

# An innovation in Career Guidance in Higher education: Effectiveness and Sustainability of Institutionalization of Service Learning in the University of Colombo

Preethi Udagama  
Career Guidance Unit and Department  
of Zoology & Environment Sciences  
Faculty of Science  
University of Colombo  
Sri Lanka  
[preethi@zoology.cmb.ac.lk](mailto:preethi@zoology.cmb.ac.lk)

Chandana Wijayanama  
Siam City Cement (Lanka) Ltd.,  
No 413, R.A, De Mel Mawatha,  
Colombo, Sri Lanka  
[wijayanama@gmail.com](mailto:wijayanama@gmail.com)

Manjula Vithanapathirana  
Department of Educational Psychology  
Faculty of Education  
University of Colombo  
Sri Lanka  
[manjulav@edu.cmb.ac.lk](mailto:manjulav@edu.cmb.ac.lk)

**Abstract**— Service learning, a structured learning experience, blends voluntary community service with academic learning. This paper reports the innovation which fostered reflection and assessment leading to deeper understanding of course content and civic engagement, applying academic knowledge, critical thinking and problem solving skills, through collaborative partnership between University, corporates and community. To date, this remains the only credit based Service Learning course offered by a Sri Lankan university. The pilot programme launched by the Career Guidance Unit (CGU), Faculty of Science, and University of Colombo in 2012, was developed as a design-based research. Following intensive literature review and discussion with teaching faculty, CGU obtained formal approval for the integration of “Service Learning” to the Bachelor of Science curriculum. In the pilot study, the faculty collaborated with three corporate sponsors through three service learning projects connecting with academic learning goals. Faculty project coaches, corporate project partners, and student groups collaborated in project planning and implementation. Evaluation was based on interviews, written reports, and presentations. The programme has matured and is continued to-date with strongly encouraging outcomes of this pioneering exercise. Service learning is recommended as an effective pedagogy for the Sri Lankan university system, capable of transforming traditional teaching and learning practices.

**Keywords**— Service learning, higher education, career guidance, tripartite collaboration, social innovation, design-based

## I. INTRODUCTION

Service Learning is a structured learning experience that blends voluntary community service with academic learning. Emphasis is placed on experimental learning reflection, active student participation, and connecting the curriculum to the real world [1] [2] [3]. Service learning is a relatively new educational concept with old roots that provides a mechanism to bridge gaps between science, universities, and communities. In Service Learning courses, students are placed in community sites to address a specific community need. This is a credit bearing educational experience in which students participate in an organized service activity that meets identified community needs and reflect on course content with a broader appreciation of the discipline and an enhanced sense of civic responsibility [4].

In a higher education context, Service learning further broadens learning in additional dimensions compared to the conventional learning methods. Interaction with the society to

apply theoretical knowledge acquired in the University helps students to adopt solutions that are socially valuable. Service Learning addresses challenges that require intellectual capacity, effort and funds to overcome community identified problems thus creating an opportunity for the development of University-community partnerships. Service based learning projects involve challenges that require intellectual capacity, effort and funds. Universities are engaged with key social segments that possess all of these resources. Higher the challenge, more appealing it is to the students full of youthful energy.

Across the world, institutions of higher education are recognizing the potential for partnership with community agencies for service learning projects. However, thus far, this learning experience is not reported in the university undergraduate curricula in Sri Lanka. The Career Guidance Unit of Faculty of Science (CGU), University of Colombo developed an innovation on Service Learning in 2012. This social innovation targeted mainly to improve the employability and citizenship of students in the Faculty of Science, University of Colombo by making a value addition to the credential they receive from the University.

Social innovations are new social practices that aim to meet social needs in a better way than the existing solutions [5]. These may include working conditions education, community development or health. Such novel ideas focus on extending and strengthening civil society where the innovation should be at least “new” to the beneficiaries it targets, but it does not have to be new to the world.

Although social innovations are experimented and reported in conferences and in similar forums, hardly any follow-up studies are conducted to report on the effectiveness and sustainability of such innovations. The objective of the study was to investigate the effectiveness and sustainability of the Service Learning course unit developed as a research-based innovation in the Faculty of Science, University of Colombo in 2012 with the facilitation of the Career Guidance Unit of the faculty.

## II. METHODOLOGY

The development of the innovation followed the Design-based research model. Wang and Hannafin [6] define design-based research as “a systematic but flexible methodology aimed to improve educational practices through analysis, design, development, and implementation, based on

collaboration among researchers and practitioners in real-world settings, and leading to contextually-sensitive design principles and theories”(p.6). Design-based research mainly includes four phases; i) conceptualization and analysis of the problem, ii) develop the solution informed by existing design principles and innovations iii) testing and refinement of solutions, and iv) reflection and enhance solution implementation [7]. There is no claim that there is a single design-based research method, but the overarching, explicit concern in design-based research for using methods that link processes of enactment to outcomes has power to generate knowledge that directly applies to educational practice [8].

Accordingly the project included the following sequential steps: i) analysis of the problem encountered in finding ways of improving quality of graduates and conceptualization of the innovation by an interdisciplinary team consisting of an educational psychologist, a human resources professional, and an academic in science who was at the time functioning as the Director of the Career Guidance Unit of the Faculty; ii) collaborative design of the course unit following an intensive literature survey coupled with the experiences of the pioneering team; iii) integration of the innovation to the curriculum and implementation of the pilot project cycle in 2012; and iv) reflection and feedback on the programme by all stakeholders concerned and implementing the module in each academic year. This process complied with the characteristic of Design-based research where “the design is embodied in research, and research is embodied in design” [6].

### III. RESULTS AND DISCUSSION

#### A. The Design and Development of the Service Learning Programme and Implementation

The pilot Service Learning program was developed as a design-based research, a model to solve a real world problem and to develop re-usable design principles. The innovation was conceptualized by a three member interdisciplinary group who are the authors of this paper.

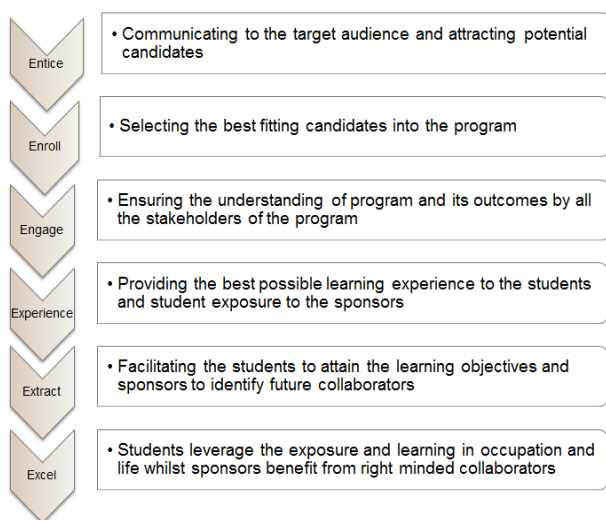


Fig. 1. The 6 Phases of the CGU Service Learning Programme

As design research begins with a theory gathering or literature review phase, an intensive literature review was carried out on service learning in higher education. A concept paper was presented to the faculty for discussion in 2012. The concept presented was as follows:

“The outcome of this exercise for the undergraduates would be academic achievement, acquisition of transferable skills required for the world of work, and inculcation of a sense of citizenship and social, professional and ethical responsibility. There are four types of service learning.

1) *Direct service*: Students’ service directly involves and affects recipients

2) *Indirect service*: Students do not directly see any specific recipients. Student actions benefit the community as a whole.

3) *Advocacy*: The intent of advocacy is to create public awareness on an issue of public interest.

4) *Research*: Finding, gathering, analyzing and reporting on issues of public interest.”

(Memorandum by Career Guidance Committee, dated 8<sup>th</sup> March 2012)

The Service Learning course was developed with a multi-pronged approach for student development:

- Earn credits
- Experiential learning and civic responsibility
- Establishment of contacts with potential employers or collaborators

During the development of the program, 6 phases were identified (Figure 1). This framework was developed collaboratively by the researchers and presented and adopted by the curriculum development and career guidance committees of Faculty of Science, University of Colombo.

1) *Entice*:

Service based learning projects involve challenges to overcome that require intellectual capacity, effort and funding. Universities are engaged with key social segments that possess all of these resources. Furthermore, working on such projects provides an exceptional opportunity for the students to learn based on experience. Higher the challenge, more appealing it is to the students.

To address the students’ perspective, an advertising campaign for students was based on the CHALLENGE element of the entire project. Also, the key benefits to them such as

- Earning credits
- Solid learning based on experience
- Establishment of contacts with potential employers or collaborators, were highlighted.

The Sponsors’ perspective of lack of required human resources as a constraint for delivering CSR projects of organizations [9] [10] [11] was addressed by the Service Learning initiative. In addition, the opportunity the organizations had to use Service Learning partnership with faculty and the university as a mechanism to strengthen their employment pipeline was also highlighted.

2) *Enroll*:

Enrollment was done in two stages.

a) *Stage 1 (Second half of second year of the degree program)*:

After the information sessions, students who fulfill the academic prerequisites defined by the University were requested to form groups and submit proposals for projects.

Criteria for projects:

- Provides opportunity to extend the learning on one or many academic topics
- Directly benefits the society in any part of Sri Lanka
- Achievable during a period of 3-6 months

*b) Stage 2 (Final year of the degree program):*

Projects selected by a committee appointed by University of Colombo were given opportunity to make presentations to a panel of evaluators appointed by the University. Representatives from Sponsors were also included to this panel. Upon selection of the projects for realization, project leaders were allowed to increase the number of project members by a few upon approval of the selection committee.

*3) Engage:*

University of Colombo engaged in the roll-out of the projects in terms of providing academic and logistics support. If any approval or clearance required to be obtained from authorities before mobilizing the project teams, University of Colombo facilitated such together with sponsors. All the stakeholders of the program (Figure 2) were provided with clear information about the following:

- The selected projects, project deliverables, project members and sponsors assigned
- Criteria for project evaluation
- Information regarding mentoring, additional soft-skill development programs to support project members.
- Reporting mechanism – progress reports, Format of final report.
- How to benefit the project from the roles of Project Client, UOC Mentors, Sponsor Advisors.

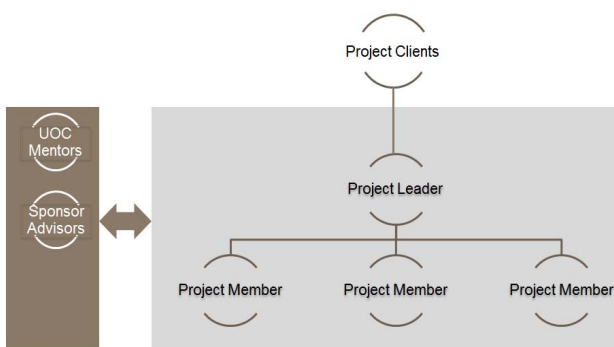


Fig. 2. Stakeholder groups of the CGU Service Learning Program

*4) Experience:*

This phase of the program intended to cover key activities and result delivery of student projects. The key stakeholders are reflected in Figure 2. The expectations from this phase were threefold; student experiences, sponsor advisors' experiences and University Mentors' experiences.

*a) Students' experiences*

- Real issues and apply academic learning into real situations
- How to deal with people from different backgrounds
- How to work with Sponsor representatives and their business tools

Phase "Experience" for students lasted from 3-6 months depending on the type of the project.

*b) Sponsor experiences*

- Additional support from students and academic resource persons to solve / improve situations sponsors are passionate about
- Students working in the projects who are with right mindset and attitude who can be recruited or collaborated with in the future.
- Closer and direct links with academics from the University of Colombo who can join sponsors' efforts in area of collaboration.

*c) University and academics will be experiencing*

- A direct contribution from their academic efforts to the betterment of society
- Further academic interests stemming from project work
- Closer and direct links with Sponsors and productive collaboration.

*5) Extract:*

"Extract" is what stakeholders extracted as a result of the "Engagement" and "Experience" during the project. As part of the program, trained Mentors and Advisors supported the students to extract the learning from the project in the best possible manner. Students and mentors were provided with guides for maintaining reflective diaries.

*6) Excel:*

"Excel" is the ultimate aim of this program to facilitate accelerated development of students in a broader context of learning. This program provided students an opportunity to apply what they learnt in the university academic modules as well as to acquire other soft skills required in to excel in a job. Above all, promotion of the students as socially responsible citizens was expected to be attained.

In the pilot stage, the analysis of real world problems was done by the faculty in collaboration with three corporate sponsors where three service learning projects were identified connecting with academic learning goals of the faculty; namely, i) Drinking Water Quality Improvement in Nelumwewa, ii) Care for Our Own and iii) Malnutrition Awareness Project. Student selection criteria were drawn and 22 students including 3 project leaders were selected from both Biological and Physical sciences study programs. A service Learning Fair was held where the proposed Service Learning projects were presented by the corporate sponsors,

with discussion and a Q&A session with the selected students. The students formed groups according to their choice and selected the project they were interested in engaging with.

Faculty coordinators and corporate client partners were grouped into the three projects. Finally, the Faculty project coaches, corporate project partners, and student groups collaborated in project planning and implementation.

Evaluation and grading of these group projects was based on participation and completion of assigned responsibilities such as work assignments / the responsibilities assigned to each student with regard to the project, writing sections of the report that would allow grading of individual student, presenting a component of the project at the final presentation and overall participation in the project. The evaluation criteria for each component were informed to the students at the beginning of the program.

Finally, all stakeholders were involved in a reflection phase initially at the project level, then at the faculty level, next the University level. The program outcomes were disseminated to the media as well.

### B. Testing and Refinement of the Pilot Programme

Formal approval was obtained for the 8 credit course unit for the Final Semester of Levels III and IV indicating the requirement of conducting a service-learning/community-group research project where students will be given the opportunity to participate in outreach and professional development activities. Three service learning projects were successfully completed during the academic year 2011/2012.

Completed projects presented by students to clients and coaches, resulted in further feedback. All students (N=22) of the groups made presentations on their project. Evaluators indicated that all students were confident on the role that they played in the projects. All three group reports reflected that the planning and implementation was project specific and that the student participants obtained a learning experience connecting theory to practical problem solving, engaged in reflection, critical thinking and had opportunities to develop transferable skills.

The CGU received positive feedback on the program from all stakeholders; *i.e.* 22 students, 6 coaches, 3 sponsors and the community consisting of academics, corporate sector personnel, print and electronic media etc. who participated in the dissemination program.

Sponsor community partners in the three organizations indicated that the projects facilitated them to recruit highly motivated volunteers to carry out socially responsible projects, undergraduates became ambassadors of the social projects of the sponsoring organization, and indicated the possibility of attracting the student participants as future employees.

### C. Reflection and Enhancement of the Innovation towards Sustainability

The 8 credit module of Service Learning continued during each academic year from 2012, and is successfully sustained in the eighth cycle that is currently happening in 2019. The modules are reflected in the Student Handbook and it has gained acceptance and recognition. The enrollment details and number of projects from 2012 to 2018 are given in Table 1.

Nature of sponsors involved in these projects were of a variable variety; pharmaceutical companies, a cement

manufacturer, banking sector, apparel sector, a State TV channel, state corporations, telecom companies, BOI flagship entities, private hospitals and a large conglomerate in Sri Lanka. University mentors also increased to 15-20 from all streams of the Faculty of Science. Some examples of the themes of projects were improving drinking water quality in a village, malnutrition awareness, housing project for a needy, IT education for school children, human elephant conflict, bio-diversity park, energy audit, school library, life saving and vocational education in schools.

TABLE I. SERVICE LEARNING PROJECTS, FACULTY OF SCIENCE, UNIVERSITY OF COLOMBO, 2012-2018

Year	Number of projects	Number of undergraduates enrolled in the programme
2012	3	22
2013	5	38
2014	6	47
2015	3	18
2016	3	16
2017	5	38
2018	4	21

Faculty of Science Service Learning program is unique as it involves corporate sponsors who are willing to partner with the faculty and students in their own CSR activities. This initiative has managed to address the issue of Sponsors being burdened with the challenge of finding the right minded and fitting individuals for job roles in their respective organizations. Despite of sophisticated selection methods adopted by organizations, hiring managers are not confident of the people they recruit until they are seen in action. The Faculty conducted an awareness campaign for corporate sponsors that highlights that the UNIQUE OPPORTUNITY elements of the Service Learning program have been very effective. Some of the sponsors have been consistent in extending support over the years.

- Opportunity to interact with potential candidates that could fit into their respective organizational culture
- Gather momentum in own CSR activities through participation of energetic youth from University of Colombo.

Following comment represents the generic feedback received from corporate sponsors:

“Clean water has been a huge challenge over decades. Students from university of Colombo joined with our efforts to renovate a fresh water tank and provide water filters to the community. Their engagement with our colleagues throughout the program was excellent. They learnt how we deliver these projects - especially how we engage with local authorities and community leaders to ensure success in the program. I’m sure their engagement gave them a good orientation for their life and career.”

Celio, Durlak and Dymnicki [12] listed benefits including the development of social skills, positive attitude towards self and university and academic performance. Some other areas of student development such as higher self-efficacy, improved personal development, confidence, communication skills were asserted by other researchers [13]. As literature

highlights the students involved in the projects too benefitted from taking part in Service Learning programs.

Feedback from students who participated in the programme confirmed that the objectives of the programme were fulfilled. The following student comment gives the holistic experience gained by the students who participants. The comment is as follows:

“This was a life changing experience”

One of the mentors who participated in the programme from its onset to date reflected on the experience as unique:

“As a mentor for the first few years for the Service Learning Program at the Faculty of Science, University of Colombo, I found this program is a unique experience for Sri Lankan Students. In addition, this provided much needed corporate/ Industrial exposure for them to get ready with corporate/ Industrial culture. As students, they have demonstrated the skills they have as fresh graduates.” to the private/ government sector

The students and other stakeholders were provided with adequate information and resources to initiate the respective projects. Number of projects launched every year varied due to fluctuating student numbers and sponsors. The findings of this study would provide a point of reference for other higher education institutions the guidance for embedding principles of social innovation into their curricula.

#### IV. CONCLUSION

The model adapted for Service Learning by the Faculty of Science, University of Colombo is unique as the tripartite collaboration between corporate sponsors, the university and the community is an innovative approach, and not a program delivery method adopted in rolling out Service Learning programs across the world. Whilst Service-Learning being a new pedagogical approach, the Service Learning course unit introduced by the Faculty of Science, University of Colombo is the only academic credit based Service Learning course offered by a Sri Lankan university.

The positive student outcomes of this pioneering exercise included academic achievement, acquisition of transferable skills required for the world of work, and inculcation of civic attitudes and social, professional and ethical responsibility.

Over the years, the project outcomes indicated that the Service learning concept fosters reflection and assessment leading to deeper understanding of course content and civic engagement, applying academic knowledge and critical thinking skills, through collaborative partnership among the University, community and the sponsoring organization.

The CGU received positive feedback on the program from all stakeholders; *i.e.* students, coaches, sponsors and the community at large consisting of academics, corporate sector personnel, print and electronic media etc. All stakeholder groups indicated that this program is a catalyst for a mutually beneficial interaction between academia and the corporate sector.

From the angle of the corporate organizations, this is an opportune partnership as some of the people resources for CSR projects can be sourced from the university and also since it is a platform to identify future talent with a better organizational fit.

This model of Service Learning as a social innovation embedded in the undergraduate program can be recommended as an effective pedagogy for the Sri Lankan university system, capable of transforming traditional teaching and learning practices contributing to employability and citizenship of graduates, adding value to the credential they receive from University.

#### REFERENCES

- [1] D. J. Giles and J. Eyler, "The Theoretical Roots of Service Learning in John Dewey: Toward a Theory of Service Learning," *Michigan Journal of Community Service Learning*, vol. 1, no. 1, pp. 77-85, 1994.
- [2] C. Kaye, *The Complete Guide to Service Learning*, USA: Free Spirit Publishing Inc., 2010.
- [3] A. & K. D. Kolb, "Learning Styles and Learning Spaces: Enhancing Experiential Learning in Higher Education," in *Academy of Management Learning & Education*.
- [4] R. G. Bringle and J. A. Hatcher, "Implementing Service Learning in Higher Education," *Journal of Higher Education*, vol. 67, no. 2, pp. 221-239, 1996.
- [5] J. Howaldt and M. Schwarz, "Social Innovation: Concepts, research fields and international trends," in *IMO International monitoring, Germany*.
- [6] F. & H. M. J. Wang, "Design-based research and technology-enhanced learning environments," in *Educational Technology Research and Development*, 2005.
- [7] T. C. Reeves, *Design research from a technology perspective*, London: Routledge: Educational design research, 2006, pp. 52-66.
- [8] Design-Based Research Collective, "Design-Based Research: An Emerging Paradigm for Educational Inquiry," in *Educational Researcher*, 2003.
- [9] J. G. Frynas, "The false developmental promise of corporate social responsibility: Evidence from multinational oil companies," in *International affairs*, 2005.
- [10] R. & F. S. Welford, "Corporate social responsibility in Asian supply chains," in *Corporate Social Responsibility and Environmental Management*, 2006.
- [11] S. & C. J. Sen, "The relevance of stakeholder theory and social capital theory in the context of CSR in SMEs: An Australian perspective," *Journal of Business Ethics*, vol. 118, no. 2, pp. 413-427, 2013.
- [12] C. Celio, J. Durlak and A. Dymnicki, "A Meta analysis of the Impact of SL on Students," *Journal of Experiential Education*, vol. 34, no. 2, pp. 164-181, 2011.
- [13] . M. J. Sanders, T. V. Oss and S. McGeary, "Analysing Reflection in Service Learning to Promote Personal Growth and Community Self-Efficacy," *Journal of Experiential Education*, vol. 39, no. 1, pp. 73-88, 2016.