Several offices of these partner organizations temporarily stopped operations while others continued to work from home. Fear and anxiety are heightened because of their community's increasing COVID-19 infections. Schools are closed, and children are undertaking blended learning. Despite this, most partner organizations are still willing to continue their engagement with Lasallian students online since many of them are already familiar and are using email and various online platforms for their regular online communications.

Applying the principles of the rights-based approach in community development and with the partners' readiness and willingness for online social engagement, students were able to extend worthwhile projects to ease the impact of the pandemic and hopefully build the community's future resilience. The projects were implemented and adjusted according to the peculiarities of the current situation. More importantly, these projects can be sustained as the community leaders, and members were involved in the entire e-SL process.

The introduction of e-SL as an integrative pedagogy in teaching courses with the SL component is DLSU's response to pursue students' social engagement and reach out to partner communities, especially in this time of the pandemic. This is very significant because the courses with e-SL allow the students to be mindful of their social responsibility and respond to the needs of partners who were severely affected by the lockdowns. The students, faculty, and partner organizations have gained collaborative virtual partnerships which extend beyond the technological connections. Indeed, e-SL has created borderless social connections with the stakeholders creating a more sustainable partnership.

Electronic service-learning undoubtedly became a catalyst to reach out to the members of partner organizations adversely affected by the COVID-19 pandemic. Adapting to this online teaching and learning pedagogy ensures

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that service to the communities does not completely stop; hence, use this to continue with students' learning process and sustain social engagement, which is DLSU's educational mission of serving society.

Future research on the impacts of online service-learning on students, faculty, and partner communities is recommended.

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# Service-learning Outcomes Measurement Scale (S-LOMS): Chinese Translation and Validation

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The Service-Learning Outcomes Measurement Scale (S-LOMS) was developed in Hong Kong and established as a valid and reliable instrument. It is a resource for further advancing service-learning in Hong Kong and potentially across Asia. Since Chinese-speaking regions comprise a major proportion of the population of Asia, the first translation project for S-LOMS was from English into Chinese. This study reports how this was done and how the Chinese version was validated. The Chinese S-LOMS was developed using a back-translation approach and then pre-tested with 11 students, who were interviewed about their understanding of the constituent items. The pre-testing results suggested that the Chinese S-LOMS has good translation validity, equivalent to that of the original English version. An empirical validation exercise with a sample of 106 participants from a Hong Kong local secondary school was conducted with factor analysis and reliability checking. Results indicated good validity and internal consistency.

**Keywords:** student developmental outcomes, measurement scale validation, translation validity, service-learning, Chinese language

## INTRODUCTION

Service-learning has been widely adopted worldwide and particularly during the past 20 years (Ma, 2018; Snell & Lau, 2020; Xing & Ma, 2010). It is an experiential pedagogy aimed at enhancing student learning



by providing opportunities to apply academic knowledge in real situations while serving the community, with guided reflection to connect knowledge and experience (Jacoby, 1996). Despite its extensive presence within higher education across Asia, the body of research studies investigating the impacts of service-learning on various stakeholders, including students, instructors, educational institutions, and community partners, has been limited and weak (Shek & Chan, 2013; Shek et al., 2019; Xing & Ma, 2010). Snell and Lau (2020) argued that the limited number of service-learning-related research studies in Asia has, at least in part, reflected the absence of a standardized and flexible measurement instrument for assessing the developmental outcomes for students arising from service-learning. Hence, they developed the Service-Learning Outcomes Measurement Scale (S-LOMS) to address this research gap (Snell & Lau, 2020).

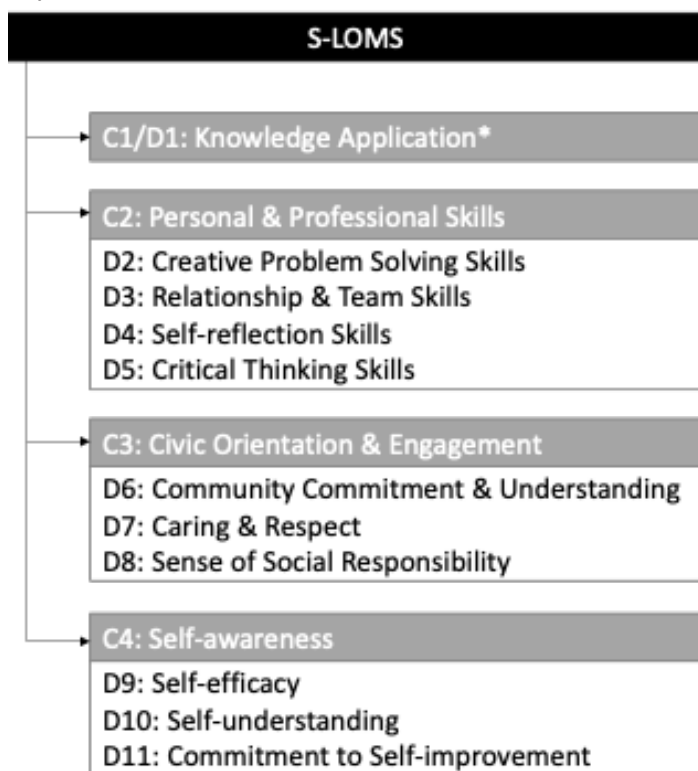
S-LOMS was designed to align with institutional contexts in Hong Kong, which have the following three characteristics (Lee, 2004), reflective of the influence of Confucianism and regarded as different from Western contexts for service-learning (Snell & Lau, 2020). First, the provision of service-learning in Hong Kong aligns closely with the educational philosophy prevalent in Chinese culture of taking a pragmatic approach by focusing on developing students' vocational skills and preparing them for future careers. Second, an emphasis reflects the orientation toward self-cultivation in the Confucian tradition on fostering students' self-awareness and reflection. Third, civic education in Hong Kong adopts a depoliticized approach by focusing on students' moral development rather than promoting democratic values.

S-LOMS covers four overarching categories and 11 learning domains in line with the above contextual characteristics. First is the overarching category of knowledge application and its cognominal learning domain. The second overarching category is personal and professional skills, which comprises the four domains: creative problem-solving skills, relationship and team skills, self-reflection skills, and critical thinking skills. The third overarching category is civic orientation and engagement, which comprises the three domains: community commitment and understanding, caring and respect, and sense of social responsibility. The fourth overarching category is self-awareness, which comprises the three domains of self-efficacy, self-understanding, and commitment to self-improvement (Lau & Snell, 2020).

The overall conceptual structure of S-LOMS, as described above and depicted in Figure 1 below, is consistent with earlier scholars' frameworks, all of which include academic enhancement, personal growth, and civic learning as key developmental outcomes of service-learning (Driscoll et al., 1996; Eyler & Giles, 1999; Felten & Clayton, 2011). It is also aligned with the classic service-learning definition as a "course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility" (Bringle & Hatcher, 1995, p. 112).

**Figure 1**

*The conceptual structure of S-LOMS*



Note: Knowledge Application is both an overarching category and the only domain within that category

C1-C4: overarching categories; D1-D11: domains

S-LOMS has been designed as a self-reporting questionnaire for students to answer before and after their service-learning experience. It comprises 56 items, each rated on a 10-point Likert scale. For the list of items and their corresponding domains and overarching categories, see the Appendix.

The reliability and validity of S-LOMS for use in English have been rigorously established through studies conducted in Hong Kong. Snell and Lau (2020) employed exploratory factor analysis and reliability analysis on a sample of 400 university students to uncover the instrument's underlying dimensionality as described above. The factor structure received further validation support through another study that used confirmatory factor analysis on a sample of over 600 university students (Lau & Snell, 2021a). In two further studies, Lau and Snell (2019, 2020) established the test-retest and criterion validity of S-LOMS. All of these studies indicated a satisfactory level of sub-scale reliability with almost all Cronbach's alpha values higher than .80.

The satisfactory levels of validity and reliability of S-LOMS in English allow practitioners the freedom to select only those domains that interest them if they do not wish to administer the entire S-LOMS instrument. However, they are encouraged to do the latter. One of the main objectives of developing S-LOMS has been to establish a centralized database for recording the developmental outcomes for students arising from service-learning. We thus envisage that S-LOMS can serve as a springboard for cross-jurisdictional, comparative studies of the developmental outcomes of service-learning across Asia.

Whether S-LOMS is reliable and valid for use in other Asian jurisdictions besides Hong Kong remains open to question. As the first step to addressing this issue, Lau and Snell (2021b) conducted a cross-jurisdictional comparison between Hong Kong and Singapore regarding student development outcomes arising from service-learning, as assessed by S-LOMS in English. As a background analysis for their study, they conducted a literature review that identified many commonalities between the goals, designs, and implementation processes of service-learning in Hong Kong and Singapore, which reflected close similarities in cultural contexts, educational philosophies, and educational policies. Their quantitative study confirmed that S-LOMS has good validity and reliability in Singapore to measure the

developmental outcomes arising from service-learning.

The above findings encourage researchers to conduct further investigations on the applicability of S-LOMS in other Asian jurisdictions. However, the language medium of the original instrument may constitute an obstacle to conducting research with student samples in locations where English is not a first or second language and where the students are not yet sufficiently proficient in English.

We considered, therefore, that it would be appropriate and beneficial to translate S-LOMS into other languages as a tool for supporting the development of service-learning across Asia, as a means for cross-jurisdictional comparative research, and as a further step towards the establishment of a centralized database. We also considered it appropriate to begin by developing a Chinese version, since Chinese is used by a large segment of the population in Asia, including but not confined to people in the PRC, Hong Kong, and Taiwan. The current study thus reports on the translation of S-LOMS from English into Chinese, along with the procedures adopted to validate the Chinese version and the results obtained regarding translation validity.

## **TRANSLATION AND VALIDATION**

The current research adopted back-translation, pre-testing, and empirical validation. The approach that we adopted for translation-cum-validation, explained below, has several merits, as Maneesriwongul and Dixon argued (2004). First, this approach enabled us to verify semantic equivalence between the source and target language versions. Second, the data enabled us to conduct reliability and validity tests. Third, we could observe whether the target language version was appropriately administered. Fourth, we could detect any discrepancies between responses to the source and target language versions.

### **Six Initial Rounds of Back-Translation**

For additional rigor, we adopted a modified version of a procedure for back-translation, with the first two steps performed as recommended by Brislin (1970, 1986). For the first step in the first round of the procedure, we

arranged for a bilingual expert to assume the role of forward translator. This paper's first author is proficient in English and Chinese and is experienced in service-learning. He performed the initial translation of all 56 items in S-LOMS from English into Chinese.

For the second step, we arranged for another bilingual expert to assume the role of back-translator. The third author is proficient in both languages and is knowledgeable about service-learning. This person conducted a "blind" translation of the full Chinese version back into English without seeing the original English version.

For the third step, in back-translation exercises that follow Brislin (1970, 1986), a meeting is typically arranged between the forward translator and the back-translator to identify, discuss, and resolve any discrepancies between the original and back-translated English versions. As an alternative step in our exercise, we arranged for the second author, a native English speaker and service-learning veteran, to serve as an English vetter. That person compared the original and back-translated English versions and identified semantic discrepancies in 17 items where the original and back-translated English versions were not equivalent.

The second round of back-translation was then arranged. The forward translator reviewed all the items that the English vetter had identified as having semantic discrepancies and then revised the corresponding Chinese forward translations. These revised items were passed to the back-translator, whose English versions were sent to the English vetter for further comparisons. Moreover, the English vetter identified five items whose two versions were not equivalent. In the third round, he identified two items where there were still discrepancies. Finally, the English vetter determined that all the original and back-translated English items were semantically equivalent on the fourth round.

We then added a further step beyond the procedure recommended by Brislin (1970, 1986). The Chinese version of S-LOMS derived from the abovementioned procedure was passed to a bilingual vetter, a native Chinese speaker and a translation professor, who has experience in service-learning. This bilingual expert compared the Chinese version against the original English version and checked for semantic discrepancies between the two versions. The bilingual language vetter suggested revisions to 39 items in the Chinese version for consideration by the forward translator,

who, after considering these, then initiated two more rounds of back-translation.

The English vetter rejected only one item because of semantic inequivalence in the fifth round. In the sixth round, this remaining item was further revised by the forward- and back-translators, and the revised item was then considered satisfactory by the English vetter. Following this, the procedure was paused, pending the pretesting phase described below.

## **Arrangements and Procedures for the Pre-testing Sessions**

As Brislin (1986) proposed, pre-testing is a means for bridging the gap between professional translators, who are extremely well-versed in the formal use of language, and the target respondents, who may be somewhat less proficient in the formal use of words and means of expression. Accordingly, the Chinese version, refined through the first six rounds of back-translation, was then subjected to pre-testing. To keep within our budget, this involved a convenience sample of 11 full-time undergraduate students from Lingnan University (10 female & 1 male; mean age: 21.0), each of whom spoke Chinese as their mother tongue and had service-learning experience. Prior consent of all the surveyed students was obtained. They all attended one of the two pre-testing sessions and each one received an incentive in the form of a HK\$ 50 supermarket coupon upon completion of the tasks assigned to them.

In the pre-testing sessions, the students were first asked to complete the Chinese version of S-LOMS. Next, they were invited to identify any language-related issues associated with the Chinese version, such as their doubts, difficulties, and areas of confusion regarding the various items. Finally, the students were asked three questions about the Chinese version. These three questions were designed to capture the students' overall ratings on two language-related issues and one service-learning relevancy issue, using a ten-point Likert scale (from score 1: strongly disagree to score 10: strongly agree). The first question was about readability: "To what extent do you agree or disagree that the Chinese in this questionnaire is easily read?" The second question was about interpretability: "To what extent do you agree or disagree that the meaning of the items in this questionnaire is easily understood?" The third question was about relevance to service-

learning: “To what extent do you think this questionnaire captures the student learning outcomes arising from service-learning?” The purpose of these three questions was to provide indications of the face validity of the questionnaire.

## Findings Arising from the Pre-testing Sessions

During the pre-testing sessions, a total of 46 student comments were received, with 26 items covering issues and concerns about the Chinese version of S-LOMS. Most of the comments referred to three types of issues. First, students expressed the need for the sentence structure to be simplified for better readability. Second, the students suggested the use of different Chinese words in order to represent the intended meaning more clearly. Third, students indicated that they were unsure about the actual meaning of some items. For example, item 16: “I can easily establish effective relationships with people” caused uncertainty among many students, reflecting a Chinese translation of the word “effective” that was considered a strange way to characterise interpersonal relationships.

Ten out of the eleven students who participated in the pre-testing sessions answered the three additional questions described above. Notwithstanding the issues expressed by the students during the pre-testing sessions, their responses to these three questions indicated a high degree of face validity for the version of the Chinese S-LOMS that was presented to them. Thus, the mean score for the readability question was 8.00 (SD: 2.14), while for the interpretability question, it was 8.36 (SD: 1.69), and for the relevancy to service-learning question, it was 7.45 (SD: 2.25). These scores indicated that the Chinese version of S-LOMS presented to the students participating in the pre-testing sessions, albeit requiring some revisions, was broadly suitable for their Chinese reading and comprehension ability and was broadly appropriate for assessing developmental outcomes arising from service-learning.

## Four Further Rounds of Back-Translation

Following the pre-testing sessions, the forward translator reviewed items that attracted concerns from students in the pre-testing sessions and determined

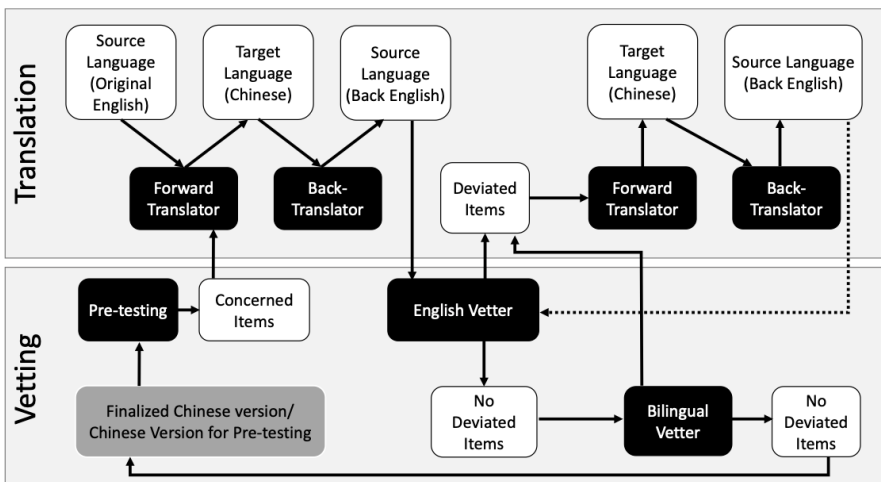
the need to revise 17 of the 26 items commented on by the students. The forward translator then made these revisions independently, except for discussing item 16 with the English vetter. Both parties were co-authors of the original English version of S-LOMS. The English vetter explained to the forward translator that the connotation of “effective relationships” in English stemmed from its usage in popular managerial texts such as a classic book by Covey (1989). The forward translator then revised item 16, based on the understanding that effective relationships are based on mutual trust, respect, and open communication.

After the forward translator made changes that they deemed necessary, the 17 modified items were then subjected to further rounds of back-translation and English vetting. The items modified by the forward translator were passed to the back-translator to adjust the English back-translation, wherever necessary. There were four more rounds of back-translation and review involving the English vetter before the latter indicated complete satisfaction. The refined Chinese version was then presented to the expert bilingual vetter, who indicated approval.

Figure 2 represents the entire translation and validation framework.

## Figure 2

### *The translation and validation procedures employed in the study*





## EMPIRICAL VALIDATION WITH A SAMPLE OF SECONDARY SCHOOL STUDENTS

Next, we approached a local secondary school in Hong Kong to invite their students to answer the revised Chinese version of S-LOMS in an empirical validation exercise. We tested the scale there because we wanted to extend the use of S-LOMS into the secondary school setting, where Chinese is often the medium of instruction. The school invited 120 students from all four of their Form five classes to complete our questionnaire during class time.

We chose this group of students for three reasons. First, since these students are currently being educated in the Chinese language, they prefer answering the Chinese version of S-LOMS rather than the English version. Second, many secondary students of senior levels, such as Form five and six, in Hong Kong are likely to be preparing themselves for further university education, and most of them are likely to be on the verge of gaining admission to a university. Hence, their academic background and study experience can be regarded as comparable to the key demographic characteristics of the university students who participated in previous validation studies of the English version of S-LOMS (Snell & Lau, 2020; Lau & Snell, 2020, 2021a). Third, testing the Chinese version of S-LOMS with secondary students can shed light on whether the measurement tool can be applied to a new population of students undertaking service-learning to increase the applicability and generalizability of S-LOMS.

The first author prepared a standard administration script for the class teachers to brief their students and provided an online video for students to view beforehand to understand how to complete the questionnaire. The students participated on a voluntary basis, with the incentive of a HK\$ 20 McDonalds cash coupon upon completion. The questionnaire comprised all 56 items of S-LOMS in Chinese language using a ten-point Likert scale (from score 1: strongly disagree to score 10: strongly agree). It also had a few questions asking about student background information, including gender, age, and whether they had any prior service-learning and/or community service experience. Completed questionnaires were collected by the class teachers and returned to the research team for analysis with confidentiality assured. Prior consent of the school and all the surveyed students were obtained.

Altogether 118 students completed the questionnaire, and 106 questionnaires were retained after data cleaning. Females comprised 63.2% of the sample. The participants' age ranged between 16 and 18, with a mean of 16.4 ( $SD=.50$ ). Among participants, over 71.7% had prior community service experience, and 11.3% had prior service-learning experience, with 8.5% having had both. Table 1 provides the details.

**Table 1**  
*Respondents' Demographics*

Variable	Frequency	Percentage
Gender		
Male	39	36.8
Female	67	63.2
Prior Relevant Experience*		
Service-Learning	12	11.3
Community Service	76	71.7
Both	9	8.5
None	27	25.5
	<b>Mean</b>	<b>Standard Deviation</b>
Age	16.4	.50

Note: The summation of the percentage of "service-learning", "community service" and "none" exceeds 100% because a respondent can have both prior service-learning and community service experience.

Due to the small sample size of barely over 100 and the relatively large number of S-LOMS items (56 items), we employed individual exploratory factor analysis (EFA) for each of the 11 underlying domains to satisfy the commonly accepted sample size requirement of at least ten subjects per one indicator (Nunnally, 1978). The method of principle components (PC) with oblimin rotation in SPSS 26.0 was utilized. Our justification is that if the design of S-LOMS permits the independent use of the items of one single dimension, the items for one domain should converge to a single factor solution in their individual EFA with satisfactory levels of the total variance explained and item factor loadings. Limitations are that due to insufficient subjects, we were unable to test validity for the overarching categories, namely personal and professional skills, civic orientation and engagement, and self-awareness, nor for S-LOMS overall. To some extent these limitations

were offset by calculating Cronbach's alpha for each domain, overarching category, and the S-LOMS overall as indicators of reliability.

Tables 2 and 3 exhibit the EFA results. For the individual EFAs, ten out of the 11 domains received single-factor solutions. The exception was Caring and Respect, which yielded a two-factor solution with 72.9% of the total variance explained. In that two-factor solution, the two factors contained the items of the domain's original sub-domains (see Snell & Lau, 2020), namely 1) Respect for Diversity (item 36 to 39) and 2) Empathy and Caring for Others (item 40 to 42) with item factor loadings of .70 or above. These two factors had a correlation of .49. In order to test whether the items for Caring and Respect could form a single factor, another EFA with a single-factor solution was performed. Results showed close to a satisfactory level of 56.7% total variance with all item factor loadings at .70 or above, except for item 42, which had a factor loading of .58.

Nine of the other ten domains obtained over 60% of the total variance, which is interpreted as satisfactory (Hair et al., 2018). The exception was for Creative Problem-Solving Skills, which obtained 53.3% of the total variance explained. As with Caring and Respect, Creative Problem-Solving Skills is a higher-order domain, originally composed of two domains, namely 1) Creativity and 2) Problem Solving Skills (see Snell & Lau, 2020). An additional EFA for the items of Creative Problem Solving was performed with a two-factor solution, and this obtained a satisfactory level of the total variance explained (65.7%) with item factor loadings at .70 or above, except for items 9 and 12, where the factor loadings were .42 and .60 respectively. The resultant two factors also contained their corresponding original items of Creativity (item 5, 6, 9, and 11) and Problem-Solving Skills (item 7, 8, 10, 12). The two factors had a correlation of .53.

**Table 2**  
*Individual EFA Results of the S-LOMS' Domains with Single-factor Solutions*

		Factor Loading									
		PPS				COE			SA		
Item	KA	CPS	RTS	SRS	CTS	CCU	CR*	SSR	SE	SU	CSI
V%	65.3	53.3	63.4	67.1	65.7	60.1	56.7	73.6	70.3	61.9	71.1
01	0.75										
02	0.88										

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03	0.83		
04	0.77		
05		0.60	
06		0.77	
07		0.69	
08		0.80	
09		0.63	
10		0.80	
11		0.71	
12		0.80	
13		0.81	
14		0.89	
15		0.82	
16		0.83	
17		0.75	
18		0.80	
19		0.66	
20		0.79	
21		0.88	
22		0.83	
23		0.87	
24		0.69	
25		0.86	
26		0.80	
27		0.77	
28			0.76
29			0.65
30			0.83
31			0.74
32			0.79
33			0.77
34			0.79
35			0.86
36			0.83
37			0.81
38			0.81
39			0.79

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40	0.73	
41	0.70	
42	0.58	
43	0.86	
44	0.87	
45	0.84	
46		0.78
47		0.85
48		0.87
49		0.86
50		0.87
51		0.83
52		0.78
53		0.65
54		0.90
55		0.76
56		0.86

n=106

Notes: For this EFA the domain CR was set to be a single-factor solution

V%: The total variance explained in percentage

KA: knowledge application; PPS: professional and personal Skills; CPS: creative problem-solving skills; RTS: relationship and team skills; SRS: self-reflection skills; CTS: critical thinking skills; COE: civic orientation and engagement; CCU: community commitment and understanding; CR: caring and respect; SSR: sense of social responsibility; SA: self-awareness; SE: self-efficacy; SU: self-understanding; CSI: commitment to self-improvement.

**Table 3**

*Individual EFA Results of the S-LOMS' Domains with Two-factor Solution*

	Factor Loading			
	CPS*		CR†	
Item	Problem Solving Skills	Creativity	Respect for Diversity	Empathy and Caring for Others
V%	65.7		72.9	
05		0.84		
06		0.87		
07	0.92			
08	0.85			

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09		0.42	
10	0.77		
11		0.70	
12	0.60		
36			0.86
37			0.83
38			0.91
39			0.83
40			0.70
41			0.77
42			0.93

---

n=106

V%: The total variance explained in percentage

Notes: For this EFA the domain CPS was pre-set to be two-factor solution

† For this EFA the number of factors for the domain CR was not pre-set

CPS: creative problem-solving skills; CR: caring and respect.

The reliability analysis (see Table 4 for details), indicated by satisfactory Cronbach's alpha scores, further confirmed S-LOMS as a reliable instrument for the current sample. Alpha values ranged between .74 and .92 for the 11 domains and between .81 to .95 for the four overarching categories. The alpha value for the whole S-LOMS was .97.

For the two domains of Creative Problem Solving and Caring and Respect, results illustrated not-so-satisfactory yet acceptable single-factor solutions, and satisfactory two-factor solutions were obtained by splitting the items into their original sub-domain, for which the alpha values ranged between .77 and .89. Thus, these two domains and their sub-domains can be administrated independently at the practical level.

**Table 4**  
*Reliability Results*

Scale/ Overarching Category/ Domain/ Sub-domain	Cronbach's Alpha
<b>S-LOMS</b>	<b>0.97</b>
<b>KA</b>	<b>0.81</b>
<b>PPS</b>	<b>0.95</b>
CPS	0.87
Creativity	0.77
Problem Solving Skills	0.86
RTS	0.92
SRS	0.83
CTS	0.74
<b>COE</b>	<b>0.92</b>
CCU	0.90
CR	0.86
Respect for Diversity	0.89
Empathy and Caring for Others	0.77
SSR	0.82
<b>SA</b>	<b>0.89</b>
SE	0.86
SU	0.78
CSI	0.79

n=106

Notes. KA: knowledge application; PPS: professional and personal skills; CPS: creative problem-solving skills; RTS: relationship and team skills; SRS: self-reflection skills; CTS: critical thinking skills; COE: civic orientation and engagement; CCU: community commitment and understanding; CR: caring and respect; SSR: sense of social responsibility; SA: self-awareness; SE: self-efficacy; SU: self-understanding; CSI: commitment to self-improvement.

To sum up, we argue that the EFA results were satisfactory in terms of total variance explained and item factor loadings. Moreover, the Cronbach's alpha values mentioned above confirmed the Chinese version of S-LOMS as a reliable instrument. The final set of the Chinese items of S-LOMS vis-à-vis their original English items is listed in the Appendix.

**CONCLUSIONS**

The current study involved developing and validating a Chinese version of the original English text of S-LOMS. This represents an attempt to promote the use of S-LOMS as a tool for measuring the outcomes of service-learning among Chinese-speaking students in Asia, including mainland China,

Macau, and Taiwan. We also consider that in Hong Kong, the Chinese S-LOMS can be administered at the secondary education level, where Chinese is the primary medium of instruction for most students. Thus, the Chinese S-LOMS may constitute a tool for informing the improvement and further development of service-learning in Asia at secondary and tertiary education levels.

In conducting translation and back-translation to develop the Chinese version of S-LOMS and its initial validation through pre-testing, we sought to enhance the procedures proposed by Brislin (1970, 1986). For example, we considered that involving both a native English vetter, who is a service-learning veteran, and a professional bilingual vetter, who is a specialist translator in the back-translation procedure would be more rigorous and conducive to achieving quality assurance than solely relying on discussions between ordinary bilingual forward and back-translators for establishing translation equivalence. In the revised procedure that we adopted for the first six rounds of back-translation, the steps involving the back-translator were conducted “blind,” and there was no dialogue between the various parties in the process, which might otherwise have constituted a source of bias, thereby detracting from the translation quality.

The results of the pre-testing sessions with local university students with Chinese as their mother tongue established strong face validity of the Chinese S-LOMS in terms of readability and interpretability. Moreover, the respondents rated the items highly in terms of service-learning relevancy. These results provided strong preliminary confirmation of the validity and relevancy of the Chinese version of S-LOMS for our target population of Chinese-speaking students engaging in service-learning.

The subsequent empirical validation provided further evidence for the Chinese version of S-LOMS in terms of validity and internal consistency. The factor structure of each scale domain was confirmed by assigning all items of a domain in the individual EFAs. The EFA analysis also discovered that the items under the four sub-domains, namely Creativity, Problem Solving Skills, Respect for Diversity, and Empathy and Caring for Others, can be handled and administered independently. Reliability indices in terms of Cronbach’s alpha achieved satisfactory results at the sub-domain, domain, overarching category, and the entire scale levels.

The above findings are consistent with the previous validation of



S-LOMS with samples composed of Hong Kong university students. For example, Lau and Snell (2021a) confirmed the 11 domains of S-LOMS by using factor analysis, demonstrated its stability over time with test-retest reliability (2020), and provided evidence for its criterion validity by known-group differentiation (2020). Furthermore, our successful validation of S-LOMS with a sample of secondary school students legitimizes the instrument for deployment in the secondary school setting. The empirical validation exercise found that only a small proportion of students had prior service-learning experience (11.3%) compared to community service (71.7%, see Table 1), which suggests that there is much room for service-learning to be further developed in Hong Kong secondary schools.

Regarding theoretical implications, the current study confirmed that students' developmental outcomes arising from service-learning could be conceptualized as four constructs, comprising academic learning through knowledge application, development of professional and personal skills, civic orientation and engagement, and self-awareness.

The Chinese version of S-LOMS underwent rigorous back-translation and language vetting procedures. Furthermore, the pre-testing and empirical validation exercises provided strong empirical confirmation of the scale as a valid and reliable measurement instrument for assessing students' developmental outcomes arising from service-learning.

## Limitations and Further Research

Although much work has been reported in this study, there are several limitations and pointers to further research. First, the small sample size constrained the empirical validation exercise, preventing us from performing more sophisticated methods, such as factor analysis at the overarching category or entire scale level, from confirming the factor structure at those levels. Future research would therefore benefit from a larger validation sample.

Second, the current study collected data from one university and one secondary school only, limiting the generalizability of the findings and hence the applicability of the translated scale. It would be desirable to extend the research to multiple secondary and tertiary educational institutions to provide additional convergent evidence of validity and reliability.

Third, the current study was bounded within the Hong Kong soil. We have already extended the use of S-LOMS in English to Singapore (Lau & Snell, 2021b), and validation studies of the Chinese version of S-LOMS can be undertaken in other Chinese-speaking jurisdictions, such as mainland China and Taiwan. Translating S-LOMS into other Asian languages, such as Japanese and Korean, may also be considered. With S-LOMS in different languages, a centralized database across Asia and beyond facilitate the cross-cultural comparisons on student developmental outcomes and cross-institutional collaboration on service-learning across Asia.

Fourth, more validation work should be done to confirm additional types of validity for the Chinese version of S-LOMS. Test-retest reliability could be established by administering the instrument with the same group of participants under a given time interval (e.g., two weeks) to assess its stability over time. Known-group differentiation analysis may be undertaken, in which the domain scores of distinct groups of participants are compared to see if their scores differ in the expected directions to confirm criterion validity. High correlations between the domain scores of S-LOMS and other scales measuring similar constructs would constitute evidence of external validity.

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## APPENDIX

### S-LOMS ITEMS IN ENGLISH AND CHINESE

Item	Domain	Sub-domain	English Item	Chinese Translation
01	KA		I know how to apply what I learn in class to solve real-life problems.	我可以在生活中應用課堂學到的知識，以解決實際問題。
02	KA		I am able to apply/integrate classroom knowledge to deal with complex issues.	我可把課堂知識用以應付複雜問題。
03	KA		I know how to transfer knowledge and skills from one setting to another.	我知道如何在不同處境靈活運用知識及技能。
04	KA		I can make connections between theory and practice.	我知道如何把理論及實踐結合。
05	CPS	Creativity	I am not afraid of trying new things.	我不怕嘗試新事物。
06	CPS	Creativity	I am able to generate original ideas.	我有創新意念。
07	CPS	Problem Solving Skills	I am able to solve challenging real-life problems.	我可以解決生活上的棘手難題。
08	CPS	Problem Solving Skills	I feel confident in dealing with a problem.	我處理問題時充滿信心。
09	CPS	Creativity	When necessary, I can think of alternatives.	必要時，我也可以想出其他方案。
10	CPS	Problem Solving Skills	I feel confident in identifying the core of a problem.	我對指出問題的核心充滿信心。
11	CPS	Creativity	I am able to look at an issue from a fresh perspective.	我能以嶄新角度考慮問題。
12	CPS	Problem Solving Skills	I often modify my strategies to solve a problem when the situation changes.	當情況有變，我經常能夠調整策略以解決問題。
13	RTS		I am good at keeping in touch with people.	我善於與人保持聯繫。
14	RTS		I am good at building relationships between people.	我善於與人建立關係。
15	RTS		I can build long-term relationships with people.	我能與人建立長久關係。

16	RTS	I can easily establish effective relationships with people.	我能與人建立可靠互信的關係。
17	RTS	I am good at resolving conflicts.	我善於化解衝突。
18	RTS	I am confident in leading others toward common goals.	我對領導別人邁向共同目標充滿信心。
19	RTS	I participate effectively in group discussions and activities.	我投入小組討論和活動。
20	RTS	I have the necessary skills for making groups or organizations function effectively.	我具備領導小組或組織有效運作的必要技能。
21	SRS	I will evaluate myself after completing a task.	完成工作後，我會評估自己的表現。
22	SRS	I reflect on myself regularly.	我會不時自我反省。
23	SRS	I always think how I can improve myself.	我總是思考如何改善自己。
24	SRS	I consider circumstances when reflecting on how well I have performed.	當我評估自身表現時，會考慮當時處境。
25	CTS	I can analyze an issue comprehensively.	我可透徹分析問題。
26	CTS	I often look at complex issues from different angles.	我經常以不同角度審視複雜的問題。
27	CTS	I can understand others' viewpoints when we are making decisions together.	當共同決策時，我體察別人的觀點。
28	CCU	I always actively discuss possible improvements for our community.	我總是積極討論如何改善社區。
29	CCU	I can identify useful resources of a community.	我可指出社區裡有用的資源。
30	CCU	I think about how I can serve the community after graduating.	我思考畢業後我能如何服務社區。
31	CCU	I can identify challenges in the community.	我可指出社區面對的挑戰。
32	CCU	I can investigate the challenges faced by people in need in a community.	我可查找出社區中需受助人士所面對的挑戰。

33	CCU		I will contribute my abilities to make the community a better place.	我會盡力利用自己的才幹建設更好的社區。
34	CCU		I can identify issues that are important for a disadvantaged community.	我可指出弱勢社區所面對的重大問題。
35	CCU		I will play my part to reduce social problems.	我會盡本份，舒緩社會的問題。
36	CR	Respect for Diversity	I respect the needs of people from different backgrounds.	我尊重不同背景人士的不同需要。
37	CR	Respect for Diversity	I appreciate the ideas of people from different backgrounds.	我欣賞來自不同背景人士的意見。
38	CR	Respect for Diversity	I am willing to try to understand people whose background is different from mine.	我願意嘗試了解與我背景相異的人士。
39	CR	Respect for Diversity	I can respect people whose background is different from mine.	我尊重不同背景的人士。
40	CR	Empathy and Caring for Others	I consider others' points of view.	我會考慮別人的觀點。
41	CR	Empathy and Caring for Others	I care about others.	我關心別人。
42	CR	Empathy and Caring for Others	I observe others' feelings and emotions.	我可察覺別人的感受及情緒。
43	SSR		I believe that everybody should be encouraged to participate in civic affairs.	我認為每個人都應積極投入公共事務。
44	SSR		I believe that taking care of people who are in need is everyone's responsibility.	我認為每個人均有責任幫助需受助人士。
45	SSR		I feel obligated to help those who are less fortunate than me.	對於比我不幸的人，我很願意伸出援手。
46	SE		I am satisfied with my achievement so far.	我滿意目前的成就。
47	SE		Most things I do, I do well.	我大致上做得不錯。
48	SE		I have many good qualities.	我有很多優點。

49	SE	I am positive about myself.	我對自己評價正面。
50	SU	I know my strengths and weaknesses.	我知道自身的長處和短處。
51	SU	I have a clear picture of what I am like as a person.	我了解自己是怎樣的一個人。
52	SU	I have a clear understanding of my own values and principles.	我了解自身的價值觀和原則。
53	SU	I know what I need in my life.	我知道我的人生需要甚麼。
54	CSI	I look out for new skills or knowledge to acquire.	我致力吸收和掌握知識技能。
55	CSI	I am always motivated to learn.	我有學習的動力。
56	CSI	I always keep my knowledge and skills up to date.	我總是不斷確保自己的知識及技能與時並進。

Notes. KA: knowledge application; CPS: creative problem-solving skills; RTS: relationship and team skills; SRS: self-reflection skills; CTS: critical thinking skills; CCU: community commitment and understanding; CR: caring and respect; SSR: sense of social responsibility; SE: self-efficacy; SU: self-understanding; CSI: commitment to self-improvement.





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