THE ROLE OF REFLECTIVE LEARNING, SERVICE-LEARNING AND SOCIAL IMPACT IN THE SUSTAINABILITY OF MALAYSIAN UNIVERSITIES

By

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ABSTRACT

Universities in Malaysia currently face tremendous challenges from both internal and external sources. To ensure business sustainability, there is an urgent need for higher education institutions to find a business model that will transform the way they operate and enhance student graduate capabilities, while contributing to the community. The study investigated how service learning impacts on the reflective learning abilities of the undergraduates and the social impact it has on the community being served. The study also explored the mediating role played by the social impact on the relationship between service learning and reflective learning. The theoretical framework of the study was based on the educational theories of constructivism and social learning. The study utilised a specially designed questionnaire to elicit information pertaining to how integrating service learning into the business curriculum enhanced students' reflective learning capabilities. Data from 256 valid questionnaires was analyzed using the variance-based Partial Least Squares-Structural Equation Modeling (PLS-SEM) method. The results revealed that the four aspects of service learning, namely curriculum connections, community needs, behaviorial intent, and student development, were found to have a significant positive influence on reflective learning and on social impact. However, social impact was not found to be a significant moderator in the service learning-reflective learning relationship. The results clearly showed the positive and transformative impact that the team-based service learning-in-curriculum strategy had on the students' learning experience, making service learning an excellent business model for higher education institutions. Integrating service learning as part of the business curriculum was indeed perceived as an innovative and effective tool in a student-centered learning environment that enriched students' educational experiences, increasing the relevance of the subject matter and encouraging students to collaborate effectively with their peers, faculty and the community. The findings offer some interesting implications for educators, researchers and policy- makers.

Keywords: service learning, reflective learning, social impact, business sustainability

ABSTRAK

Universiti-universiti di Malaysia pada masa ini menghadapi cabaran yang besar daripada sumber dalaman dan luaran. Untuk memastikan kemapanan perniagaan, terdapat keperluan segera bagi institusi pengajian tinggi untuk mencari model perniagaan yang akan mengubah cara beroperasi dan meningkatkan keupayaan siswazah, di samping menyumbang kepada masyarakat. Kajian ini mengkaji bagaimana pembelajaran perkhidmatan memberi kesan kepada keupayaan pembelajaran reflektif siswazah dan kesan sosial terhadap masyarakat yang menerima perkhidmatan tersebut. Kajian ini turut meninjau peranan pengantara yang dimainkan oleh kesan sosial dalam hubungan antara pembelajaran perkhidmatan dan pembelajaran reflektif. Kerangka teori kajian ini adalah berdasarkan kepada teori pendidikan konstruktivisme dan pembelajaran sosial. Kajian ini menggunakan soal selidik yang direka khas untuk mendapatkan maklumat mengenai bagaimana untuk mengintegrasikan perkhidmatan pembelajaran di dalam kurikulum perniagaan bagi mempertingkatkan keupayaan pembelajaran reflektif pelajar. Data daripada 256 soal selidik yang sah dianalisis menggunakan kaedah berasaskan varians Model Persamaan Berstruktur Kuasa Dua Terkecil Separa (PLS-SEM). Keputusan menunjukkan bahawa empat aspek pembelajaran perkhidmatan, iaitu sambungan kurikulum, keperluan masyarakat, niat kelakuan dan pembangunan pelajar didapati mempunyai pengaruh yang positif dan signifikan ke atas pembelajaran reflektif dan kesan sosial. Walau bagaimanapun, kesan sosial didapati tidak memainkan peranan yang signifikan sebagai pengantara dalam perhubungan di antara perkhidmatan pembelajaran dan pembelajaran reflektif. Dapatan jelas menunjukkan kesan positif dan transformatif perkhidmatan pembelajaran berasaskan pasukan -dalam- strategi kurikulum untuk pengalaman pembelajaran pelajar, dan membuatkan perkhidmatan pembelajaran sebagai model perniagaan yang sangat baik untuk institusi pendidikan tinggi. Mengintegrasi perkhidmatan pembelajaran sebagai sebahagian daripada kurikulum perniagaan sememangnya dilihat sebagai alat yang inovatif dan berkesan dalam persekitaran pembelajaran berpusatkan pelajar yang memperkaya pengalaman pendidikan pelajar, meningkatkan relevens mata pelajaran dan menggalakkan pelajar untuk bekerjasama secara berkesan dengan rakan-rakan mereka, fakulti dan masyarakat. Hasil kajian ini menawarkan beberapa implikasi yang menarik untuk pendidik , penyelidik dan pembuat dasar.

Kata Kunci: pembelajaran perkhidmatan, pembelajaran reflektif, kesan sosial, kemapanan perniagaan

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LIST OF ABBREVIATIONS

BI	Behavioral Intent
CC	Curricular Connections
CESI	Community Engagement Social Impact
CN	Community Needs
ECN	Community Needs – Engagement
ERL	External RL
IPSD	Interpersonal Growth
IRL	Internal RL
KMO	Kaiser-Meyer-Olkin
MOHE	Ministry of Higher Education
PGSD	Personal Growth
PLS-SEM	Partial Least Squares-Structural Equation Modeling
RL	Reflective Learning
SD	Students' Development
SESI	Socio-Economic Social Impact
SI	Social Impact
SL	Service Learning
SPSS	Statistical Package for Social Sciences
UCN	Community Needs - Understanding
UNDP	United Nations Development Programme

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The strive for economic development and community inclusiveness has been the focus of higher education institutions for decades and this is seen in the voluminous research and academic output that has been produced. Higher Education Institutions play a pivotal role in community engagement and economic development through the incorporation of real as well as community issues into the curriculum delivered and by engaging the students directly in these issues; and by doing so, the entire education process and outcomes become purposeful and intentional. This is the case for the Malaysian higher education system, which has, over the past few decades, transformed significantly from a teacher-centric to a more student-centric model. We have, over the last two decades, witnessed a rapid rise in global recognition of our higher education institutions due to their research output, institutional quality, and one of the top destinations for international students. The Malaysian government has put in high levels of investment into the higher education sector so as to encourage innovative teaching and learning practices that will equip students with the much-needed high-order skills and well-balanced attitudes.

One of the five aspirations stated in the Malaysia Education Blueprint (2015-2025) (UNDP, 2014) is to provide "An education system that gives children **shared values** and **experiences** by embracing diversity". This aspiration can only be achieved through a more holistic higher education system. In line with this, the Malaysia

Education Blue Print (2015-2025) seeks to promote continued excellence in the higher education system in Malaysia by increasing the use of experiential and **service learning** to develop 21st century skills among the undergraduates so that they eventually become holistic, entrepreneurial and balanced graduates (Malaysia Education Blue Print, 2015) and thereafter, become future leaders who are **reflective practitioners and values-driven**. Service learning could therefore become the business model that universities adopt to remain relevant and to ensure business sustainability. Sandaran (2012) echoes this call when she aptly pointed out that "For faculty members, SL could enable them to integrate theory and practice with community needs. In this way, SL would assist Malaysian universities to achieve their goals for becoming centres of excellence and produce outstanding graduates and citizens." As business sustainability focuses on managing the triple bottom line of profits, people and planet, service learning is seen as an innovative business process that would assist universities to manage their financial, social and environmental risks, obligations and opportunities, in their effort to become centres of excellence. Aside from business sustainability, service learning also helps students understand the importance of sustainable development in terms of meeting the needs of the present without compromising the ability of future generations to meet their own needs. Service learning provides an effective platform to create breadth in business education, as mentioned by Godfrey, Illes and Berry (2005). Starik, Rands, Marcus and Clark (2010) aptly pointed out that "Integrative coursework and beyond-classroom projects that produce real and beneficial results in all these fields (of management and business) need to be developed to empower students to "take over" the instruments of societal power and influence to transformatively advance sustainability in their lifetimes." (p. 381)

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According to De Janasz and Whiting (2009), the dynamic and constant changes in the global environment require education systems to have a more holistic approach (Govekar & Govekar, 2008; Govekar & Rishi, 2007). Sandmann, Saltmarsh and O'Meara (2008) in their study, provide an integrated model for advancing the scholarship of engagement, as they believe engagement to be a core value of universities, reflecting "a fundamental epistemological position underlying the shift in the locus of education to include the community." (p. 48)

Universities or higher education institutions are called upon not only to teach its students a set of life skills, but also to nurture positive attitudes among them towards the environment and their community, while embracing cultural diversity. It is important for the students to reflect upon their actions and understand that their education is not merely to obtain a degree or paper qualifications but also be beneficial to the community. Thus, having programmes that link service and learning will contribute to the enhancement and holistic education that will truly nurture purposeful graduates. Higher education institutions serve as a dynamic environment in which students are able to learn about and experience inclusivity and diversity, and higher education institutions have the ability to provide students with a real world experience and enhance their cognitive and developmental growth (Hurtado, Milem, Clayton-Pedersen & Allen, 1999; Chan, Lin & Lu (2012); Paxton, 2015). During this period of a student life cycle, students tend to be more open to social, political and cultural issues and have enhanced critical thinking skills (Hurtado et al. 1999; Billig, 2002) and it is imperative that they are guided accordingly and in the right direction as they are very fragile in their thinking. Recent research by Di Stefano, Gino, Pisano and Staats (2014), reveals that there is greater appreciation if a student practices "learning by thinking" and not only "learning by doing" which encourages thinking

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instead of rote learning. Universities are now recognizing the importance of reflective practice as a graduate attribute and thus, nurturing them in the right direction and manner is crucial as this will ensure a sustainable growth for the country. Learning by doing and reflective learning through exposure to authentic experiential events is critical as the students must be able to link their subject matter to their actions and programmes. Reflective practice can be enhanced by the incorporation of elements of service-learning such as curricula connections, student development, community engagement and behavioral intent. It has been known particularly in the United States to bridge the gap between community and academia but lesser known or practiced in Malaysia.

Both reflective learning and service-learning are relatively new terms in the Malaysian educational context but are considered very powerful pedagogical tools which have been recognized as providing a dynamic and holistic education for decades in the United States particularly as that is where it originated. Dewey (1933) describes this methodology as 'primacy of education', which uses learning and reflection and the incorporation of 'experiential learning'. It is undeniable that experiential learning is a crucial aspect in working with students with different learning styles and in order for service-learning and reflective learning to be effective and beneficial (Kolb, 1984). Both Dewey and Kolb's theoretical model discusses the collaboration and inter-play of various aspects of reflective learning and service-learning as foundational building blocks to learning and graduate attributes. Traditional teaching and learning methodologies do not always satisfy the needs and the pace of the current generation and may be inadequate to fulfill the required skill-sets and enhancement of educational needs. The whole idea of holistic education is about connecting education with the real world with the intention to make a difference

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and recognizing their contributions through reflective learning is crucial as Schon (1983) calls it reflection-in-action. Both reflective learning coupled with service-learning plays a critical role in the pursuit of holistic education where it places a lot of value on the needs, awareness, interest and commitment of the learner. As both these concepts are relatively new in Malaysia, it can be very confusing as it has various definitions and interpretations. This study will narrow the definitions down contextually and provide a more adaptable and acceptable definition that can be used in Malaysia. Reflective learning through service-learning initiatives incorporates the need for not only family and personal values, civic consciousness, spiritual and emotional values, holistic skills and community engagement but also the importance of reflection while grounding it in curricula and pedagogically assessed outcomes. This is needed for students in today's generation to understand their curricula and its applicability to the real world and to make real connections. It has also been suggested by Twenge and Campbell (2008) that the Generation Y are more socially engaged as well as conscious and they are more excited with engaging with the communities while recognizing their educational context and emotional orientation to achieve greater appreciation of the service and situation. Higher education institutions are expected to be more engaged with the community and learning outcomes should inevitably link curricula to needs in the pursuit of nurturing graduate capabilities, particularly through reflective learning. Therefore, the higher education institutions are the natural link where there can be a structured and designed approach to addressing community needs through academic content. The dynamics of the classroom now changes into borderless experiential labs where critical reflection can be encouraged and developed rather than only descriptive and formatted answers.

The growth and importance of higher education institutions cannot be disputed these

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days especially with the new economy being a people-based economy, it has become critical for higher education institutions to be the change makers. This is emphasized by Castell (2000) that there is need and the potential growth of the education sector which covers both the aspects of teaching and learning where higher education institutions not only teach but also look at positive attitudes of students. Teaching has always been the core of higher education institution until research intensive teaching institutions took center stage. This change brought about new layers of administrative policies, governance, promotion criterias, different profiles and structures and as highlighted by Bacon, Windall and MacKinnon (2012) and Bowden and Pallent (2004). Therefore, it is important to ensure that the culture of a higher education institution is translated to its students' learning process and not forgotten with the zeal for promotions. To a certain extent, the core and perception of the very nature of education was both diluted and tainted because the focus was now redirected to research and academic rigour. The very essence of a higher education institution has been renegotiated and the institutional core has come under pressure from various needs that may not necessarily benefit the students. Having been in the education field for the last decade, a personal opinion is that academics are less valued for their passion in teaching and need to make a social change but are driven more for the number of high indexed academic journal papers published, thus denying valuable student experience and opportunity for real world interaction, negating the chance to use their skills and knowledge for a greater good. According to Bleiklie (2005), people cannot assume that the changes in government policies always corresponds with changes at the institutional level, student level or at the level of individual academics. It is therefore imperative that empirical evidence be collected to conclusively state the extent to which learning does take place rather than leaving it to

possible assumptions.

There is a call for higher education institutions to be more innovative in multidisciplinary research and teaching where community needs are addressed through the academic pursuits and curricula integration as well as positive student attitudes. This will also ensure that the graduates are more purpose driven rather than being exam oriented. The intention is for the higher education institutions to create a link between the academia and the community to ensure that there is true experiential learning for the greater benefit of society and to address a larger social impact landscape. Education should be a holistic process and students should be provided with the tools to enhance reflective practices which connect their practices and help them link theories and knowledge. Smith (2011) emphasized the role of reflective learning that supports growth and professional development with the importance of reflective practice in the fore-front of learning and service-learning as a pedagogical tool to enhance critical reflection.

The importance of nurturing holistic individuals were outlined in the national education philosophy - Education in Malaysia, which is still an ongoing effort towards further developing the potential of individuals in a holistic and integrated manner. This drive further reiterates the need to ensure that education is not merely an academic endevour but an effort to link higher education institutions to communities and industry. This is in essence the only and most sustainable way for nation building as stated in the Malaysian Education Blueprint, 2013–2025. A holistic individual should understand themselves and their surroundings in order to integrate and be purposeful in the activities that they engage in. Reflective learning and service-learning are not subjects on its own but includes many stakeholders in this learning

process (Barth & Michelsen, 2013; Scholz, Lang, Wiek, Walter & Stauffacher, 2006). This is an extension on how societal and community problems can be resolved collectively by higher education institutions. Higher education institutions are essentially a repository of knowledge and resources and the most ideal place where community outreach can thrive. This gives both purpose and meaning to our educational pursuits and is a basis to build a solid foundation for one's career, educational development and economic growth. Reflective learning through service-learning initiatives can be used as a catalyst to bring together various stakeholders, such as higher education institutions, communities, governments and the industry as reflective learning brings forth aspects and ideas that may not be identified through structured learning processes. However, regardless if education institutions engage in reflective learning through service-learning; it has limitations and is driven by the core purpose of that institution, its functions and operations. Thus, the concept of reflective learning through service-learning initiatives should be looked at as an approach to achieve that link by addressing the service-learning outcomes in a reflective, systematic and structured manner (Roche & Coote (2008); Toncar, Reid, Burns, Anderson & Nguyen, 2006). This is just a fraction of a larger theme – the modern higher education institutions are changing in all aspects and it is imperative that changes are made to ensure graduate attributes are enhanced and meet the industry requirements.

The reflective learning component in the curricula is embedded to enhance student learning as emphasized by Donaghy and Morss (2007) where their study shows that students engaged in reflective learning have improved personal insights, decreased assumptions and clarity on their individual strength and weaknesses. This is an important insight as in many educational pursuits, much of the learning is

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unstructured and happens outside classroom settings where students may link their academic knowledge as the interact with others. Silverman (2007) found that service-learning initiatives provides a much needed opportunity to incorporate varied teaching methodologies including reflective learning, which Gosling (2001) mentions is the norm in higher education institutions for the past decade. This is also supported by Ash and Clayton (2009), Bringle and Hatcher (1999) and Eyler and Giles (1999) where they postulate that reflection is a central component of student learning and appreciation of service-learning. However, evaluating it and assessing it against set outcomes have been a challenge and its effective integration is essential as the traditional standardized methodologies and tests can be inaccurate (Lewis, 2007). Thus, for years researchers such as Fink (2007); Collier and Williams (2005); Paul and Elder (2005); Ellis (2001); Kolb(1984) and Dewey (1910) as well as educators world-wide have been emphasizing that there should be meaningful and purposeful learning and students should be encouraged to think and spend time to reflect on their actions. Williams, Gemus, Foster and Seargeant (2002) in a study on integrating behaviors and attitudes found that reflective learning helped students put in perspective their actions and learning. This notion of reflective learning is a process of synthesizing authentic experiences into learning that can be unplanned (Fink, 2007). When learning is unplanned, this can pose a problem in assessments which may be open to ambiguity where assessing can be a problem when the outcomes are highly subjective rather than objective in nature which opens variations to interpretations. In reflective learning what is assessed is the process and not the content of the learning (Bourner, 2003) and therefore this study will attempt to bring clarity to the process and the outcomes.

Ultimately, the purpose of reflective learning through the engagement in service-

learning initiatives is to combine service and learning to alleviate community needs while having a deeper appreciation and understanding of the academic curriculum. Thus, the element of reflective learning, service-learning and social impact will need to be studied. As far as the author's knowledge is concerned, there is minimal research on the relationship of reflective learning, service-learning and social impact as a quantitative study in Malaysia. As this study attempts to make that connection, it serves as another contribution to the literature and the research in this area of service-learning in Malaysia. This study will also contribute to the literature of social impact which encompasses social impact towards an individual or community. Hanifan (1916) defined social capital in an effort to assess the renewal of community and Putnam (2000) further defines it as the effective engagement of people with one another to build networks and trust. Putnam's framework is used in many studies but DeFilippis (2001) considers it weak in identifying the emerging needs in communities. Other researchers have agreed with DeFilippins (2001) as they have stated that in order for social capital to build communities effectively, the differences in power must be addressed urgently. The lack of research on service-learning and community development have been recognised by Cruz and Giles (2000) and Dorado and Giles (2004), and this is more so in the developing countries. Therefore, this study will be an opportunity to further shed light on this area. While service-learning is certainly not an area that has received little attention from researchers from all over the world but as far as the author's knowledge goes, there is very little is known about it in Malaysia. Thus, this study is an examination of the direct effect of service-learning on reflective learning and its social impact on the various stakeholders; and whether social impact plays a mediating role in the service learning-reflective learning relationship.

1.2 MOTIVATION OF THE STUDY

The motivation of this study is the realization that there is an opportunity for higher education institutions to play a greater role in society, to align its mission research activities around community needs for the betterment of Malaysia, in terms of sustainable growth. This study will be core to all aspects of a higher education institution as this is an opportunity to use education, experience, skills and talent to empower the students so that they can help the community, and link it to the vocation and greater community needs, ensuring greater sustainability for the higher education institution, as well as the country. This is an opportunity to link education to the community where educational pursuits becomes larger than a paper qualification chase but a societal good that makes a social change in the long run.

Reflective learning has been a key area of focus in higher education curriculum over the last decade as there is a drive for need for graduates to be holistic individuals and understand their contribution in the economic and social change. This is done by preparing students to be life-long learners through experiential activities and this is where service-learning can play a pivotal role in bridging the gap between communities and classroom and where through these service-learning activities and reflective practices, there is an opportunity to develop their capacity to learn how to learn and to turn their experience into learning (Petkus, 2000; Prentice, 2007). Reflective learning has been increasingly important in undergraduate programmes where there is a need to move away from rote learning to experiential and independent learning through appreciation of differences and knowledge while understanding that this combination will bring value and impact to the society. If higher education institutions, understand the benefits of reflective learning through

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service-learning initiatives, students will eventually become 'reflective practioners' as suggested by Schon (1983) who introduced the principles of 'reflection-on-action'. In most higher education institutions there are focused educational development units that seek to infuse reflective learning in the curriculum (Gosling, 2001) but this initiative must be supported with the appropriate service-learning activities and tools to ensure that the concept of reflective learning through service-learning activities is embedded in the curriculum across the institution. Chickering (2008) believes that without such reflection, learning is not sustainable.

Dewey (1933) sets a philosophical basis that reflection is an active, persistent consideration of knowledge that grounds a belief. Dewey acknowledges that experience itself does not result in learning but it must be coupled with critical reflections that gives new meaning to the situation and supports growth and informed knowledge. This point of view was also advocated by Stewart and Webster (2010). In order for this to happen, reflective learning needs to be supported by substantive service-learning activities that will be able to link knowledge, growth and community in an educative sense. Therefore, studies have shown that when various service-learning activities were introduced with various community partnerships, the students were receptive and positive about the idea of helping others as part of their course. The initial concerns or insecurities faded very quickly as they reached out to others and many found a sense of purpose and passion in their actions (Eyler & Giles, 2002; Melchior & Bailis, 2002; Aquila & Dodd, 2003; Scales & Roehlkepartain, 2004). With this, there was a realization that this is a method that could help students understand themselves better while reaching out to the community and finding a deeper purpose in life. It is hoped that through service-learning it will bring about maturity in the students as they would need to be responsible to make academic

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connections, reflect on their actions and ensure the community that they are supporting benefited from their actions. At the core of Dewey's educational philosophy (1933) are the three principles which states that 1) education must lead to personal growth; 2) education must contribute to humane conditions and 3) education must engage citizens in association with one another.

Reflective learning and service-learning bring about a meaningful and purposeful interpretative relationship between the learner and community, which brings enormous potential to higher education institutions in terms of academia, society and civic mindedness. It may be an uphill challenge as there is little buy-in of this approach currently, hence, the need for this study to ensure there is a systematic approach is recommended to the higher education institutions on the need to focus on reflective learning through service-learning activities in Malaysia. Similar to Dewey's educational philosophy that integrates reflective learning and experiential learning, service-learning is the methodology that can be effectively used to achieve the learning outcomes through reflective learning. In the United States, the National Commission on Service-Learning (2002), defined service-learning as "a teaching and learning approach that integrates community service with academic study to enrich learning, teach civic responsibility, and strengthen communities". This definition reflects the importance of service-learning as a tool and a key methodology for personal development and a holistic understanding of academic connections, which has pushed the need to advocate the benefit of reflective learning through service-learning initiatives as an integral part of the education system. In order to do so, there is a need for stakeholder buy-in which may be a challenge especially since this is a relatively vague concept currently in Malaysia.

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Bringle and Hatcher (1996) postulates that learning theorists have recognized that purely experiential activities may not result in learning particularly discipline-related and in order for reflective learning to be effective, it is imperative that each proposed activity need to be well developed and designed to be engaging as well as experiential with specific learning outcomes. This is because it may face many obstacles due to the lack of understanding of what service-learning is and why its value far outweighs any traditional academic programmes. This society reveres structure and systems, thus, the one possible way of progressing this is to understand its intrinsic values, institutionalize the system and create a structure that will benefit all stakeholders either through policies or curriculum design. Some observations have been made on why service-learning initiatives are not in the forefront of reflective learning in Malaysia. Currently, there seem to be a lack of attention and structure or institutionalized plans to ensure reflective learning is given the needed attention in as well as values and service-learning initiatives is incorporated in the academic curriculum. From the author's observation of various mission statements of public and private higher education institutions ; there is mention about reaching out to the community and holistic education but there is a lack of structure, academic and institutional where reflective learning through the integration of reflective learning and service-learning activities are used to achieve the mission. This shows that the majority of the institutions has recognized the importance of linking service to learning but may not have embraced the importance of using reflective learning through service-learning initiatives to nurture holistic and purposeful individuals for the country. It should start with the leadership, community and faculty partnerships. Andrews (2007); Parker and Altman (2007); Zlotkowski (1999) and Bringle and Hatcher (1996) postulates that service-learning blends academic outcomes to

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community needs and the use of reflective learning supports the appreciation of learning and community reach; this can be both in the local or international context.

Another observation is that, in spite of experiential learning being widely encouraged even in Malaysia, there is a lack of focus on reflective learning and service-learning which essentially grounds and synthesizes learning through linking learning to service for the betterment of the community. As stated by Giles and Eyler (1994) that reflection is a key part of service-learning for undergraduate students but there is a need to develop a more clearly defined body of knowledge. In many higher education institutions service-learning outcomes is not measured as a key performance indicator and thus less emphasis is given to its importance and value. In most private higher education institutions, particularly where the author comes from, faculty and students are the greatest expense but also the most valuable asset. We need both these groups to exceed their potential to contribute to profitability as well as goodwill. Warren, Thompson and Saegert (2001) have suggested that institutional transformation is needed to bring the change to human capital and the society when the individuals develop a need to reach out. Therefore, tracking performance based solely on performance by disregarding contribution to society through the core activity which is education will decrease the productivity in the long run. While performance based systems have survived in the education system, researchers have also focused on civic responsibility and civic engagement through reflective learning (King & Kitchner 1994; Schon, 1983; Dewey, 1933) as an element for sustained growth (Papamarcos, 2005; Hoxmeier & Lenk, 2003); values, empathy and interpersonal development (Simmons & Clearly, 2005; Berger & Millem, 2002); and different experiential teaching and learning pedagogies (Simmons & Clearly, 2005) as valuable aspects of the educational process that should have the potential to be measured. Contributors

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must be given the opportunity to serve and engage with the others to enable them to enhance their self- worth (Berger & Millem, 2002) and purpose in life. Thus, while education is being perceived as a solution for many global problems, higher education institutions must be committed to translate the outcomes of service-learning activities through reflective learning into measurable goals. These goals in turn must be ideally translated to individual performance goals which are assessed periodically. In many instances, the need for service and the holistic education through reflective learning is not stated thus not measured. In order for this to succeed and acknowledging both the reflective and service obligation, there is a need to consciously enter into partnership with the local communities where they could also be part of the faculty (Jameson, Clayton & Jaeger, 2011; Konwerski & Nashman, 2002; Rehling, 2000) and by doing this, there is a potential to identify their problems as well as work towards addressing these problems collaboratively, with a measureable outcomes. With so many aspects being relational and unquantifiable, many organisations do not see a tangible return on investments and have chosen the path of indifference and intentionally focus on business needs and bottom lines.

Over the last twenty years reflective learning and service-learning initiatives have grown very popular in higher education institutions (Jacoby, 2009; Clark & Young, 2005; Furco, 2001) but the lack of structured service-learning requirement in curriculum development and the acknowledgement of its importance in Malaysia may cause this country to lag in this area. The fact remains that what gets measured is done and this also applies to students who may not see the relevance of community engagement if it not an element of their coursework. Thus, integrating and assessing learning through reflections based on students' service with the community as an important aspect of the coursework in the curriculum, addresses the university-

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community partnership and as clients to serve a greater purpose (Simmons & Clearly, 2005; Lopez & Lee, 2005). This is a designed approach in reaching out and benefitting the community. Students will be required to experience all the processes of observation, action, analysis through structured learning activities (Goldsmith, 1996; Henry, 1994 & Silcox 1993) and reflection (Schon, 1983) as a programme outcome (Kolb, 1984). This is a method where research and classroom education is brought to life and outcomes are for the greater community.

Just as the Malaysian education plan has outlined, reflective learning thorough engagement in service-learning initiatives ensures that higher education institutions play an important role in helping resolve community problems and it will be a sustainable approach for the Government to nurture purposeful graduates and responsible citizens (Reitenauer, 2005) that will bring positive change to the community by doing the right things (Sikula & Sikula, 2005), while growing personally, socially and academically (Billig, 2009; Conway, Amel & Gerwien 2009) as purposeful graduates. Early researchers such as Dewey's (1938) critique about the American education system is similar to what is happening in Malaysia which is that it did not connect the students' learning in schools with what the students did outside of school. Over the years, in Malaysia, we are producing passive learners who study in silos and are beginning to lose the skills to succeed in the changing society as they do not connect the activities and learning through reflections. Thus, by using service-learning initiatives as a tool to encourage reflective learning attempt to address this by having action learning as the core and this pedagogy that bridges the theory and practice (Shulman, 1991). This in turn gives better student academic outcomes (Billig, 2009; Harwood & Radoff, 2009) and civic engagement and social skills (Billig, 2009; Conway *et al.* 2009). This allows students to experience life and its challenges as

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they see problems through their real connections and evaluate outcomes based on their knowledge and understanding of the subject manner while appreciating the outcomes of their work. By embedding reflective learning and service-learning into the curriculum, the service is not solely evaluated but the reflective process is given importance (and Bringle & Hatcher, 1999) and the ability for the students to ensure that they have learnt by providing evidence of their service and the course which is the basis of the credit assessments. Thus, having seen many successes in service-learning activities and transformation of lives in the communities, the author is motivated to further investigate this area and propose its managerial and theoretical implications in higher education institutions.

1.3 PROBLEM STATEMENT

The world we live in is a world of profound contradictions. On one side of the continuum, there are nations that enjoy tremendous economic and technological growth; while on the other, there are nations that have barely enough to feed their people and to provide them with basic amenities. Even within a nation, there are disparities in terms of income distribution, education and employment opportunities. The Malaysia Human Development Report 2013 (UNDP, 2014) reported that the average income of people in the rural area is only about one third of that earned by the people living in the urban areas. It was also reported that Malaysia had one of the highest income inequality in the region, where the top 1% enjoyed disposable incomes that were 22 times higher than the disposable incomes of the bottom 40% (UNDP, 2014). As far as wealth distribution was concerned, the report highlighted the profound disparity that existed, with 11% of the population owning 50% of the

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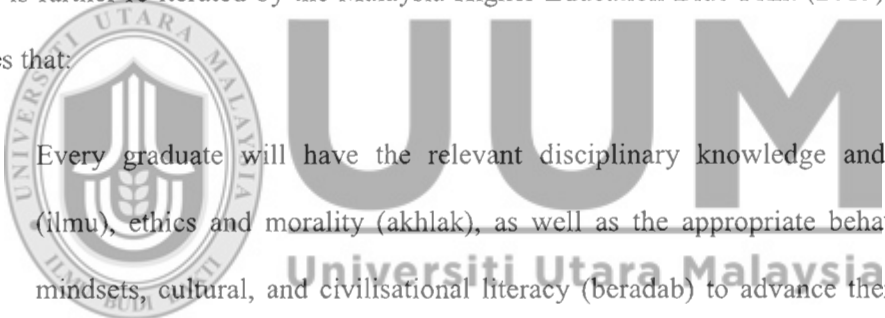
wealth, and that the wealth of the richest 40% of the Malaysian population approximately equaled to 22% of Malaysia's Gross Domestic Product (UNDP, 2014). The disparity in income that exist within Malaysia needs to be addressed as it can lead to various socio-economic problems, and an unsustainable economic growth. Aside from income inequality, there are other forms of inequality that exist in Malaysia. These include the single mothers, the disabled, the elderly, the homeless, street children, the orang asli community, and many other marginalized groups of people. As Malaysia is a complex multi-ethnic and multi-religious nation, it is imperative that our policy makers develop and implement inclusive growth strategies that will benefit their citizens, especially the poorer and more marginalized people. Inclusive growth as defined by Stewart (2010) is "growth in which the benefits are well distributed across distinct groups and to the poor irrespective of their group membership." (p.3) Our policy makers need to reflect on the much needed changes in the way policy decisions are made and to place inclusive growth at the center of policy making, if the government is serious about circumventing any further inequalities and targeting sustainable growth, in its attempt to achieve developed status. Education is believed to play a major role in bringing about inclusive growth, and addressing the inequality problem that our nation faces.

Education has been the answer for many socio-economic problems and it is believed that through education, many community problems in Malaysia can be resolved. Higher education acts as a catalyst to enhance economic growth, by developing a skilled and productive workforce. There is a need to link higher education institutions with the communities, in such a manner that it addresses sufficient portions of the community needs and resources, as suggested by Parlola and Goke-Parlola (2006), Andrews (2007) and Mintz and Hesser (1996). The importance of community

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engagement in higher education has been demonstrated by the previous Higher Education Minister, Datuk Seri Mohamed Khaled Nordin who stated, in 2010, that :

> Community engagement will feature prominently in our plans next year and the ministry will acknowledge programmes with significant social impact. As a clear sign of MOHE's commitment to community engagement, the Minister also emphasised that universities cannot function as ivory towers and must be committed to the community. In recognition of this, universities with the best community engagement programmes, will receive recognition and be financially rewarded from next year. (The Star, 1st Dec 2010)

This is further re-iterated by the Malaysia Higher Education Blue-Print (2015) which states that:

> Every graduate will have the relevant disciplinary knowledge and skills (ilmu), ethics and morality (akhlak), as well as the appropriate behaviours, mindsets, cultural, and civilisational literacy (beradab) to advance them to a high level of personal well-being. They will be global citizens with a strong Malaysian identity, ready and willing to contribute to the harmony and betterment of the family, society, nation, and global community. Such holistic, entrepreneurial, and balanced graduates are a natural extension of the goal of the Malaysian basic education system to develop values-driven Malaysians. (p.1-15)

In line with this, the Malaysia Education Blue Print (2015-2025) seeks to promote continued excellence in the higher education system in Malaysia by increasing the use

of experiential and **service learning** to develop 21st century skills among the undergraduates so that they eventually become holistic, entrepreneurial and balanced graduates (Malaysia Education Blue Print, 2015) and thereafter, become future leaders who are reflective practitioners and values-driven. Service learning can therefore be utilised as a business tool that would aid universities to manage their triple bottom line of financial, social and environmental risks, obligations and opportunities, so as to ensure business sustainability. Service learning would also empower students to ""take over" the instruments of societal power and influence to transformatively advance sustainability in their lifetimes" (Starik *et al.* 2010, p. 381). This is further re-iterated by Desmond and Stahl (2011) and Diambra, McClam, Fuss, Burton and Fudge (2009) who strongly advocate that service learning is not only beneficial to students or communities, but more importantly also benefits schools, colleges and universities in mitigating and responding to community needs, while addressing employer needs, in terms of skills and attitudes.

As far as service learning is concerned, while it is not a new phenomenon in some Malaysian universities, many of these service learning projects are conducted in an ad hoc manner, without a definitive, coherent and comprehensive policy on service learning. As such, it may not be as effective, in terms of student learning experience, as we envisage. Realising the importance of service learning in developing holistic graduates, the Ministry of Higher Education has begun to place service learning as an important tenet of the higher education curriculum. The collaboration between the university and the community is expected to empower the undergraduates and the communities they serve, which becomes an important beginning to the inward growth strategy that Malaysia needs to implement, in order to reduce the inequalities that exist within its society. This also allows the service learners to partake in a real world

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problem and reflect on their direct role in assisting the government to close the inequality gaps that exist. As a starter, the inward growth strategies that the government can implement can begin with the Ministry of Education compelling all institutions of higher education to ingrain service learning into their curriculum.

In line with the above, this study is in the right direction as it focuses on the impact of service learning in higher education on the students' reflective learning and their perception of the social impact that these service learning activities have on the communities they serve. The importance of reflective learning and social impact cannot be denied as these are the milestones of success in our attempt to develop holistic, entrepreneurial, and balanced graduates, who will become our future leaders who place great importance on values, equality and equity. Understanding the need to develop entrepreneurial skills, Hernandez and Newmand (2006) in their study, focused on building a model of service-learning in entrepreneurship education. This study will show how effective service learning can be in inculcating reflective thinking among the undergraduates and the significant social impact it can have on the community. It is believed that the way forward for the Malaysian education system and for the future sustainable growth of the country, is to define a problem and work towards a solution that will drive resources behind its purpose, inspiring students and communities and encouraging them to take action directed towards social change for the betterment of the community at large.

From the perspective of higher education institutions, when students and faculty work with community partners, it is an effective mechanism for creating a bridge and in minimizing the gap between the communities. This creates community bonds that is much needed in ensuring sustainable growth is achieved. Therefore, it is imperative

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that this study be carried out as it investigates and provides a validated and reliable instrument to measure the impact of service-learning on reflective learning and the mediating role of social impact. This study is in the right direction as it addresses not only the community needs, but also the students' development needs in a collaborative service-learning setting. We believe that this study will contribute towards a more equal, equitable and better society.

1.4 RESEARCH QUESTIONS

Higher education institutions have been known for providing service to the community through their ability to create new knowledge and innovations in training the future leaders of communities and the nation; they are the key to the nation's capacity building. Reflective learning through the use of service-learning is an extension of the higher education institutions service commitment as it provides services directly to those who are most in need, and it evaluates and assesses the effective delivery and service. Service-learning participation alone cannot enhance students' life skills which includes, tolerance, understanding and appreciating diversity, open and receptive of complex community issues (Jones & Hill, 2001; Eyler & Giles, 1999; Dunlap, 1998) but for students to reap the absolute benefit of service-learning, reflective learning and activities should be included for opportunities for values clarification through structured reflective sessions (Lisman, 1994). Based on the gaps in the existing literature regarding the reflective learning and service-learning within higher education institutions in Malaysia, specific research questions are posed. The purpose of this study is to determine the relationship between service-

learning, reflective learning and social impact for business undergraduates in Malaysia. For this purpose, answers to the following research questions are posed:

Research Questions:

RQ 1 : Does service-learning (comprising of the four components of curricula connections, student development, community needs and behavioral intent) have a direct relationship with reflective learning?

RQ 2 : Does service-learning (comprising of the four components of curricula connections, student development, community needs and behavioral intent) have a direct relationship with social impact?

RQ 3 : Does social impact mediate the relationship between the components of service-learning and reflective learning?

1.5 RESEARCH OBJECTIVES

The objectives that would be used as a guideline for this study are:

1. To examine if the components of service-learning (curricula connections, student development, community needs, behavioral intent) have a direct relationship with reflective learning of undergraduate business students.

2. To examine if the components of service-learning (curricula connections, student development, community needs, behavioral intent) have a direct relationship with social impact on the community.

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3. To assess if social impact has a mediating effect on the relationship between the components of service-learning and reflective learning.

The incorporation of service learning into the curricula and its subsequent impact on students' development in terms of their reflective learning abilities and character building have long been practiced particularly in the universities in the United States. However, as far as the Malaysian universities are concerned, both reflective learning and service-learning are relatively new pedagogical tools which are slowly being recognized, justifying the reason for this study's first two objectives on the impact of service learning on reflective learning and its social impact on the community in need. In recent years, there has been an increasing amount of literature on service learning and its direct impact on reflective learning, social impact and student development, but to the author's knowledge, no known studies have investigated on whether the social impact of service learning, as observed by the students, can mediate the impact of service learning on reflective learning. The third objective is a new idea that the author believes is a gap in the service learning-reflective learning literature. This was the basis to justify the need for the third research objective of assessing if social impact has a mediating effect on the relationship between the components of service-learning and reflective learning. The author also carried out a content analysis of the reflective logs of the previous batches of students undertaking service learning activities, and found that there were several students who reflected how they were somewhat affected by their observation of the transformation in the community that they served over the period of their study, and how that observation improved their reflective abilities. This augurs well with the study by MacDonald (2009), who emphasised the need for providing enough time to carry out service learning activities to ensure the service learning experiences are **long enough** to allow for proper

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implementation and reflection, thereby revealing the possible mediating role played by social impact on the service learning-reflective learning relationship. Since long engagements are required, one possible suggestion could be to make service learning a key engagement for graduate outcome. Howard (2001) argued that for reflective learning to be enhance, one needs to be guided as this is not just a journal of events but one that needs to make meaningful connections (McGuinness & Brien, 2007; Moon, 2006) with deep learning, rather than surface learning between experiences and academic outcomes. Through these meaningful experiences that students go through and observe, both Jameson *et al.* (2013) and Sen (2010) have found that there is a deeper level of critical analysis in their reflective journals. With this in mind, the author found this to be yet another reason to justify the need to investigate the third objective of this study. It is hoped that the third objective will provide yet another angle to the service learning-reflective learning relationship.

1.6 SIGNIFICANCE OF THE STUDY

This study hopes to provide new insights to all stakeholders comprising of the students, policy makers, universities and communities across the world, as more and more nations are beginning to take a more serious view of the role of community engagement or service learning in bringing about the much needed societal transformation. As the study investigates the impact of service learning on developing the reflective practices of our undergraduates and the social impact on the community, it is indeed a comprehensive study which will provide ample evidence and feedback to the necessary stakeholders in their decision-making process. This would include policy makers, educators, communities, students,

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graduates, future leaders, human resource managers, employers and the government; and the list is not exhaustive. This study hopes to provide a deeper and more elaborate understanding of the impact of service learning on the reflective learning abilities of the undergraduates, and the subsequent social impact on the communities being served. Despite the existence of various studies on service learning research, most of these studies involved the more developed countries. There have been some service learning projects undertaken by some Malaysian universities, they are by far rather sporadic and ad hoc in nature. The empirical studies on this area have acknowledged the importance of service learning. There is a need to conduct a more exhaustive and in depth study on this rather important area of research. It is with this in mind that the study is carried out, with the hope of contributing further novelty to the pool of existing literature on happiness, by researching into the economics of happiness in a more extensive manner.

It is hoped that this study will provide new insights in several directions. First and foremost, as mentioned earlier in Section 1.3, according to the Malaysia Human Development Report 2013 (UNDP, 2014), Malaysia is said to have one of the highest income inequality in the region. This disparity in income distribution can lead to numerous socio-economic problems for this complex multi-ethnic and multi-religious nation. It was recommended that the way forward to address this disparity is for Malaysia to develop and implement inclusive growth strategies that will benefit their citizens, especially the poorer and more marginalized people. Education is believed to be a major catalyst in uplifting society and solving many socio-economic problems and it is believed that through education, many community problems in Malaysia can be resolved. There is, therefore, a need to link higher education institutions with the communities as the nation resolves to address the inequality not only in income, but

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the inequality that exist in society in the form of marginalized groups such as the single mothers, the disabled, the elderly, the street children, the homeless, and many others. Service learning provides a mechanism that links higher education to the community. This is a good mechanism in mobilizing and utilizing the ample resources in higher education institutions to bring about meaningful transformation to the marginalized communities that desperately need help. What better way than to start with our undergraduates who are our future leaders, to undertake real world socio-economic problems faced by the communities through service learning projects that will teach them the real lessons that they could never possibly learn with the four walls of their classrooms. Service learning projects provide a platform that will empower not only the service learners (students), but also the communities that they serve. This is in line with the inclusive growth strategies that our nation seeks to implement in order to address the disparities faced by society. With service learning, out students learn to cope with real world problems that take them out of their comfort zone and teach them to valuable lessons of gratitude and compassion, while enhancing reflective capabilities. These students will eventually take the roles of future leaders and the experience they underwent in serving the community will make them better leaders. As our students learn to serve and be responsible for the community at large, they become empowered to take charge to their own lives and that of their community, making this world a better place to live in.

Secondly, this study is significant to policy makers, particularly in Malaysia and to organizations, faculty, community and other researchers. Kerry Ann O'Meara (2011) defines the scholarship of engagement as "learning, professional service, community-

based research, and applied research that engage professional or academic expertise in partnership and reciprocity with local expertise to address real-world issues. Therefore by understanding the importance of service-learning as a key component of academic scholarships and community needs, there is a clear recognition of its need (Andrews, 2007). Thus, governments and organisations can effectively embed the appropriate application of this model into the Education Blueprints and organizational learning plans which can be replicated and measured effectively. This is in line with the research by Alexander, Van Wyk, Bereng and November (2010), who argues that the purpose of education is about building human capital towards achieving individual and community needs and thus, higher education institutions play a critical role, and according to Striano (2009) education systems are now pressured to be more sensitive and responsive to community and social needs.

Faculty is often familiar with forms of experiential education including internships, field research, or volunteer work. Furco (1996) suggests that service-learning is distinctly different as it provides reciprocal benefits to the higher education institutions and community as well as the opportunity for students to learn by doing service to the community. With reflective learning as its centrality, students engaged in service-learning activities will be able to link service to learning objectives, provide thoughtful feedback and seek clarification of values, personal and community growth. This gives the students a holistic experience and the faculty a sense of purpose to able to help the greater community through their teaching. According to Cooper (2007) suggests that learning is a creation of meaningful experiences that affect individual and holistic development. In this regard, Bringle, Hatcher and Clayton (2006) and Lantis, Kent, Kille and Krain (2010) suggests that to ensure that learning takes place the promotes learning that connects reflections and outcomes and assessments to the

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curriculum and learning. This approach looks at experiential education through reciprocal learning to the service provider and the recipient as well as an authentic and experiential learning experience (Berman, 2006; Jacoby, 2003; Engstrom, 2003) which then link learning through reflections. The reciprocal relationship is about a mutually beneficial and meets the educational goals (Bringle & Hatcher, 2006; Berman, 2006). This entire experience is about a transformative journey where learner serve and achieve academic goals while the community benefits and is different from volunteering and charity work or one-off service activities (Baillie & Laurie, 2011; Harris, 2010; Megivern, 2010; Verjee, 2010) and it is important for these learning to be connected through reflective practices.

This study may also prove significant in contributing to the underdeveloped area of research related to reflective learning and service-learning in the academic setting in Malaysia, and in posing numerous pertinent questions to guide future research. The main significance of this study lies in the fact no existing studies have explored service-learning programs through reflective learning and social impact. Knowledge and understanding of the factors affecting students' learning through service-learning programmes may provide additional insight into student retention and community well-being as their motivation to continue doing good. The research of this kind is significant to policy makers contemplating such learning experiences.

1.7 SCOPE OF STUDY

The scope of this study will focus on the students' perception of how service learning impacts upon their reflective learning abilities for the first objective, whereas for the second objective, the study looks into the social impact of service

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learning on the communities being served. The final objective of this study focuses on the mediating role of social impact on the relationship between service learning and reflective learning. The study utilises a specially designed questionnaire to elicit information pertaining to the students' perception of how integrating service learning into the business curriculum enhanced their reflective learning capabilities and created a social impact on the community they served. The study employs the variance based-Partial Least Squares-Structural Equation Modeling (PLS-SEM) modelling method to analyse all three objectives.

1.8 DEFINITION OF KEY TERMS

1.8.1 Service Learning

A single concept of service-learning would be difficult to be defined and may compromise the essence and the nature of it (Finley, 2011). Consistency and accuracy in using a particular definition in a given context is very important as according to McBride and Sherraden (2007), it is important that defining service-learning accurately and clearly identifying its form and structures, will give clarity about the construct in a particular context and enable future research and the innovation and advancement of practice and theory.

The term service learning, according to Bringle and Clayton (2012), refers to a course which is credit bearing, where the students participate in mutually identified service activities that benefit the community, and they reflect on the service activities in such a manner that they gain further understanding of course content.

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1.8.2 Reflective Learning

Reflective learning refers to learning through and from experience to enhance oneself while examining norms and practices that constitutes to these judgments that may have guided reflection and also future learning. It is an important experience that brings experience, thinking and learning as part of evaluation and growth (Boud, Keogh & Walker, 1985; and Jarvis, 1992). Smyth (1992) explained that:

> ...reflection can mean all things to all people...it is used as a kind of umbrella or canopy term to signify something that is good or desirable...everybody has his or her own (usually undisclosed) interpretation of what reflection means, and this interpretation is used as the basis for trumpeting the virtues of reflection in a way that makes it sound as virtuous as motherhood. (p.285)

1.8.3 Social Impact

Latane (1981) defines social impact as any influence on individual feelings, thoughts, or behavior that is exerted by their real, implied, or imagined presence or actions of others. Engagement with the community and the subsequesnt social impact, is absolutely critical if service-learning is to be beneficial. As service learning provides ample opportunities for students, not only to meet the needs of the community, it also enhances their graduate capabilities, making them responsible and empowered to become change agents as they contribute to their own community. The social impact of service learning therefore, does not only focus on the community, but also addresses the other stakeholders (students, faculty, universities, and the policy makers).

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Several studies (Chickering, 2008; Cook (2008); Brail, 2013; Said, Ahmad, Hasan & Awang, 2015; and Kruger, Kruger & Suzuki, 2015) have shown the positive social impact that service learning activities have, as it provides ample opportunities and useful services to communities in need. Students are exposed to various networking opportunities resulting from undertaking service learning activities.

1.9 ORGANISATION OF THE THESIS

The study is organised in the following manner:

Chapter 2 (*Literature Review*) draws together various bodies of literature which inform the conceptual and analytical frameworks for this research. Some gaps in this existing literature will be identified and described. This will set the basis of the research questions in the study.

Chapter 3 (*Methodology and Research Contexts*) plays an important role in this study. First, it traces the choices that were made regarding the research topic, methodological approach and community engagement, while also providing justification for these decisions. Having explained the intention of having reflective learning and service-learning activities which enhance learning and social impact both in terms of the community needs and the benefits to the student in the wider social context that they operate in.

Chapter 4 (*Analysis of Findings*) explores the findings from the empirical analysis that relate to the components of the service-learning programmes that benefits the students in higher education institutions to reflective learning. The chapter initially presents empirical findings, identifying outcomes catalysed by the service-learning programmes to reflective learning. Data will be presented about how these service-

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learning programmes have influenced conceptions of the spatial boundaries of students, curricula connections, community needs and behaviour intent.

Chapter 5 (*Conclusions and Policy Implications*) draws together the essential empirical and conceptual findings from this thesis. It begins by reviewing the empirical findings of the study and the conceptual model is revisited in light of these findings. The discussions then suggests how the findings could influence institutional strategies, curricula discourse and policy implications. Some limitations of this research will be highlighted and the study will conclude with recommendations and future research direction.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION: REFLECTIVE LEARNING, SERVICE-LEARNING AND SOCIAL IMPACT

Service learning and reflective learning has been practiced in many institutions of higher learning as it has been known to enhance learning and provide deep understanding of the subject matter. Reflective learning is a form of learning that is beneficial to both the student and the faculty but unfortunately it lacks a grounded definition that can be used across in various contexts. This is because its definition can change contextually and even based on idealogy. Over the past decade, reflection has been frequently used in the educational literature (Boud *et al.*, 1985; Moon, 1999; Olsen & Burk, 2014; Toni & Makura, 2015) but there is a varied approach to its meaning. Reflecting on materials and situations is central to deeper understanding and learning while reflections polish critical thinking skills. The ability to reflect on experiences and learn from it will enhance continual personal development but it is important that it is captured in a structured manner. Thus, a model of reflection based on service-learning as a pedagogical tool will be used to provide some clarity on this definition. It is indeed a very exciting topic to be studied but it is equally faced with challenges to be put in action. Various researchers such as Marie, Lewis, McKee & Adam (2010); Lay & McGuire (2010); and Moon (2006) have all agreed that critical reflection enhances learning and provides deeper and more succinct understanding of a context. However, Moon (2006) was very critical about the fact that reflective practice cannot be prescriptive but should be guided to enhance individuality and to

nurture different perspectives based on the ideology of the student. Thus, it is important that the nature and process of the activities are defined. For the purpose of this study, the service-learning activities will be used as a pedagogical tool to enhance students reflection which can be tested from the service-learning components which will be discussed, i.e. curricula connections, student development, community needs and behavioral intent.

Three Decades of Service-Learning in Higher Education (1966-1996) is an interesting book by Seth Pollock (1996) which provides some insights into the conceptual evolution of service-learning. Though the book is a very interesting read, it however lacks philosophical depth; but provides opportunity for more research in the service-learning space. However, most of the literature on service-learning, its concepts and practices comes from the American perspective and is lacking in Malaysia. It is interesting how in America, education is viewed as a public purpose which is to prepare students for public and community life, thus, the importance given to service-learning and its learning through reflective learning. The approach to education and its broad philosophies are not very different in Malaysia but over the years, both reflective learning and service-learning as key educational concepts has not emerged in education blueprints, national agendas or even school and higher education institution curricula and research. As a form of experiential education, service-learning has its roots in Dewey's theory of experience and primacy of education. Along with internships, cooperative and collaborative learning, and other forms of experiential learning, service-learning became established and grew on numerous college campuses in the late 1960s and the 1970s but did not sustain. Young participants engaged in service experiences did not necessarily ensure that either substantial learning or effective service would result in their engagement and as

expected, did not understand the purpose of their work (Kendall, J. 1991). The leadership or work done was by a handful of academics and was not an institutionalized.. The work was supported by many stakeholders, namely, the Government, state grants, faculty and researchers through faculty development workshops, conferences, and publications proliferated, and books on service and other disciplines (Zlotkowski, Longo & Williams, 2006; Zlotkowski, 1997). Service-learning was then further embraced through journals and conferences and this saw service-learning partnerships grow as a link between academia and community (Bailis, 2000; Kronick & Cunningham, 2013). These guidelines and frameworks are used as a foundational guide for service-learning until today. This was an opportunity for higher education institutions in the United States to broaden the scope of service-learning and to bring their resources to bear on both the broad social issues and local problems, while providing a link between academic pursuits and community needs through scholarship of engagement. O'Meara (2011) defines the scholarship of engagement as "learning, professional service, community-based research, and applied research that engage professional or academic expertise in partnership and reciprocity with local expertise to address real-world issues". This reiterates the fact that higher education institutions can actively educate students to be purposeful citizens inside and outside the realm of politics by focusing on personal and social responsibility as intended learning outcomes, including civic understanding and engagement, cultural diversity and competency, and ethical logical and reasoning that is grounded in the need to solve community needs. Research by Colby, Beaumont, Ehrlich, and Corngold (2007) propagates the fact that education needs cultural diversity and inclusivity, this is further supported by White (2001) and Kronick & Cunningham, 2013) as they reiterate the fact that by solving community problems,

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students benefit personally, socially and also academically. From this, it can be seen that service-learning is widely recognized for its effectiveness in educating students for lives of civic and community engagement as well as personal and academic growth through reflective learning.

In Malaysia, the National Higher Education Strategic Plan 2007-2020 (Ministry of Higher Education, 2006) made calls for higher education institutions to have a more focused community orientation via learning and civic action. It is further stated that Malaysia' sustainable economic growth also depends on a new vision of higher education institutions that place community orientation at the forefront of every graduate. Researchers have also taken a more critical view and some intense discussions have taken place around the varied views on service-learning as discussed in section 2.3. There are setbacks because of poorly planned and executed service-learning programmes and also the lack of understanding of the nature and intended outcomes of service-learning by the faculty. Service-learning is a collaborative effort in which students partner with the community to provide a needed service which is identified by the community, while integrating academic coursework in a meaningful, purposeful and educational way (Weigert, 1998). In a study by Pelco, Ball & Lockeman (2014), it was revealed that students who undertook service-learning activities found that it contributed much to their academic and professional growth. Further, the ability to assess and evaluate how effectively the services are being provided is a specialized service that the university can offer. It is important to understand how higher education institutions view service-learning as a bridge that would enhance value of good practices and promote their own values as a graduate capability and leaders in the global community. It is also meaningful to study how

service-learning brings competitive advantage to the higher education institutions and students value this as an advantage.

2.2 REFLECTIVE LEARNING

Reflective learning varies considerably based on the disciplines and traditions (Fook, *et al.* 2006) and even within similar disciplines, various interpretations can be found. Ghaye (2007) rather critically referred to the entire reflective learning and practice process as an attempt to make sense of uncertainty and chaos particularly at a workplace. This can be true as in some professions, reflective practices are used as a feature to define competence and to rationalize the current practices.

Reflective learning covers a wide array of aspects covering the life-long learning process, structured learning process, learning as Introspection, and Reflection as a graduate capability. Boud *et al.* (1985); and Jarvis (1992) interpreted reflective learning as learning through and from experience to enhance oneself while examining norms and practices that constitutes to these judgments that may have guided reflection and also future learning. It is an important process that brings experience, thinking and learning together as part of evaluation and growth. In an effort to cultivate life-long learning among students, Bleicher & Correia (2011) employed a "small moments" writing strategy to help students reflect on their service-learning experiences.

With structure and process, critical reflection will remain uninformed and ineffective. Crawley (2005) builds on the ideas from Hillier (2002) to outline reflective learning as a structured and purposeful process which should be more aptly defined as critical

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reflection. Reflecting and being aware of one's cognitive capabilities is one of the highest and advanced cognitive development (Piaget, 1976). Enhancing this argument was the work of Vygotsky (1978) where he claimed that children grow and develop by relying on others while internalizing and modeling others. Research by Hatcher, Bringle and Muthiah (2004); and Guthrie and McCracken (2014) provide some theoretical and empirical evidence on the importance of metacognition in students academic and cognitive development. Incorporating social activities such as service-learning, collaborative work and peer tutoring has indicated better and more enhanced learning and development (Brown and Palincsar, 1989; Driver et. al., 1994; Okada and Simon, 1997). By incorporating social activities into classroom and making it borderless labs and learning communities (Brown & Campione, 1996; Scardamalia & Bereiter, 1994) support the findings that both social processes and cognitive processes are crucial in the students' academic and cognitive development (Vygotsky 1978; Wertsch, 1991). Thus, with a foundation of a structured process with collaborative inquiry and reflective learning through service-learning, there should be improvement in their reflective learning and metacognitive development.

Reflective practice brings value as introspection as it facilitates the understanding of one's strengths and weaknesses, inquiry and questioning (Moon, 2002) and by doing this, they may be able to transfer tacit self- knowledge (Smith & Pilling, 2007) to actionable plans while understanding the value if knowledge gained. Although this seems ideal but the challenge remains as argued by Sadler (1989) that what is the ability of students to be able to evaluate their own learning to ensure reflective practice is even beneficial while Marton and Säljö (1984) proposed that students must engage in deep and meaningful, not just skimming through and surface learning. By incorporating active learning approaches which enable deeper and self-appropriated

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learning, there will be a more intrinsic motivation (Entwistle, 1987) to learn and seek deeper meaning of the knowledge gained. Higgins, Hartley, and Skelton (2002) as well as Nicol and Macfarlane-Dick (2006) have very aptly stated that reflective learning is important and student should be given adequate time to reflect and feedback should be given in a timely manner and that is currently lacking. Reflections that are written and built on are more powerful to enable introspection than discussions or even collaborative work. This will improve achievement and understanding of a subject matter and is an important transferable skills that will enhance graduate capabilities (Smith & Pilling, 2007).

It is important that as students transition to the workplace, they are equipped with not only technical skills by have maturity in their thinking and have the ability to self-reflect and evaluate work and practices. As Smith and Pilling, (2007) have said student who have the ability to reflect will have a better advantage at the workplace as this reflective practice will make the graduates more involved, appreciative of new knowledge and skills (Nolan, Raban, & Waniganayake, 2005) and will be more engaged in reflecting on their actions (Schon, 1983) while self-evaluation and self-assessment (Rushton, 2005). In many professions, reflection is a requirement (Betts, 2004) and universities have been encouraged to embed reflection in courses as a start point for life-long learning.

Most researchers of service-learning believe that service-learning is grounded in the work of Dewey (1910; 1917); Piaget (1976) and Kolb (1984). Piaget (1976) argued awareness and reflection of one's cognition is one of the characteristics of the most advanced stages of cognitive development and thus, reflection is an important aspect of personal growth.

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Kolb's (1984) Experiential Learning Model also serves as yet another theoretical foundation of service-learning. Experiential learning has been researched for many years and it is postulated that the more experience one goes through, the higher the level of retention of knowledge and the ability to apply critical thinking skills (Dale, 1969). Purely experiential initiatives, without academic linkages and intended outcomes, will not serve the purpose of enhancing curriculum and measuring graduate outcomes.; thus student reflections (Foley, 2006; McEachern, 2006; Askew, 2004) on their actions and connections to academic context is a key part of learning; and reflective learning (Healey & Jenkins, 2000; Ash & Clayton, 2004) combines elements of experience and theories. However, Howard (2001) argues that reflective learning needs to be guided and is not just a journal of events but needs to make meaningful connections (McGuinnessand Brien, 2007; Moon, 2006) with deep learning rather than surface learning between experiences and academic outcomes. Through these meaningful experiences, both Jameson et al. (2013) and Sen (2010) have found that there is a deeper level of critical analysis.

Service-learning engages students in concrete experience, followed by critical reflection on the service experiences. The intention of reflection (Molee et al, 2010; Urraca, Ledoux & Harris, 2009; and Grusky, 2000) is to ensure that students have a deeper understanding of why they are engaged in service and the real issues. Students have also reported that, through their reflections, the actual experience and has grounded their understanding of the academic curriculum (McClam et al. ,2008).

In a study by Stachowski and Frey (2005) in which service-learning activities were performed by student teachers in the American Indian Reservation Project in their placement communities across the Navajo Nation, reflection was found to be an

integral component of service-learning, and without it, the experience was simply found to be an exercise without meaning. Reflection as described by Silcox (1993) is "the process of looking back on the implications of action taken— both good and bad—determining what has been gained, lost, or achieved, and connecting these conclusions to future actions and larger societal contexts". (p. 102) To promote reflective thinking, Song, Koszalka, and Grabowski (2005) suggested focusing on three main areas which included: teaching methods, scaffolding tools, and the learning environment. Gibson, Hauf, Long and Sampson (2011), on the other hand, found how reflective learning was used to enhance the learning potential of service-learning pedagogy.

In a quantitative study involving twenty-six pre-service teachers at a Midwestern, private, faith-based, Liberal Arts University, Welch and James (2007) discovered that as a result of the service-learning activity that the pre-service teachers undertook, there was a significant improvement in the reflection entries of their journals. This was the result of having a guided reflection rubric, which was employed as a tool for learning and teaching for service-learning experiences in special education courses. The reflection entries provided the bridge between the service-learning activities and the academic content of the course. Ross (2012) concurred with the findings of Welch and James (2007) on how service-learning enhances the reflective learning abilities of the students. In a study of 76 undergraduate student nurses who completed 8 hours each of service-learning as part of their course objectives in the junior level gerontology course, Ross (2012) re-iterated the importance of providing time for students to critically reflect on their service and the learning experience. Reflection was found to help the student think about and analyze their experience in the context of their classroom learning and the needs of the elderly clients served by the

community agency. Kaye (2004,) aptly emphasizes reflection as being "indispensable to the entire service-learning process and is what weaves it all together intellectually and emotionally for everyone involved." (p. 26)

The quantitative and qualitative evidence shown in the various studies cited above indicate the importance of service-learning in enhancing the reflective learning abilities of the students involved in community outreach projects.

2.3 SERVICE-LEARNING

Service-learning takes the form of a variety of norms and cultural activities, with a level of personal context which makes this a term that cannot be cast in stone as a definition. According to Bringle and Clayton (2012), service-learning is a course which is credit bearing, where students participate in mutually identified service activities that benefit the community, and thereafter reflect on the service activity in such a way as to gain further understanding of course content. Service-learning, therefore, is seen as a pedagogical aspect of the formal academic curriculum that embeds service to the community with measureable outcomes, incorporates critical reflection and supports the growth of individuals in terms of behaviour and personal development, social responsibility and enhancement of disciplinary knowledge. This emphasizes the importance of service-learning, which is built on the importance of civic education, skills and habits (Eyler, Giles, Stenson & Gray, 2001; Battistoni, 2002; Westheimer & Kahne, 2003; Zlotkowski et al., 2006; Clayton, Bringle & Hatcher, 2013).

Service learning is a rather broad concept which encompasses various aspects including the pedagogical tool aspect, the experiential learning aspect, the integration

aspect, and personal context aspect. Service-learning as a pedagogic tool is suggested by Turner and Mayer (2009), Mottner (2010), Celio, Durlak and Dymnicki (2011), and Kulkarni (2014), where they link learning and experiential outcomes together. This view can be varied as not all scholars view this as the core to service-learning. Howard (2003), views service-learning as only a pedagogical tool, and not a model or framework. Similarly, Bringle and Hatcher (2003) narrows service-learning to "course-based" events, however, they have been clear that there is an enhanced purpose and societal responsibility for the participants through the service-learning activities. Karlberg (2005) argues that service learning needs to be re-defined as a pedagogy to encourage students to partake in activities that enhances the welfare of others.

For many service-learning faculty members, it has changed the approach and reach of the traditional classroom education and this requires faculty motivation (O'Meara, 2012). Service-learning combines a service objective and academic learning objectives with a pedagogical slant as stated by Rama, Ravenscroft, Wolcroft and Zlotkowski (2000), Flannery and Pragman (2008) and Kulkarni (2014), who have all given a different slant to what service-learning means in the pedagogical contexts.

This nature of academic context is supported by Conway et al. (2009), as it is a socially embedded learning practice. Bryant, Bryant, Roberts, Vaughn, Pfannenstiel, Porterfield and Gersten (2011) mentions that the process involves comprehension of the study materials, analytical and reflective thinking and community or societal engagement, which will take the form and rationale of the activity and the context it operates in and in support of the community at large. As a pedagogy, service-learning promotes critical thinking, student engagement and meaningful experiences (Madsen,

2004; Love, 2008; Kisha, 2013) and this approach has increased the depth and richness of learning and Wyrick (2003) states that reflection and learning begins when a student is immersed in an experience or contribution. Students also learn best when they are actively involved in the learning process (Bradford, 2005), where they can promote knowledge acquisition, increase collaboration and develop solutions from real work experiences (Wells & Grabert, 2004). Higher education institutions serve as a dynamic environment in which students are able to learn about and experience diversity; and higher education institutions have the ability to provide students with a real world experience and enhance their cognitive and developmental growth (Hurtado *et al.*, 1999; Chan Lin, 2012; Paxton, 2015).

Education is the key to a nation's development and sustainability and research shows that an educational journey is structured to support human capital development. Waghid (2002) emphasize the need to bridge the gap between universities and society; and this is the pressure set on higher education institutions globally to be the main drivers of this. Academic service-learning is a pedagogical model that integrates relevant and purposeful community-based projects within a credit-bearing academic course, in which students make sense of their learning through critical reflection on their community-based experiences in light of course concepts and themes (Pritchard & Whitehead, 2004; Stringfellow & Edmonds-Behrend, 2013; Kabli, Liu, Seifert, & Arnot, 2013). This link has been described by Schuetze (2010) as a partnership, reciprocity and joint ownership where this collaboration of skills and knowledge serves to enrich everyone. Empirical studies have shown that service-learning and community engagement has brought about a transformational impact in student learning. Service-learning is used as an academic tool that bridges the link between community and academia through structured techniques through traditional

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educational teaching, engagement and reflection (Cook, 2008; Penn, 2003). Service-learning as a pedagogy uses traditional teaching, creates a need to support community needs and nurtures reflection about the actions and its relationship to the education concepts (Burke & Bush, 2013). Earlier researchers such as Eyler and Giles (1999); Hardy and Schaen (2000); Simons and Clearly (2006) have also identified academic service-learning has a pedagogy that helps translate theory into practice. This is also very transformative as it teaches the students to learn and to do (McDaniels, Weston, Gabrielle, Barrow, Long & Nagorka, 2013); and is very outcome focused.

Service-learning provides students with an avenue to challenge and appreciate the theories and attitudes regarding society and people (Carlebach and Singer, 1998; Naudé, 2012). By having a critical view, the students will also deepen their understanding of the learning as also suggested by Smith-Par'ıol'a and G'ok'e-Par'ıol'a (2006). They suggested that service-learning includes an organized service activity to serve community needs and a reflection on how those activities help students understand the classroom learning (Le, Raven & Chen, 2013). Service-learning as a pedagogy enables students to develop their learning through service activities (Brail, 2013; and Said, Ahmad, Hasan & Awang, 2015). With this, service-learning has become a key of service, embedded in a course in which students participate in a service that matches community needs, uses skills related to the discipline and allows reflection of their activities (Foli, Braswell, Kirkpatrick & Lim, 2014).

Service-learning used in a structured manner connects in class learning to community needs and improves the student participation and respect for community and peers (Kaye, 2004). However, according to Jacoby (2014), service-learning offers a

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broader interpretation that intentionally includes experiences facilitated by student affairs, various on-campus professionals, community partners, and student leaders, as long as those experiences incorporate the fundamental elements of service-learning, reflection, and reciprocity. With this, there must be a collective effort to integrate other resources and departments into the curriculum delivery to ensure better outcomes.

Jacoby (1996) explains service-learning as a form of experiential education in which students engage in activities that address human and community needs, together with structured opportunities for reflection designed to achieve desired learning outcomes, as an extension of Kolb's (1984) experiential learning. The experiential learning creates a mental model use for reasoning (Narvaez and Bock, 2002). Service-learning symbolizes the intended desire of combining service with learning and thus the use of hyphen connects the two words together as an action. Kruger, Kruger and Suzuki (2015) revealed that service learning provided a platform to incorporate experiential learning into a programme of study to provide a new avenue for the application of theory to practice.
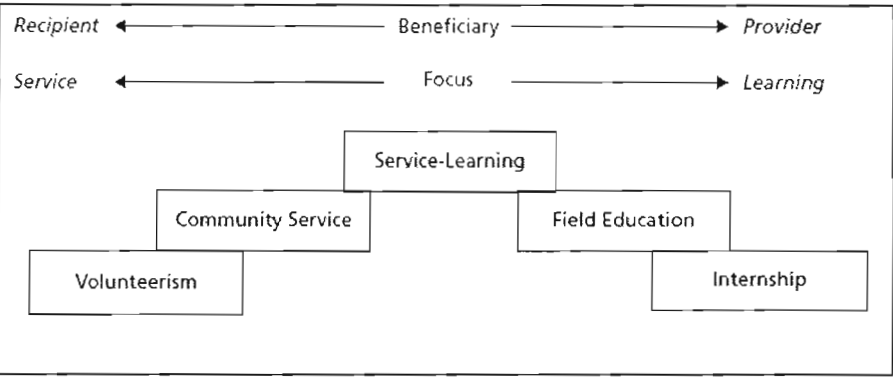
Figure 2.1
Furco's Model

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This study will be guided by the Furco's Model (1996) which is frequently cited to emphasize the unique difference of service-learning and how varied it is from community- based work and experiential learning. The understanding of this model is crucial to comprehend the nature of service-learning explored in this study. These programmes are generally more structured and have an intended and structured outcome. It is important to note that the element of reflection is not needed but may be done as an exercise. In this manner, it lacks structure and academic credibility.

Service-learning is central in Furco's model as it intentionally creates a link and balance between learning, student activities and community needs. Service-learning is service that is integrated with learning, and adds value to all parties (Porter-Honnet & Poulsen, 1989; O'Grady, 2000). Quan and Raven (2015) incorporated service learning projects into their international business curriculum to assess students' learning outcomes on global poverty issues and found that their students underwent a transformational experience.

Reflections are crucial and are designed with the specific outcome and the learning is not from the experience but from the reflections. Reflections of class work and out of class experience can contribute to better learning, retention and understanding (Foley, 2006; Askew, 2004). Howard (2001) argues that it is the learning that is important is reflective assignments and not just recording of events. However, Jacoby (1996) does not only view service-learning as a philosophy but as a pedagogy where there is mutual reciprocity amongst the participants and community. As a pedagogy, service-learning is about reciprocity and both the student/ learner/server receives just as much as they give and the reflective assessments should create opportunities for synthesizing class theories and out of class experiences in a meaningful and

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understanding manner (Healey & Jenkins, 2000; Ash & Clayton, 2004). Service-learning as a pedagogy which is about reciprocity, studies have shown that students develop holistically and there is evidence of critical thinking through service-learning activities (Jameson, Clayton & Ash, 2013). In terms of reciprocity, Sigmon (1996) states that each party benefits from this engagement in various ways where the students understand the value of their work and how that serves a greater community. In service-learning, the students extend their discipline specific knowledge to meet the community needs and identify or acknowledge their growth through the reflective process which is structured and designed to meet the intended outcomes. However, Holdsworth and Quinn (2012) argue that if the difference is not clear and the programmes are not designed effectively; the students may not be able to see the difference and this will fail to develop the perspective of reciprocity.

Although service-learning is seen as reciprocity which benefits all parties, the students and communities (Howard, 2001, Stoecker & Beckman, 2009), there are researchers who are skeptical of this pedagogy and believe that if the initiatives are not well crafted, there is a possibility that the communities will be losing and disadvantaged through this process (Stoecker & Beckman, 2009; Baillie & Laurie, 2011; Jacoby, 2003; Farco, 1996) define this as reciprocal learning as they learn from experience. Learning from experience and reflecting upon it has proven to be substantive and effective in the learning experience as stated by Bender and Jordaan (2007) where service-learning is a pedagogic philosophy. Also, service-learning is an action learning approach that involves structured purposeful experiences where students can construct their actions while also enhancing their critical thinking (Barrows, 2002; Revans, 2011; Stappenbelt, 2010). While this is a purposeful experience, it is also a transformative experience where the students find meaning in what they do (Pugh,

2011); this will enable that when a student can see and appreciatethe benefits of their actions in the community. Students would be able to make connects in their observation, personal commitments and learning to the actions that they are engaged in. It is experiential because it combines community service and academic learning, providing academic benefits and practical experience while also engaging students with the community (Vogelgesang & Astin, 2000; Gallini &. Moely, 2003; Eyler, 2009; Aldas *et al.*, 2010). By engaging with the community students, academic requirements are met while they address the community needs as suggested by Ross (2012); Cashman and Seifer (2008), while Mahasneh, Tawalbeh, Al-Smadi, Ghaith and Dajani (2012); Murphy, (2010); Verjee, (2010) suggest that it is not just the academic requirements but the students uses their experience of working while serving the community.

The process of integrating real-world experiences through service-learning and the curriculum adds value to social interactions. Service-learning as reciprocity was proposed by Kendall (1990) and this idea of reciprocity is further elaborated by Kaye (2002) as an initiative that mutually benefits the community and the students. Nevertheless, there is a broad understanding that the integration of academic curriculum, service to the community, collaborative work between staff and students and the critical reflection is needed to ensure the academic, community and personal goals are met while extending the benefits to the greater community (Bringle & Clayton, 2012). They have further emphasized the importance of service-learning as a part of formal academic curriculum (Clayton, Bringle, & Hatcher, 2013). Integration of service helps reduce stereotypes and attitudes of service and community, helped them collaborate and make better career choices in their life, Hirschinger-Blank and Markowsitz (2006). When student experiences are integrated with learning, new

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perspectives are formed and there are opportunities for breaking stereotypes and be open to differences (Nairn, 2005). Kraft (1998) stated, that due to the lack of agreement on service-learning conceptually, it is difficult to evaluate accurately while, Eyler and Giles (1999) and Wade (1997) maintain that service-learning lack a conceptual framework as there is a lack of structure and a defined process that is backed by theory or a body of knowledge. This is more apparent as service-learning is not very academic but its more experiential which lack technical inquiry or theorizing. However, (McClam, Diambra, Burton, Fuss & Fudge, 2008; Moely, 2003) found that students understood and applied better technical content and learning through intergrated and experiential activities. The question then remains as to the genuine reciprocal desire of the higher education institution as well as the community in working together or are there distinctly separate agenda's that are coming together for individualistic purposes. had critically questioned the survival of service-learning as it lack grounded frameworks and good practices; thus, this study is done at an opportune time to understand how service-learning plays a pivotal role in learning while service is rendered to the community to alleviate their needs.

Studies have been done from the attitude, case studies, survey etc but not from a philosophical perspective (Varlott, 1997). It must be acknowledged that most of the connections are made from Dewey and its connections with service-learning. Hatcher (1997) as well as Giles and Eyler (1994) has attempted to trace service-learning to the Dewey theory. had discussed Dewey's influence in service –learning.

Student development as the core of service-learning through the values of service, community engagement and empowerment have been postulated by Stanton (1990) and similarly by Kendall (1990) who echoes this with the humanistic philosophy of

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human growth, purposeful contribution, social vision and a more involved approach to community. They also note that transformative learning when we link problems to solutions and this process of learning has led to the better learning. Not only does it encourage academic growth but also from a personal perspective, it encourages community growth (Ash, Clayton & Atkinson, 2005; Annette, 2003; Battistoni, 2002). Further, Eyler and Giles (1999) that students that were engaged in greater length had a more positive and impactful experience. However, Mezirow (2000) and Taylor (2000) highlight that aspects such as dilemma and negative experiences have not been investigated thoroughly. Service-learning does not only bring the community into the classroom but cultivates life-long perspectives (Banerjee & Hausafus, 2007). Life-long learning is such an important skill as more and more universities begin designing university courses to promote lifelong learning (Baveye, 2008). Being immersed in service-learning gave the students a sense of altruism and they were motivated to gain more knowledge and skills for themselves (Bowman, Brandenberger, Snyder & Toms, 2010; Simmons and Clearly, 2008; Moely, McFarland, Miron, Mercer & Ilustre, 2002). Thus, it is important to recognize that learning takes various forms and students needs to be encouraged to develop a holistic view of things and recognize their own potential.

2.4 SOCIAL IMPACT

The National Commission on Service-Learning (2002) explains service-learning as a teaching and learning tool that engages the key stakeholders (educational institutions, students, and the community) in an educational, civic, and community strengthening activity. Students partaking in service-learning activities are provided with the

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opportunity to meet the needs of their community, while being nurtured to become responsible citizens, resulting from the development and improvement of these students' social awareness and civic engagement (Berry & Workman, 2007). Kruger, Kruger and Suzuki (2015) acknowledges the role played by service-learning activities in engaging students in structured activities that are intentionally designed to create a social impact by addressing the needs of the community, aside from enhancing student learning and civic responsibility.

Several studies (Chickering, 2008; Cook (2008); Brail, 2013; Said, Ahmad, Hasan & Awang, 2015; and Kruger, Kruger & Suzuki, 2015) have shown that service-learning has a positive social impact as it provides ample opportunities and useful services to communities in need and to the larger community of stakeholders involved in the service learning activities. Students are exposed to various networking opportunities resulting from undertaking service learning activities.

Vernon and Foster (2002) examined the perceived impacts that college students had at the nonprofit agencies where they served and on the needs of youth their service addressed, and found that the service provided by the college student volunteers had an overwhelmingly positive social impact on the community youth in terms of the general benefits that the youths received from the students' community service activities. One such area of social impact in which some college students were really able to make a difference for youth was in enhancing the youth's self-esteem. Yet another social impact the service-learning activities had on the youth was that the college student volunteers were able to provide a sense of future or a new perspective for some children through their service.

In addressing social impact as the reciprocity of service-learning, Sandaran (2012) discusses the need for incorporating reciprocity for learning and serving, in which service-learning is viewed as civic engagement and not charity as its focus is on reciprocity that culminates in a win-win situation for all stakeholders in the service-learning activity. The reciprocity aspect of service-learning thus provides a platform for students to explore and gain deeper understanding about service, and build a more mature and respectful relationship between the providers and the recipients of the service. In his dissertation research project, Clarke (2000) evaluated service-learning programmes according to the 3-I (Initiator, Initiative, and Impact) Model, in order to evaluate the process of community impact. Using both quantitative and qualitative methods, the author revealed evidence from multiple sources, that the community was favorably impacted by the service project. Clarke (2000) mentions that:

> Survey respondents and community leaders felt that: they had a clear idea of why the university was involved with the community; they knew what the project goals were; the community helped set project goals; the university helped the community reach its own goals; the project worked well in the community and the community was well-served; the community/university bond was strengthened; the community gained access to new resources; additional student projects in the community would be welcome; and the project helped community residents become active in and feel a sense of control over the community. (p. 165)

2.5 THEORETICAL UNDERPINNINGS

2.5.1 Dewey (1916) and Kolb (1984)

Reflection is a vital component of learning and Higher Education Institutions should be aware of its importance and embed it in the curriculum. However, it must be noted that incorporating reflection needs to be integrated and planned careful so that they students have multiple reflection opportunities during their duration of study and with

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reflection as a feedback (Mutch, 2003), it will also feed-forward to future enhancements in learning, development and growth. Growth is certainly an important variable in reflective learning as Korthagen, (1993) stated in his study on schools that practice reflection on English a for Foreign Language (EFL) shows that when members of a subject link their personal beliefs about learning to a critical analysis, they better understand the reason they are studying that subject and how that extends to supporting growth of themselves and others; they take more responsibility of their learning and actions. This in turn puts classroom context in perspective and encourages culturally appropriate and a more developmental reflective practice (Milner, 2003). Another approach to valued reflective learning is where needs and active participation is highly valued (Adler & Reed, 2000). In order for this to be practiced effectively, there needs to be a creation of a learning community (Sergiovanni, 1996) where sustainable change and improvement will occur. However, creating a learning community that practices reflection will require in a change of approach by the institution and faculty. There is a need for further scholarship on the faculty role in service-learning (McKay & Rozee, 2004; O'Meara, 2012). It is important to have a common understanding about organizational mission and initiatives, shared purposes and goals, and a need for constant improvement (Hajnal, Walker, and Sackney, 1998). Reflective learning cultivates meaningful and deep learning and helps both students and faculty to enhance new skills and grow professionally. Reflective learning through service-learning initiatives gives connections and meanings that need to be investigated in this study. Therefore, an understanding of service-learning is very important.

Robert Sigmon (1979) a pioneer in the field of service-learning, provided three key principles for community service-learning that those being served control the services

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provided, those being served become better able to serve and be served by their own actions, and those who serve are also learners and have significant control over what is expected and what is learned. For service-learning, it is strongly rooted in the conceptual underpinnings of the works of Dewey (1916, 1933), where he postulates that meaning is not from reason or experience, but is rather defined through conversation and engagement in which persons with particular interests to justify their own claims to knowledge through languages with specific norms. Dewey states that the purpose of education essentially is to establish the relationship of knowledge to conduct (Dewey, 1916) and to nurture responsible citizenships and would see beyond himself but serve the greater community. Dewey embraced project learning and discovery but one method may not fit all and was mindful that both the curriculum and the student are important and it is imperative to get the community involved and inclusive thus narrowing the wealth gap. However, Dewey did not coin the term service-learning as it was coined by Robert Sigmon and William Ramsey (Sigmon, 1979) and what Dewey did was to weave his theory of knowledge with the need for citizenship and believe that students should practice inquiry, reflective thinking and service for education to be useful. It should be noted that this concept by Dewey existed many decades ago such as the his explanation of the conception of experience in his works Experience and Nature (1925) and the Art as Experience (1934) which built on his conception of reflective thought and learning in How We Think(1910) and also the Essays in Experiemental Logic (1916). Dewey's approach is a naturalistic approach that acknowledges the concept that thinking and reflection can alter bond and routine. He furthers makes a clear distinction between primary and secondary experience and this was the start of all holistic education pursuits where

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emotional and intellectual dispositions are used for the improvement of social conditions.

David Kolb (1984), contributed significantly by embracing Dewey's theory and gave credit to John Dewey, Kurt Lewin and Piaget as founding fathers of the reflective approach and expanded on it with his own contributions through his writings on reflections that led to Dewey's theory being interpreted in a four stage experiential learning cycle involving concrete experiences, reflection, abstract conceptualization, and active experimentation. Learners are working in a space where the community forms the basis of the reflections and faculty will then support with reflective processes which generate abstract concepts and hypotheses, which is then built on concrete experiences (Eyler & Giles, 1993). This essentially is about transforming the actions into meaningful experiences by integrating experience into real and contextual learning. As service-learning is experiential, there are numerous variables to be looked at and thus makes it both vague and exciting as a concept. Both Kolb and Dewey wrote about reflective learning and has been a foundation for service-learning developments and Dewey and Kolb's theories are the cornerstone of reflective methodology which is an essential element in service-learning (Bringle, 2003). They further state that reflective activities serves as a link to bring out and understand the context of community service and narrow the social inequality gaps. Thus, these theories are crucial to set an solid foundation to be built on as learning is constructed from self-realization, realization of surroundings and awareness of social spaces and hence these theories will be the underpinning theoretical foundation for this study.

2.5.2 Critical Social Theory (1937) and Social Impact Theory (1981)

Another theory worth analyzing is the critical social theory, which has its findamental objective in the improvement of the human condition. Horkheimer (1937) states that the theory is concerned with finding alternatives to existing conditions and further states that the critical social theory rejects the separation of knowledge and action, value and inquiry, and challenges the unity of the scientific method with regard to social affairs. This differs from that of Dewey and Kolb. Although this theory aims to integrate the three fundamental knowledge interests into a holistic approach to inquiry and intervention but recognizes the other knowledge interests as mitigating influences to the possible excesses of instrumental rationality and balances. Similarly, Latane (1981) defines social impact as any influence on individual feelings, thoughts, or behavior that is exerted by their real, implied, or imagined presence or actions of others. Thus, engagement with the community is absolutely critical if this service-learning is to be beneficial. This study will generally make reference to these theories in terms of service-learning and its social impact. However, for the purpose of this research, the author will be focusing mainly on both Dewey and Kolb's theories and the following service-learning variables.

2.6 COMPONENTS OF SERVICE-LEARNING

2.6.1 Service-learning as part of Academic Curricula

Higher education institutions should offer a wide range of service-learning experiences intentionally designed for students at different stages in their education and at various levels of development. This is because learning traditionally occurs in

spaces and outside the classroom where it can take the form of learning that is conceptualized as tacit, incidental or informal (Barth, Godemann, Rieckman & Stoltenberg, 2007). It is important to note that the spectrum of service-learning experiences described in this section does not emerge within institutions of higher education as a whole, fully formed and this falls back to the Dewey theory (1916) where education is a process and experience not a destination. Service-learning can also occur on campus, involving service-learners with other members of the campus community such as peer assisted study sessions for lower performing students.

In addition to the modes of service activities discussed above, service-learning experiences can be course-based or extra curricular. While it is essential to offer a variety of both types of experiences, it is even more important that all experiences offered involve a balance of service and learning, as well as the fundamental practices of reflection (Boud *et al.*, 1985) and reciprocity (Howard, 2001, Stoecker & Beckman, 2009). It is more likely to have learning outcomes that are clearly defined and assessed, to meet standards of academic rigor, to tie the service experiences to the discipline's knowledge base, to offer the opportunity to apply theory to practice, and to engage students in objective, often written, critical reflection that is tied to course content. This design of the course content then has an impact on student outcomes that will benefit the community and create a link between students and the communities (Butin, 2010; Astin & Sax, 1998; Giles & Eyler, 1998).

Winter and Cotton (2012) bring about the concept of the hidden value in the curriculum where they say that when requirements of the service-learning is not structured, it may lose its effectiveness and student outcomes. Alternatively, students

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can engage in service-learning during internships which runs for no less than 10 weeks, engage students in service and reflection at a high level of frequency and intensity but of short duration. They may be or may not be embedded in the curriculum. Opportunities for students who are ready for more community engagement include community-based research as part of a course, as self - study, or with a faculty member.

2.6.2 Service-learning as a contributor to Student Development

Higher education institutions are looked upon as providers and problem solvers for the gaps in human capital and one fundamental aspect is graduate capabilities. Many graduates have high graduation scores but a low adaptability and transferable skills (Guo & Van der Heijden, 2008). This is a problem that Malaysia is plagued with, and as such, there is a need to focus on student development. It is hoped that these service learners will acquire critical thinking, become more adaptable and are able to use their knowledge for the benefit of a larger community as suggested by Barrie (2008), who reveals the existence of a real gap between graduate capabilities and the real world experience. Hence, with service-learning, it can be the vehicle to link these aspects to ensure our graduates are holistic individuals that are able to understand and undertake challenges in the real world. According to Overall (2010); Reeb (2010); Cashman and Sheifer (2008) and Peterson & Yockey (2006); through service-learning, aside from academic outcomes, students develop in terms of enhancing their skills in the areas of critical thinking, problem solving, increased social awareness and inclusivity, appreciation of diversity and also increased confidence in contributing to society. Calvert (2009); and Calvert, Jagoda & Jensen (2011) support the notion that service

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learning integrated in the business curriculum would enhance students' capabilities and assist in developing social entrepreneurs. This process of student development will further sharpen their reflective learning abilities. These outcomes coupled with graduate academic scores will enhance the employability and capability of the human capital in the country. Both community and students engage in a learning process where there is a sense of searching and a collaborative need to help one another, but unfortunately higher education institutions disseminate information passively (Meyers, 2009) and then leave the applicability of this knowledge to the students. However, the use of service-learning is important as the students becoming participants of real issues and are able to simultaneously apply the theories that they learned in the classrooms (Speck, 2001), while nurturing their self-awareness, respecting people and appreciating experiences. Students will then be able to develop compassion and make sense of differences by looking at experiences meaningfully. In order to expand their perspectives, it is crucial that these students widen their reach and not always associate with people like themselves, as this will create differences among the races (Sidanius, Van Laar, Levin & Sinclair, 2004). By widening their reach and through service-learning, there is an opportunity to make significant contributions and see positive outcomes in oneself and in others.

Service-learning experiences can be used in a enhancing learning in a transformative manner to further develop critical thinking and to visualise new ideas and perspectives, while enhancing skills and attitudes (Mezirow & Associates, 2000). Students will be able to enhance their reflective capabilities and sharpen their thinking abilities as they understand their value in community problems (Hefferman & Cone, 2003). These community problems can be used as an opportunity to propose solutions to the government on how best to help the communities, which then provides the

students with a contributory voice, moral thought and development (Brandenberger, 1998). By participating in service-learning, the students experience an increase in self-esteem while enhancing their social skills (Miller & Neese, 1997), and other valued attributes (Pascarella & Terrenzinni, 2005). Through service-learning programmes, Mayhew and King (2008) have found that there is also an increase of social and moral reasoning amongst the participants and interest in community immersion activities (Bowman et al, 2010). Thus, as Dewey(1938) saw experience as the most valuable teacher, immersing in that experience is the institution of character building and student development as learners transform experience into knowledge (Kolb, 1984). One's growth in a student development cycle is their ability to acknowledge and understand themselves. By engaging in the community, the students will be able to identify and understand their own civic identities (Campbell, 2008) and challenge their own views and thinking and eventually correct social inequalities.

In a longitudinal study of over 22,000 college undergraduates who participated in course-based service-learning, Astin, Vogelsang, Ikeda and Yee (2000) found evidence based on the students' survey results that the service-learning activities significantly impacted the students' academic outcomes in terms of GPA, critical thinking skills and particularly writing skills, which in turn further strengthened their reflective learning abilities.

Simons and Cleary (2006) carried out an exploratory methods design to examine the impact of a service-learning course on students' development. Their findings based on a survey of 142 educational psychology students involved in service-learning activities, showed improvements in diversity and political awareness, community self-efficacy and civic engagement scores of the students. These findings were further re-

iterated by Meyers (2009) who provided qualitative data on service-learning that documented how service-learning experiences impacted students' personal growth and civic participation.

In yet another empirical study carried out by Aftandilian and Dart (2011), students from the Texas Christian University who took part in a Garden-Based Service-Learning project were asked to provide their feedback through an online summative evaluation as well as through some pre- and post-service self-evaluations. The evidence showed that students had gained a sense of personal and professional achievement and developed good citizenship and community-building skills.

2.6.3   Service-learning as a Community Need

While service-learning is often viewed as a continuum from a lesser to a greater degree of duration, intensity, and commitment to social justice, Morton (1995) suggests that there also exists a series of related but distinct paradigms of service-learning and he argues that each paradigm contains a world view, a problem statement, and an agenda for change. Service-learning provides opportunities for students to develop collaborative partnerships with the communities and work on social needs that can reciprocally benefit both parties (Butin, 2010). Regardless of how these programmes are designed, the community members are important in the process of developing and implementing service-learning, not merely recipients of service and it must be understood that not all relationships in service-learning are reciprocal partnerships (Bringle, Clayton, & Price, 2009), and not all relationships or partnerships involve the same stakeholder populations. Enos and Morton (2003) distinguish between one-time events, short-term placements, ongoing placements that

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involve mutual dependence, interdependent core partnerships, and other transactional services.

2.6.4 Service-learning as a factor of Behavioral Intent

Human beings have varied behaviours and these behaviours are linked to attitude and the stronger the intentions, the more the individual will be engaged in a particular attitude and Root *et al* (2002), Mercer *et al.* (2002) and Rockquemore and Shaffer (2000) found that service-learning has reduced stereotyping and increased community involvement. This positive behaviours is hoped to create community inclusiveness and sustainability in the nation. Ethnography studies have also supported this as students' involvement in community has increased their understanding and appreciation for learning and the positive views of the community and course while gaining greater knowledge of self and positive changes to the community (Boyle-Baines & Kilbane; 2000; Eyler and Giles, 1999). This has also been tested by other researchers through using various techniques such as single-item surveys to assess attitudes (Rockquemore & Schaffer, 2000), reflective essays (Green, 2001) and also those who do not measure bahaviour but attitudes (Gallini & Moely, 2003; Mercer *et al*, 2002). Behavior according to Taylor *et al.* (2006) is determined by prior experience while increasing their individual gains and the actions are based on their own assumptions. This also then raises the question of why things are different and there is inequality (Bringle, 2003) and individuals then use stereotypes (Sperling *et al.* 2003) to explain differences and create norms and inferences from these relationships. Thus, in order to reduce stereotypes and prejudice and focus on creating inclusiveness and positive behavior, service-learning activities reduces the social distance through

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contact (Dandy & Pe-Pua, 2013). This initiative cannot be left to chance and the higher education institutions must consciously link with the community to create this contact which is essential (Taylor et al, 2006; Bringle 2003; Pettigrew & Tropp, 2000). By nurturing and developing environments where students learning experiences link academia to the community, education takes a new life and students' behavior changes as they see the relevance of the curriculum with the work that they do in the community which helps them with personal growth and a sense of social responsibility (Bringle & Hatcher, 1996), reduce inequality and development of human and social capital.

Hellman, Hoppes and Ellison (2006) carried out a quantitative study of 403 University students undertaking service-learning activities and found through multiple regression analysis, that a sense of community connectedness, cost and benefit considerations, and the seriousness of community needs are significant variables in explaining variance in the intent to engage in community service.

CHAPTER 3

RESEARCH METHODOLOGY
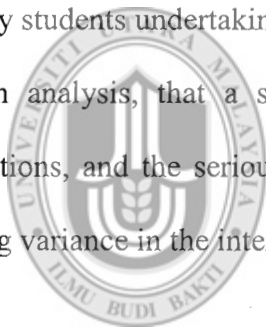
3.1 RESEARCH PROCESS

In this chapter, the over-arching research design of this study is described and this includes the description of the sample, the instrument used and the data collection procedures. Studies by Saunders, Lewis and Thornhill (2011) have shown that causal relationships between variables can be defined as explanatory studies where the emphasis is about studying the situation and its relationship between variables. Thus, this research is both descriptive and explanatory. The exploratory and descriptive research design was adopted in this study due to the nature of the study of service-learning. Exploratory research provides insights into and comprehension of service-learning. While descriptive research, describes data and characteristics about elements of service-learning, reflective learning and social impact. It is descriptive because the detailed questionnaire is used to collect the descriptive data and explanatory as it explains the relationship between service-learning, reflective learning and social impact. This will provide a better understanding of the theory and its relationship in the service-learning context. Hypotheses that is derived from theory will guide the process and provide a list of needs to be measured. The main method of research in this study is through survey questionnaires. As suggested by Burns and Bush (2011), the research process must be robust and cover the following steps as follows:

- Establishing the research aim

- Determining the research design

- Identifying the information types and sources

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- Designing the survey instrument

- Determining the sampling plan and size

- Data Collection

- Data Analysis

It is important to understand that the purpose of this research is to measure the relationship between service-learning, reflective learning and social impact. Specifically, this study explores how, at the conclusion of a one-semester service-learning course in a business undergraduate programme, students' perceptions of their appreciation of difference and awareness of structural inequality varied based on within group variables (curricula connections, student development, community needs and behavioral intent), including other demographics. This is also assessed via reflective learning logs. The following steps will be discussed in this chapter.

Measurement is an underdeveloped component of research on service-learning (Bringle & Hatcher, 2000; Bringle, Phillips, & Hudson, 2004). Measurement as used here refers to any systematic procedure that gathers information or evidence about the process and outcomes of service-learning. There is an integral connection between theory and measurement because measurement must be clearly linked to constructs, which are embedded in theories that should be formal and explicit (Bringle, 2003; Eyler, 2011).

3.2 RESEARCH DESIGN

De Vos and Fouche (1998) defined research design as a detailed plan of how a research study is to be conducted, and the research design reflects the purpose of the

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inquiry, which in this case is exploratory in nature. This is especially appropriate if the subject matter being investigated has high levels of uncertainly and lack of understanding due to the limited literature on this subject (Hair, Babin, Money & Samouel, 2003) in Malaysia. In this study a quantitative descriptive design will be adopted. The survey designs are classified together because they also belong together logically. They are often more quantitative in nature, requiring questions as a data-collection method. Respondents are ideally selected from a predetermined group.

3.3 IDENTIFYING THE INFORMATION TYPES AND SOURCES

In most researches, there are two types of information sources, namely secondary and primary sources. For primary data which is the integral data for this research, a survey will be conducted. These primary data is from service-learning projects in a Malaysian private higher education institution. However careful considerations were made while determining these sources in the service-learning projects. Therefore the sampling elements, units and frame were specified before proceeding to the next step. In this research, the sampling frame was the service-learning project carried out in a private institution of higher learning. The sampling unit are the service-learning project while the elements were the reflective logs and survey feedback provided by the students.

The service learning project used for the purpose of this study was a collaborative project involving a Private Higher Education Institution, Government agencies, Non-Government Organisations and Social Enterprises. A total of 400 students participated in the project.

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The project involved single mothers, Government agencies, students and faculty. The intention of this project was to empower single mothers in realizing their potential, with regards to collaborative decision making, community learning and enhanced business skills. The business students used their knowledge to support, enrich and engage, while transferring entrepreneurial skills to the single mothers, in a bid to develop women entrepreneurs. Part of the project included our students training the single mothers who had taken small business loans from Amanah Ikthiar Malaysia, with the documentation and repayment scheme through a financial planning and budgeting process. This created a rather good opportunity for the students to practice their business knowledge and skills while supporting a community cause.

3.4 DESIGNING THE SURVEY INSTRUMENT

To be able to use the survey method effectively, a well designed questionnaire was developed with the intent to examine the relationship of service-learning to reflective learning and social impact. Anderson (2004) contends that surveys using questionnaires are a widely-used data-gathering technique in research and can be used to measure issues that are crucial to the management and development of human resources, such as behaviour, attitudes, perceptions, beliefs, opinions, characteristics and expectations, among others. Thus, the design and administration of a relevant questionnaire is appropriate for measuring organisations' perspectives on service-learning. Emphasis was also given to opinions of respondents to elicit perspectives that were relevant to reflective learning and service-learning. Thus, both open-ended and close-ended questions were asked. Closed-ended questions are used in order to

retrieve the maximum amount of information without imposing on the time and resources of the respondents (O'Leary, 2004).

A six-point Likert scale questionnaire was designed to gauge the responses. The questionnaire was divided into three parts. Part A looked into the respondent demographics. Part B focused on the respondents' perceptions of their service-learning experience, and the perceived impact on their reflective learning abilities and the social impact. There were six sections in Part B that represented the dimensions of this study. Each dimension contained multi-items measured by a six-point Likert-scale. The items in each dimension was developed based on the review of literature on service-learning, with special reference to the studies of Dingman (2003) and John and James (2011), besides analyzing the reflective journals of the previous batches of students who undertook service-learning projects. The items in Section A, B and F of this questionnaire were developed based on a review of the existing literature on service learning as well as by analyzing the reflective journals of the previous batches of students who undertook service-learning. As for Section C, the items were developed based on a review of the existing literature on service learning, with a special focus on the research done by John and James (2011); as well as by analyzing the reflective journals of the previous batches of students who undertook service-learning. The items in Section D and E were developed based on a review of the existing literature on service learning, with a special focus on the research done by Dingman (2003); as well as by analyzing the reflective journals of the previous batches of students who undertook service-learning. Part C comprised of an open-ended question and a likert-scale question for feedback purposes. A total of 400 questionnaires were distributed A non-probability quota sampling method was

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conducted to select representative respondents who were able to provide the needed information. Confidentiality was guaranteed in all cases.

The scale ranges from never (1) to always present (6). The emphasis was laid on the last executed project rather than the current project keeping in view the fact that the post facto analysis must have been done on these projects and the respondents will be able to answer the questions more precisely and accurately. Moreover, it would be easier for respondents to give information on whether their projects were successfully delivered, keeping in view the risks that the project faced in a given semester situation. The 6- point likert scale is used as some studies in educational research suggest midpoints as sometimes used as a dumping ground when there are new or difficult to understand labels (Cummins and Gullone, 2000; Kulas and Stachowski, 2009). Thus, it is preferred to refer midpoints to the label of "slightly agree or moderately disagree" instead of "3" as a number. This may be able to solve the problem of "untrue" or "safe" middle response category endorsement (Kulas and Stachowski, 2009; Kulas, Stachowski & Haynes, 2008). As reflective learning and service-learning and its labels may be new to many respondents, the choice of using a 6 point Likert scale is to avoid respondents choosing a mid-point as a dumping ground or a safe answer.

3.5 SAMPLE SELECTION

The quota sampling technique was utilised for sample selection. Quota sampling is the nonprobability sampling technique in which the stratums and their proportions are identified in the manner they are represented in the population. This sampling

technique ensures the selection of a representative sampling frame that captures both Malaysian and foreign students. The total elements in the sampling frame of this survey were 400. Extracting 100 of the 400 elements was deemed sufficient.

3.6 DATA COLLECTION

Once the sampling plan and size was determined, the 400 questionnaires was sent to the respondents undertaking the service-learning project for business undergraduate students. As a start the questionnaires was sent to all students. The sample was selected using the previously mentioned sampling plan to determine who the intended respondents are after which the questionnaires was distributed to the students. The completed questionnaires wase submitted online and where necessary, hardcopies was used. Data collected was then analysed in the data analysis step. This is discussed in detail in the next chapter.

3.7 CONCEPTUAL FRAMEWORK

Figure 3.1 shows the conceptual framework that will be used for this study. Based on the conceptual framework of this study, the measures of latent constructs for Service-learning, Reflective Learning and Social Impact are detailed below.
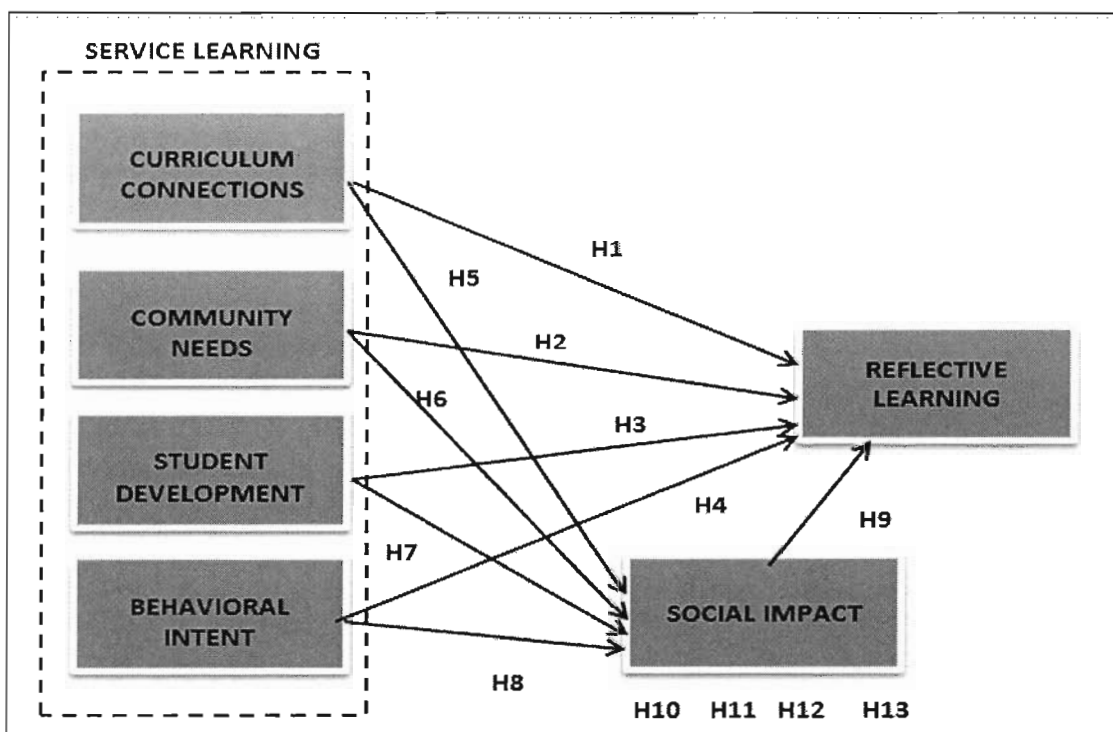
Figure 3.1
Conceptual Framework

3.7.1 Variables

A)   Measures of latent constructs for Service-learning

Service-learning experience, based on the literature, is comprised of various factors or

contructs. In this study, there are four main contructs that make up service-learning

and these are Curriculum Connections, Student Development, Community Needs, and

Behavioral Intent. Each of these contructs are measured by several questions seeking

to find out the overall learning process and experiences the students underwent while

partaking in the service-learning activity.

1.   Curriculum Connections (CC)

The benefits of service-learning are enhanced through effective integration with one

or more academic disciplines. The Service-learning and Curriculum Framework

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provide a platform for teachers with the means for integrating service-learning activities within the classroom curriculum. This construct is measured by thirteen questions seeking to find out how service-learning strategies infused into the business curriculum allows students to establish connections to the community and solve real-world problems in business-related fields such as sustainable businesses, corporate social responsibility, green businesses, environmental studies and ethics and corporate governance, to name a few.

2.   Student Development (SD)

This construct was measured by 16 items seeking to find out how service-learning strategies infused into the business curriculum allows students to develop skills and graduate capabilities such as critical thinking, lifelong learning, teamwork and leadership skills.

3.   Community Needs (CN)

The community needs construct was conceptualized through 10 survey items measuring how service-learning strategies infused into the business curriculum provide opportunities for students to establish the needs of the community and find effective solutions to address these community needs.

4.   Behavioral Intent (BI)

The behavioral intent construct was conceptualized through eight survey items measuring how service-learning strategies infused into the business curriculum can create a platform for students to reconsider their identity as volunteers and the nature

of helping, aside from being committed to making a difference in the community they live in.

(B). Measures of latent constructs for Reflective Learning

The reflective learning construct was conceptualized through nine items measuring the students' perception of the impact of the integration of service into the class on their learning experience being more personal, contributing to greater engagement and reflection.

(C) Measures of latent constructs for Social Impact (SI)

The social impact construct was conceptualized through 13 items measuring the perceived social impact of the integration of service into the class.

The research questions for this study were developed to address the problem statement in Chapter One. A survey questionnaire was administered to elicit pertinent information from the students who completed a course where service-learning activities were offered and taught by several service-learning faculty members. The student responses were collected and analysed to answer the following research questions that guided this study:

RQ 1 : Does service-learning (comprising of the four components of curricula connections, student development, community needs and behavioral intent) have a direct relationship with reflective learning?

RQ 2 : Does service-learning (comprising of the four components of curricula connections, student development, community needs and behavioral intent) have a direct relationship with social impact?

RQ 3 : Does social impact mediate the relationship between the components of

service-learning and reflective learning?

3.8 HYPOTHESES DEVELOPMENT

Based on the conceptual framework and the research questions described above, the following hypotheses were developed:

Hypothesis 1: Curriculum connection has a significant relationship with students' reflective learning.

Hypothesis 2: Student Development has a significant relationship with students' reflective learning.

Hypothesis 3: Community needs has a significant relationship with students' reflective learning.

Hypothesis 4: Behavioral Intent has a significant relationship with students' reflective learning.

Hypothesis 5: Curriculum connection has a significant relationship with social impact.

Hypothesis 6: Student Development has a significant relationship with social impact.

Hypothesis 7: Community needs has a significant relationship with social impact.

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Hypothesis 8: Behavioral Intent has a significant relationship with social impact.

Hypothesis 9: Social Impact has a significant relationship with students' reflective learning.

Hypothesis 10: Social impact mediates the impact of curriculum connections on students' reflective learning.

Hypothesis 11: Social impact mediates the impact of student development on students' reflective learning.

Hypothesis 12: Social impact mediates the impact of community needs on students' reflective learning.

Hypothesis 13: Social impact mediates the impact of behavioral intent on students' reflective learning.

3.9 DATA ANALYSIS METHODOLOGY

3.9.1 Overview Of Analysis

This chapter describes the statistical procedures and measures used to find the causal relationships between service-learning, reflective learning and social impact. The procedures and measures, included exploratory factor analysis, reliability analysis, cronbach's alpha, item-total correlation and confirmatory factor analysis. The

quantitative analysis of the question responses obtained from the questionnaire was summarised and portrayed clearly.

Statistical analysis using the Statistical Package for Social Sciences (SPSS), version 18.0 for Windows and the Partial Least Squares Structural Equation Modelling (PLS-SEM) software was utilsed to analyse the data obtained from the questionnaires. The results will be summarized using descriptive statistics such as frequency distribution, mean scores and standard deviations. For the pilot study, exploratory factor analysis was carried out using the SPSS software, while for the actual study, the PLS-SEM software was used. The utilization of factor analysis will provide useful insights into the various dimensions or constructs of service-learning, reflective learning and the perceived social impact of the respondents. The variance-based PLS technique was employed to test the reliability and validity of the measurement model, after which the structural model was utilised to test the underlying hypothesis of this study.

The are several reasons to justify why this study chose to employ the PLS technique as the statistical tool for testing structural equation models (Urbach and Ahleman, 2010) for the actual data. Firstly, PLS-SEM, being a structural equation modelling technique is a second-generation technique compared to utilising first generation techniques such as multiple linear regression and analysis of variance using the SPSS software. Being a latent variable modelling technique, PLS incorporates multiple dependent constructs and explicitly recognizes measurement error (Karim, 2009). PLS-SEM allows the researcher to carry out simultaneous modeling of relationships among multiple independent and dependent constructs (Gefen, Straub, & Boudreau, 2000), bringing about a richer and more meaningful analysis. Secondly, PLS does not demand as much with regards to sample size, compared to other techniques. This

augurs well with this study as the sample size of 256 is most suited to this technique. Aside from that, PLS also allows the use of input data that is not normally-distributed. Yet another justification for the use of PLS is that it is better suited for models with several contructs, which this study has, and has the ability to handle both formative and reflective constructs. PLS is also particularly useful for prediction, which is in line with the requirements of this study.

3.9.2 Reliability Analysis

A key issue for any investigative enquiry is its credibility - the extent to which the data that have been obtained are both relevant and valuable. To make this assessment, it is necessary to consider how reliable and valid the data are (Anderson, 2004). O'Leary (2004) describes reliability as being concerned with internal consistency; internal consistency was measured under reliability by calculating the Cronbach's alpha coefficient (α). This coefficient reflects the homogeneity of the scale as a reflection of how well the different items complement each other in their measurement of different aspects of the same variable or quality (Litwin, 1995). Correlations through Cronbach's alpha coefficient estimate the extent to which the changes in one variable are associated with changes in the other variable.

3.9.3 Validity Testing

Validity is defined as the degree to which an instrument measures that what it was intended to measure (Kumar, 2005). O'Leary (2004) further elaborates that validity is premised on the assumption that what is being studied can be measured or captured. A

pilot study was used to ensure content validity. Content validity is defined as a subjective measure of how appropriate the items seem to a set of reviewers who have some knowledge of the subject matter (Litwin, 1995). According to Anderson (2004), no one project is going to be able to produce findings that are 100 percent reliable and valid. Based on the above, a planned approach to gathering the required data will be followed. The research instrument will be pilot tested to maximise the reliability and validity of the study, and to justify the decisions taken.

3.10 PILOT STUDY

3.10.1. Overview of the Pilot Study

A pilot study is a term used to describe a process by which a feasibility study or trial-run is conducted in preparation for the full-scale study. A pilot study is considered a crucial element of a good study design. Though the pilot study itself cannot guarantee the attainment of a successful full-scale study, it however does increase the likelihood that the main study would indeed be effective. Anderson (2004) strongly advises the running of a pilot study to ensure an effective instrument is designed, as an inappropriately designed survey or instrument is likely to generate data that will be of little value. Aside from developing and testing the adequacy of a research instrument, the pilot study would also be able to assess the feasibility of a full-scale study.

The first step taken was to administer the questionnaire to the pilot subjects in exactly the same manner we would administer in the main study. A pilot study was conducted on a group of undergraduate business students. A total of 75 out of 120 students responded to this pilot test. The pilot study was personally administered by the author

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to encourage dialogue with the respondents for feedback on the issues that arose from the survey instrument such as ambiguities and difficult questions. The questionnaire took an average of 15 minutes to 20 minutes to complete, which was considered reasonable.

Feedback from the respondents of the pilot study revealed the need to further enhance and improve the instrument, with all unnecessary, difficult or ambiguous questions being discarded. The respondents also provided feedback on the adequacy in the range of responses provided in the pilot questionnaire. A further check on the responses provided, enabled the author to re-word or re-scale specific questions that were not answered as expected. As a result of the feedback given, we were able to amend the errors and shorten, revise and improve the measurement instrument (questionnaire) until no further amendments were deemed necessary. Prior to administrating the finalized questionnaire to the intended respondents, there was a need to determine the size of the sampling frame, sampling units and elements.

The measurement instrument (a questionnaire) required self-completion by the pilot subjects. It is imperative that the questionnaire items accurately address the research questions. The pilot test tested the appropriateness of the questionnaire and how comprehensible it was. It also tested whether the questions were well defined, clearly understood and presented in a consistent manner.

The pilot survey was taken by a total of 75 pilot subjects comprising of undergraduates participating in service-learning activities, as part of their curriculum. The pilot survey was carried out to elicit information with regards to the perception of the pilot subjects with regards to the factors that helped or hindered their learning experience. The questionnaire utilised a 1-6 Likert-scale format to measure the extent

to which the students perceived the impact that service-learning had on their reflective learning experience and on the resulting social impact.

The questionnaire was divided into 3 parts that related to a) socio-demographic characteristics of the respondents; b) service-learning with items seeking information on curriculum connections, community needs, student development and behavioral intent; the impact of service-learning on reflective learning and social impact; and c) the respondents' view on learning and other feedback.

The conceptual framework employed in this study is described above. The main components of service-learning comprise of Curriculum Connections, Student Development, Community Needs, and Behavioral Intent. The study will investigate the impact of students' service-learning experience on reflective learning and the possible moderating effect of social impact on the relationship between service-learning and reflective learning.
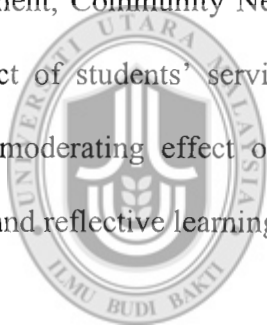
3.10.2 Data Entry and Analysis

Data from the 75 subjects were entered directly into the Statistical Package for Social Sciences (SPSS) software, with specific codes used for each questionnaire item. Data were then analysed using SPSS version 18.

3.10.2.1. Respondents' Demographics

The respondents' demographics are depicted in Table 3.1. There were a total of 75 respondents of which 66.7% were females and 33.3% were males. The respondents

were diverse in ethnicity, with the majority being Chinese (57.3%), followed by Malays (24%) and Indians (8%) and a handful of other ethnic groups.

Table 3.1
Respondents' Demographics

Measure	Item	Frequency	Percentage (%)
Gender	Male	25	33.3
	Female	50	66.7
Ethnicity	Arab	1	1.3
	Bangladeshi	2	2.6
	Chinese	43	57.3
	Indian	6	8
	Indonesian	1	1.3
	Japanese	1	1.3
	Malay	18	24
	Pakistani	1	1.3
	Punjabi	1	1.3
	Swiss	1	1.3

3.10.2.2. Factor Analysis and Reliability (Cronbach's alpha)

In order to test the reliability of the measurement instrument and validate the said research instrument, an exploratory factor analysis was conducted. Factor analysis is a data reduction technique that attempts to identify the underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. It is often used in data reduction to identify a small number of factors which explain most of the variance observed in a much larger number of manifest variables. Factors analysis is also used to generate hypotheses regarding causal mechanisms or to screen variables for subsequent analysis. The results of the factors analysis are shown in the following sections.

3.10.2.2.1 Factor Analysis and Reliability (Cronbach's alpha) for Curriculum Connections

Table 3.2

Factor Analysis and Reliability (Cronbach's alpha) for Curriculum Connections

VARIABLES	Component Curriculum Connections
A1: Service-learning has enhanced my understanding of the course material because it helped me draw connections between the service and how topics in the class related to it and to each other.	.869
A5: The service-learning process allowed me to link personal and social development with academic and cognitive development.	.831
A13: The application of service to academic content had a positive impact on my learning experience.	.828
A3: I can imagine myself working in the an industry related to the curriculum covered in this service-learning module.	.807
A11: Service-learning improves students' ability to apply what they have learned in "the real world.	.796
A10: The teaching and learning strategy integrates meaningful community service with instruction and reflection to enrich the learning experience.	.786
A2: The service aspect of this module helped me gain knowledge of key community issues.	.779
A4: I can imagine myself working in the an industry related to the curriculum covered in this service-learning module.	.778
A8: The service aspect of this module enriched classroom learning.	.768
A7: Plenty of real world examples and illustrations were given to help us to grasp things better.	.735
A6: I am able to apply concepts and theories of the courses.	.729
A12: I have learned to see social problems in a new way.	.693
A9: Plenty of real world examples and illustrations were given to help us to grasp things better.	.685
EIGENVALUES	7.857
Cumulative Percentage of Variance (%)	60.437
Cronbach's Coefficient Alpha	0.943
KMO Measure of Sampling Adequacy	0.895

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3.10.2.2.2 *Factor Analysis and Reliability (Cronbach's alpha) for Student Development*

Table 3.3

Factor Analysis and Reliability (Cronbach's alpha) for Student Development

VARIABLES	Component	
	Personal Growth (PGSD)	Interpersonal Growth (IPSD)
E13: The service-learning experience has enhanced my ability to reflect on my actions and learning.	.850	
E15: I am now more aware of and form opinions from diverse perspectives.	.736	
E2: I have a gained a deeper understanding of ethical issues as a result of my serving learning experience.	.734	
E10: Through my service-learning activity, I now better understand team dynamics.	.677	
E5: The service component was a venue for students to apply what they learned.	.628	
E3: I understand the need for professional practice when serving the community.	.563	
E7: My service experience enhanced my critical thinking and conflict resolution skills.		.902
E6: I have become more intellectually engaged as a result of my service-learning experience.		.827
E8: I am better able to define and analyse problems to arrive at effective solutions.		.748
E12: In serving the community I have become more self-reliant.		.742
EIGENVALUES	5.531	1.127
Cumulative Percentage of Variance (%)	55.314	11.267
Cronbach's Coefficient Alpha	**0.865**	**0.885**
KMO Measure of Sampling Adequacy	**0.875**	

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3.10.2.2.3 Factor Analysis and Reliability (Cronbach's alpha) for Community Needs

Table 3.4

Factor Analysis and Reliability (Cronbach's alpha) for Community Needs

	Component	
VARIABLES	**Community Needs – Engagement (ECN)**	**UNDP**
B9: Service-learning provided a platform for collaborating with community partners to address significant needs.	.898	
B6: Students' views of the community needs were valued in this module.	.875	
B7: I have a responsibility to serve my community.	.870	
B5: If everyone works together, many of society's problems can be solved.	.860	
B8: I gained greater awareness of the needs of the community I served.	.811	
B10: There were plenty of opportunities for me to discuss important ideas with the community that I served.	.809	
B3: Service-learning provides useful solutions to community needs.		.862
B2: I have gained tremendous knowledge about the community.		.820
B1: I have a good understanding of the needs and problems facing the community in which I live.		.796
B4: The needs of the community were specifically addressed through stakeholder discussions.		.604
EIGENVALUES	6.130	1.418
Cumulative Percentage of Variance (%)	61.297	14.176
Cronbach's Coefficient Alpha	0.950	0.829
KMO Measure of Sampling Adequacy	0.876	

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3.10.2.2.4 Factor Analysis and Reliability (Cronbach's alpha) for Behavioral Intent

Table 3.5

Factor Analysis and Reliability (Cronbach's alpha) for Behavioral Intent

	Component
VARIABLES	**Behavioral Intent (BI)**
F8: I will take part in future service-learning activities as I enjoyed a sense of fellowship experience while serving the community.	.855
F7: As a result of undertaking service-learning, I am now committed to undertake furture service-learning projects.	.842
F1: I didn't know what I wanted to do with my life, but after experiencing service-learning, this is exactly what I want to do.	.826
F3: In the future, I plan to participate in a community service organization.	.824
F6: I am confident that I can help individuals in need by participating in community service activities.	.795
F4: Service-learning has enhanced my desire to become involved in my community.	.772
F2: Service-learning gave me a concrete idea of what social work might be by having the volunteer experience in social agencies	.771
F5: Service-learning has positively changed my perception about community involvement.	.756
EIGENVALUES	5.195
Cumulative Percentage of Variance (%)	64.939
Cronbach's Coefficient Alpha	0.921
KMO Measure of Sampling Adequacy	0.864

3.10.2.2.5 Factor Analysis and Reliability (Cronbach's alpha) for Reflective Learning

Table 3.6

Factor Analysis and Reliability (Cronbach's alpha) for Reflective Learning

VARIABLES	Internal Reflective Learning (IRL)	(External Reflective Learning (ERL)
D8: My service-learning experience has made me reflect about my own core values.	.916	
D7: Participating in service-learning made me reflect on my own privilege and put my own problems into perspective.	.912	
D5: I am better able to reflect and think more deeply about issues raised in classes as a result of my service-learning experience.	.895	
D6: The service-learning experience has enhanced my ability to reflect on my actions and learning.	.884	
D9: I am better able to assess my learning strengths and weaknesses.	.870	
D4: The emotional involvement that the service-learning added to the class made me more engaged in the material, reflecting on the issues and consciously noticing issues from the class in "real life."	.819	
D2: "As a result of my service-learning experience, I reflect about the course, and use the material I learned, in settings beyond the classroom and the community site."		.850
D1: As a result of my service-learning activity, my own learning experience has become much more personal.		.787
D3: The integration of the service into the class made the experience more personally meaningful for me and contributed to greater engagement and reflection.		.767
EIGENVALUES	5.899	1.321
Cumulative Percentage of Variance (%)	65.541	14.678
Cronbach's Coefficient Alpha	0.963	0.783
KMO Measure of Sampling Adequacy	0.891	

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3.10.2.2.6 Factor Analysis and Reliability (Cronbach's alpha) for Social Impact

Table 3.7

Factor Analysis and Reliability (Cronbach's alpha) for Social Impact

VARIABLES	Component	
	Socio-economic Social Impact (SESI)	Community Engagement Social Impact (CESI)
C2: I perceive the service-learning made an impact on the community.	.845	
C1: I perceive that I have made a real contribution through my service-learning activity.	.818	
C3: The community I served have learned to earn a sustainable income through my service-learning activity.	.794	
C4: As a result of the service-learning activity, residents are more aware and educated about an issue that affects them or their community.	.768	
C5: My service-learning activity had a positive socio-economic impact on the community.	.711	
C6: I believe public policy changes will take place in the community we served.	.710	
C7: The service-learning activity developed a sense of ownership among the community members.	.630	
C12: The service-learning activity provided greater community awareness about and/or knowledge of the specific issues they faced.		.805
C10: The community-students collaborative service activity has brought positive changes in the community individuals' behavior.		.801
C11: The service-learning activity increased community pride.		.797
C13: I believe that our service-learning project can now be replicated in other communities.		.783
C8: The service-learning activity provided an ideal opportunity to enhance the community's learning experience.		.705
C9: The service-learning activity developed more civically engaged communities.		.675
EIGENVALUES	**7.095**	**1.583**
Cumulative Percentage of Variance (%)	**54.577**	**66.752**

Cronbach's Coefficient Alpha	0.911	0.892
KMO Measure of Sampling Adequacy	0.853	

3.10.3 Factor Analysis (Summary) and Reliability (Cronbach's alpha)

Table 3.8 provides a summary of the results of a series of factor analysis conducted on the various constructs in the survey. Factor analysis attempts to identify the underlying variables, or factors, that explain the pattern of correlations within a set of observed variables. The emerging constructs from the data reduction process of factor analysis are shown in Table 3.8. The respondents' service-learning experience was measured by a combination of contructs made up of curriculum connections (13 items), community needs (10 items made up of ECN (6 items) and UCN (4 items)), student development (10 items (10 items made up of PGSD (6 items) and IPSD (4 items)), behavioral intent (8 items) which remained after factor analysis was conducted. For the reflective learning and social impact constructs, there were a total of 9 items (made up of IRL (6 items) and ERL (3 items)) and 13 items (made up of SESI (7 items) and CESI (6 items)) respectively, which remained after factor analysis was conducted.

The constructs are all reliable as shown by their respective Cronbach's Alpha values in Table 3.8, which are all well above the minimum requirement of 0.7 (as per Nunnally, 1978), suggesting that the items within these constructs have relatively high internal consistency/reliability. The KMO valued from the factor analysis of each construct indicates a good level of data reduction adequacy.

Table 3.8
Factor Analysis and Reliability (Cronbach's alpha) Summary

Construct	Factor	Number of items per construct	Questions	Cronbach 's Alpha	KMO Measure of Sampling Adequacy
CC	CC	13	13: A1-A13	**0.943**	0.895
CN	UCN	4	4: B1-B4	**0.829**	0.876
	ECN	6	6: B5-B10	**0.950**	
Service-learning					
SD	PGSD	6	6: E2, 3, 5, 10, 13, 15	**0.865**	0.875
	IPSD	4	4: E6, 7, 8, 12	**0.885**	
					0.864
BI	BI	8	8: F1-F8	**0.921**	
Reflective Learning	IRL	6	6: D4-D9	**0.963**	0.891
RL	ERL	3	3: D1-D3	0.783	
Social Impact	SESI	7	7: C1-C7	0.911	0.853
SI	CESI	6	6: C8-C13	0.892	

Note:

CC	Curricular Connections
CN	Community Needs
SD	Students' Development
BI	Behavioral Intent
RL	Reflective Learning
SI	Social Impact
UCN	Community Needs - Understanding
ECN	Community Needs – Engagement
PGSD	Personal Growth
IPSD	Interpersonal Growth
IRL	Internal RL
ERL	External RL
SESI	Socio-Economic Social Impact
CESI	Community Engagement Social Impact

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All items in the individual constructs were found to be adequately correlated as their highest absolute correlation fell between 0.35 and 0.85 as per Cohen's criteria (1989), that posits that two variables or items are said to be associated if their correlation coefficient value is at least 0.35. Therefore, it can safely be said that every item in the respective constructs correlated adequately with at least one other item within their own constructs.

The summary results of the Factor Analysis and Reliability (Cronbach's alpha) provided in Table 3.8 clearly demonstrates the feasibility of the study protocol of this pilot study. The results of the exploratory factor analysis carried out on the pilot study data showed the robustness of the survey instrument used in this study. The items used for all constructs in this study remained except for the Student Development construct in which, out of a total of 16 items, 6 items (E1, E4, E9, E11, E14 and E16) were removed to further improve the questionnaire/research instrument. This pilot study was able to effectively detect flaws in the questionnaire. Once the recommended amendments are made to the questionnaire, it can then be utilised in a full study.

3.11 CONCLUSION

In this chapter the research objectives and target population were described. The chapter also described and justified the methodology used in the research design, measuring instrument, construction of the questionnaire, sampling process, data collection method and statistical package used for the statistical analysis. The results of the data collected through pilot study are presented.

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CHAPTER 4

RESULTS AND ANALYSIS

4.1   Introduction

The main objective of this study is to investigate the inter-relationship between service-learning, reflective learning and social impact. This study is important as most of the literature on service-learning, its concepts and practices comes from the American perspective and is lacking in Malaysia. As such, it is hoped that the findings of this study will provide the much needed insights into the conceptual evolution of service-learning in Malaysia.

The service-learning dimension comprises of four main constructs: curriculum connections, community needs, student development and behavioral intent. This study will examine how each of these service-learning constructs relates to reflective learning and the social impact on the community being served. In addition, the study also investigates whether the perceived social impact acts as a mediator in the relationship between the four service-learning constructs and reflective learning. This chapter will be centered on the statistical analysis employed in answering the three broad research questions of this study. The general goal of this study is to develop a more rigorous understanding of the impact of service-learning participation in enhancing the students' reflective learning and the perceived social impact on the community. The three main objectives of this study are detailed as follows:

1. To examine if the components of service-learning (curricula connections, student development, community needs, behavioral intent) have a direct relationship with reflective learning of undergraduate business students.

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2. To examine if the components of service-learning (curricula connections, student development, community needs, behavioral intent) have a direct relationship with social impact on the community.

3. To assess if social impact has a mediating effect on the relationship between the components of service-learning and reflective learning.

This chapter will focus on the various statistical techniques of analysis used in answering the three broad research questions which guided the study. The study seeks to make an important contribution to the existing body of knowledge on service-learning models by analyzing the impact of service-learning on reflective learning, and the social impact of service-learning. Service-learning in our context is comprised of curriculum connections, community needs, student development and behavioral intent. Our general models of reflective learning and social impact is written in the following manner (as per Equations 4.1 to 4.3):

Reflective Learning $= f($Curriculum Connections, Community Needs, Student

Development, Behavioral Intent) $\qquad$ (4.1)

Social Impact $= f($Curriculum Connections, Community Needs, Student

Development, Behavioral Intent) $\qquad$ (4.2)

Reflective Learning $= f($Curriculum Connections, Community Needs, Student

Development, Behavioral Intent, Social Impact) $\qquad$ (4.3)

This chapter will be divided into the following subsections based on the three broad research questions of this study. The three broad research areas are depicted in the functional forms as shown in equations 4.1 to 4.3 above.

The Statistical Package for the Social Sciences (SPSS) and the Partial Least Squares Structural Equation Modelling (PLS-SEM) software was used to analyze the data collected. The results will be summarized using descriptive statistics such as frequency distribution, mean scores and standard deviations. The utilization of factor analysis will provide useful insights into the various dimensions or constructs of service-learning, reflective learning and the perceived social impact of the respondents. The PLS technique was employed to test the reliability and validity of the measurement model, after which the structural model was utilised to test the underlying hypothesis of this study.

4.2 RESPONSE RATE

A total number of 400 questionnaires were distributed among the students undertaking service-learning activities in a private institution of higher learning. The respondents for the actual study were different from the respondents for the pilot study. 286 respondents answered the survey, making it a response rate of 71.5%. After the data screening process, 30 surveys were removed as they contained incomplete responses. Thus, 256 or 64% of the respondents were qualified and used for further analysis, in Table 4.1 shown.

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Table 4.1
Response Rate of the Questionnaires

Response	Frequencies/Rate
No. of distributed questionnaires	400
Returned questionnaires	286
Returned and usable questionnaires	256
Returned and excluded Questionaires	30
Questionnaires not returned	114
Response rate	71.50%
Valid response rate	64%

4.3 DATA EDITING AND CODING

Following the collecting of data from the respondents, editing of the data was undertaken in order to ensure the completeness and consistency of the data. Editing is considered as a part of the data processing and analysis stage (Zikmund, 2003). Following the recommendation of Sekaran (2000), this thesis includes all respondents in the analysis who completed at least 75% of questionnaire answers. Any missing data has been considered as missing values (Kinner & Taylor, 1996; Sekaran, 2000) and is discussed below.

Coding was used to assign numbers to each answer and allows the transference of data from the questionnaire to computer aided software such as SPSS. In this thesis, the coding procedure was performed by establishing a data file in SPSS, and all question items were all pre-coded with numerical values (see questionnaire in Appendix A). Data editing procedures were undertaken after data were entered into the data file in order to detect any errors in data entry. Out-of-range values in the data file were corrected by referring to the original questionnaire.

4.4   DATA SCREENING

As the first stage in the data analysis, screening for missing data and normality was conducted. Data screening is useful in making sure that data have been correctly entered and that the distribution of variables, that are to be used in the analysis, are normal (Coakes, 2006). These preliminary analyses are discussed next.

4.4.1 Treatment of Missing Data

It is uncommon to obtain data sets without some missing data (Hair, Anderson, Tatham & Black, 1995; Coakes, 2006). Missing data usually occurs when a respondent fails to answer one or more survey questions. Tabachnick and Fidell (2001) have recommended to evaluate the degree to which there are missing data by evaluating the amount of missing data because the missing data will lead to biased estimates of results (Tabachnick & Fidell, 2001).

The screening of the data in SPSS indicated that there was no variable that had more than 5% of missing data (see Table 4.2). Since less than 5% of missing data is considered acceptable (Churchill, 1995), there was no requirement to assess the pattern of missing data. In fact there was no missing data in any of the questions, therefore, no further treatment was conducted to deal with missing values.

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Table 4.2
Missing Data Analysis

	N	Mean	Std. Deviation	Missing Count	Percent
CC1	256	2.97	.668	0	0.0
CC2	256	3.20	1.101	0	0.0
CC3	256	3.13	.833	0	0.0
CC4	256	3.97	.818	0	0.0
CC5	256	2.99	.914	0	0.0
CC6	256	4.14	.855	0	0.0
CC7	256	4.09	.905	0	0.0
CC8	256	4.17	.858	0	0.0
CC9	256	4.00	.870	0	0.0
CC10	256	4.04	.784	0	0.0
CC11	256	4.18	.849	0	0.0
CC12	256	3.30	.915	0	0.0
CC13	256	4.05	.776	0	0.0
CN.UCN1	256	3.98	1.010	0	0.0
CN.UCN2	256	3.60	1.020	0	0.0
CN.UCN3	256	3.72	.945	0	0.0
CN.UCN4	256	3.93	.973	0	0.0
CN.ECN1	256	3.96	1.060	0	0.0
CN.ECN2	256	4.09	.943	0	0.0
CN.ECN3	256	4.08	.926	0	0.0
CN.ECN4	256	4.07	.867	0	0.0
CN.ECN5	256	4.16	.891	0	0.0

CN.ECN6	256	4.03	.976	0	0.0
SI.SESI1	256	4.08	.818	0	0.0
SI.SESI2	256	4.00	.792	0	0.0
SI.SESI3	256	3.91	.861	0	0.0
SI.SESI4	256	3.92	.755	0	0.0
SI.SESI5	256	4.11	.960	0	0.0
SI.SESI6	256	4.04	.832	0	0.0
SI.SESI7	256	3.77	.948	0	0.0
SI.CESI1	256	3.88	.827	0	0.0
SI.CESI2	256	4.31	.775	0	0.0
SI.CESI3	256	4.09	.741	0	0.0
SI.CESI4	256	4.09	.881	0	0.0
SI.CESI5	256	4.07	.867	0	0.0
SI.CESI6	256	3.95	.910	0	0.0
RL.ERL1	256	4.05	.775	0	0.0
RL.ERL2	256	3.99	.937	0	0.0
RL.ERL3	256	4.09	.916	0	0.0
RL.IRL1	256	4.07	.913	0	0.0
RL.IRL2	256	4.05	.955	0	0.0
RL.IRL3	256	3.99	.937	0	0.0
RL.IRL4	256	4.09	.916	0	0.0
RL.IRL5	256	4.06	.899	0	0.0
RL.IRL6	256	4.01	.920	0	0.0
BI1	256	4.17	.768	0	0.0
BI2	256	4.09	.920	0	0.0

BI3	256	4.05	.940	0	0.0
BI4	256	4.01	1.070	0	0.0
BI5	256	3.98	.863	0	0.0
BI6	256	3.90	.795	0	0.0
BI7	256	3.81	.902	0	0.0
BI8	256	4.16	.780	0	0.0
SD.PGSD1	256	3.87	.828	0	0.0
SD.PGSD2	256	3.13	.806	0	0.0
SD.PGSD3	256	4.08	.721	0	0.0
SD.IPSD1	256	4.04	.735	0	0.0
SD.IPSD2	256	3.00	.795	0	0.0
SD.IPSD3	256	4.05	.844	0	0.0
SD.PGSD4	256	3.98	.854	0	0.0
SD.IPSD4	256	2.85	.666	0	0.0
SD.PGSD5	256	2.95	.773	0	0.0
SD.PGSD6	256	3.19	.931	0	0.0

4.4.2 Assessment of Normality

Following the assessment of missing data, the scale data was assessed to determine normality of distribution. Because of the assumption that structural equation modelling requires variables to be normality distributed, it was necessary to check the distribution of variables to be used in the analysis (Hair et al., 1995; Kline, 2005).

In order to check any actual deviation from normality, a number of methods can be used. One method is to use skewness and kurtosis. By using this method, values for

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skewness and kurtosis should not be significant if the observed distribution is exactly normal. For large sample sizes, 200 and over (Hair *et al.* 1995), even small deviations from normality can be significant but not substantive. Hence, it is necessary to check the absolute values of skewness and kurtosis. That is a variable with an absolute value of kurtosis index greater than 10.0 may suggest a problem and values greater than 20.0 may indicate a more serious one (Kline, 2005). Therefore, it was recommended that absolute value of skewness and kurtosis should not be greater than 1.0 and 2.0 respectively. Using SPSS, an inspection of both skewness and kurtosis indicated that the absolute values were within the recommended levels (see Table 4.3), suggesting normality of the data. Table 4.3 also presents the descriptive statistics for the items used in this thesis. Since most of the variables did not deviate from normality, it was not necessary to make any adjustments such as transformation of the data (Tabachnick & Fidell, 2001). However, for some of the variables, they were outside the recommended limits showing non-normality of the data to some extent. This is one of the reasons why PLS based SEM is used to analyse the data in this study (Hair, Hult, Ringle and Sarstedt, 2014).

Table 4.3
Descriptive and Data Normality

Items	Mean	Std. Deviation	Skewness	Kurtosis
CC1	2.97	.668	.035	.226
CC2	3.20	1.101	.861	.582
CC3	3.13	.833	.617	.448
CC4	3.97	.818	-.728	.751
CC5	2.99	.914	.645	-.257
CC6	4.14	.855	-.532	-.054

CC7	4.09	.905	-.658	-.062
CC8	4.17	.858	-.743	.451
CC9	4.00	.870	-.461	.580
CC10	4.04	.784	-.899	1.721
CC11	4.18	.849	-.856	.486
CC12	3.30	.915	.615	.698
CC13	4.05	.776	-.843	1.119
CN.UCN1	3.98	1.010	-.568	-.584
CN.UCN2	3.60	1.020	-.200	-.800
CN.UCN3	3.72	.945	-.422	-.555
CN.UCN4	3.93	.973	-.699	.322
CN.ECN1	3.96	1.060	-.884	.190
CN.ECN2	4.09	.943	-1.169	1.259
CN.ECN3	4.08	.926	-1.053	1.112
CN.ECN4	4.07	.867	-1.127	2.013
CN.ECN5	4.16	.891	-1.125	1.364
CN.ECN6	4.03	.976	-.974	.591
SI.SESI1	4.08	.818	-.492	.155
SI.SESI2	4.00	.792	-.716	1.166
SI.SESI3	3.91	.861	-.384	.326
SI.SESI4	3.92	.755	-.580	.680
SI.SESI5	4.11	.960	-1.052	1.165
SI.SESI6	4.04	.832	-.971	1.210
SI.SESI7	3.77	.948	-.358	-.288
SI.CESI1	3.88	.827	-.449	-.245

SI.CESI2	4.31	.775	-.555	-.499
SI.CESI3	4.09	.741	-.197	-.658
SI.CESI4	4.09	.881	-.377	-.816
SI.CESI5	4.07	.867	-.747	.997
SI.CESI6	3.95	.910	-.835	1.349
RL.ERL1	4.05	.775	-.655	.835
RL.ERL2	3.99	.937	-.877	.660
RL.ERL3	4.09	.916	-.757	.001
RL.IRL1	4.07	.913	-.793	.141
RL.IRL2	4.05	.955	-.647	-.045
RL.IRL3	3.99	.937	-.647	-.206
RL.IRL4	4.09	.916	-.572	.067
RL.IRL5	4.06	.899	-.736	.544
RL.IRL6	4.01	.920	-.624	-.328
BI1	4.17	.768	-.513	-.226
BI2	4.09	.920	-.583	-.356
BI3	4.05	.940	-.864	.196
BI4	4.01	1.070	-1.216	1.422
BI5	3.98	.863	-.324	-.135
BI6	3.90	.795	.043	-.868
BI7	3.81	.902	-.516	.462
BI8	4.16	.780	-.495	-.086
SD.PGSD1	3.87	.828	-.591	.639
SD.PGSD2	3.13	.806	.208	-.120
SD.PGSD3	4.08	.721	-.055	-.911

SD.IPSD1	4.04	.735	-.181	-.780
SD.IPSD2	3.00	.795	.007	-.689
SD.IPSD3	4.05	.844	-.484	-.170
SD.PGSD4	3.98	.854	-.412	.133
SD.IPSD4	2.85	.666	.262	.049
SD.PGSD5	2.95	.773	.036	-.386
SD.PGSD6	3.19	.931	.294	-.309

4.5   NON-RESPONSE BIAS TEST

Non-response bias is an issue of concern when dealing with survey methodology (Armstrong & Overton 1977). Non-response bias could threaten the validity of the survey (Tse, Tse, Yin, Ting, Yi, Yee & Hong, 1995). In this research, non-response bias was checked using the Armstrong and Overton (1977) method of comparing the responses of late respondents with those of early respondents on key demographic variables and responses on the principal constructs (Table 4.4). For this analysis, the early respondents (60 percent of the sample), refers to the first 154 responses were compared with late respondents, refers to the later 102 responses, using an independent samples t-test. A comparison between early and late respondents reveals no significant difference on most of the items (Table 3). Therefore, the t-test provides evidence that the responses of those surveyed are typical of the target population.

Table 4.4
Independent Samples Test

Items	F	Sig.	t	df
CC1	.661	.417	-1.763	254
CC2	26.410	.000	-2.662	254
CC3	9.080	.003	-1.670	254
CC4	.224	.637	-2.812	254
CC5	34.202	.000	-2.137	254
CC6	3.776	.053	-3.044	254
CC7	.151	.698	.164	254
CC8	2.006	.158	-.129	254
CC9	.848	.358	-1.086	254
CC10	.601	.439	-2.369	254
CC11	1.006	.317	.049	254
CC12	1.140	.287	1.016	254
CC13	.281	.597	-1.024	254
CN.UCN1	9.478	.002	-.454	254
CN.UCN2	2.361	.126	.495	254
CN.UCN3	12.132	.001	.717	254
CN.UCN4	.060	.807	-2.189	254
CN.ECN1	.384	.536	-2.380	254
CN.ECN2	1.298	.256	-2.158	254
CN.ECN3	1.252	.264	-2.513	254
CN.ECN4	.634	.427	-2.291	254
CN.ECN5	.496	.482	-2.262	254
CN.ECN6	3.713	.055	-.943	254

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SI.SESI1	.382	.537	-3.853	254
SI.SESI2	.734	.392	-1.291	254
SI.SESI3	1.273	.260	-2.420	254
SI.SESI4	3.339	.069	-.569	254
SI.SESI5	2.885	.091	-5.293	254
SI.SESI6	1.496	.222	-2.386	254
SI.SESI7	2.222	.137	.335	254
SI.CESI1	.388	.534	-1.073	254
SI.CESI2	2.453	.119	-1.842	254
SI.CESI3	.026	.873	-2.121	254
SI.CESI4	2.870	.091	-1.048	254
SI.CESI5	.260	.610	-2.716	254
SI.CESI6	.424	.516	-2.058	254
RL.ERL1	.848	.358	-1.556	254
RL.ERL2	1.598	.207	-2.873	254
RL.ERL3	5.448	.020	-2.137	254
RL.IRL1	.088	.767	.443	254
RL.IRL2	2.801	.095	1.229	254
RL.IRL3	4.477	.035	.844	254
RL.IRL4	2.170	.142	-.172	254
RL.IRL5	.128	.721	.422	254
RL.IRL6	2.535	.113	-.167	254
BI1	.502	.479	-.909	254
BI2	7.110	.008	-.338	254
BI3	2.220	.137	-.572	254

BI4	4.401	.037	.691	254
BI5	.333	.564	-.649	254
BI6	.900	.344	-.378	254
BI7	4.615	.033	1.058	254
BI8	1.107	.294	-3.560	254
SD.PGSD1	.529	.468	-.331	254
SD.PGSD2	5.766	.017	-.864	254
SD.PGSD3	11.802	.001	-2.695	254
SD.IPSD1	5.687	.018	-1.924	254
SD.IPSD2	2.973	.086	1.222	254
SD.IPSD3	6.719	.010	-.789	254
SD.PGSD4	.119	.730	-.208	254
SD.IPSD4	.113	.737	2.610	254
SD.PGSD5	.689	.407	1.460	254
SD.PGSD6	12.446	.000	.291	254

4.6 DESCRIPTIVE ANALYSIS

4.6.1 Respondents' Demographics

These respondents' demographics are depicted in Table 4.5. Of the total of 256 respondents, 48.8% were females while 51.2% were males.

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Table 4.5
Respondents' Demographics

Measure	Item	Frequency	Percentage (%)
Gender	Male	131	51.2
	Female	125	48.8
Ethnicity	Arab	2	0.8
	Bangladeshi	4	1.6
	Chinese	167	65.2
	Indian	14	5.5
	Indonesian	3	1.2
	Japanese	2	0.8
	Malay	59	23
	Maldivian	1	0.4
	Pakistani	1	0.4
	Punjabi	1	0.4
	Somali	1	0.4
	Swiss	1	0.4

The respondents were diverse in ethnicity, with the majority being Chinese (65.2%), followed by Malays (23%) and Indians (5.5%) and a handful of other ethnic groups.

4.6.2 Descriptive Analysis of the Construct Items

The students who undertook the service-learning course were required to take a survey in the form of a structured questionnaire to elicit further findings on the effectiveness of service-learning on the students' reflective learning capabilities and on the perceived social impact that their service-learning participation had on the community. The questionnaire contained various sections, each with a set of items measuring the three dimensions comprising of service-learning, reflective learning and social impact. The service-learning dimension comprised of four constructs based on the review of literature on service-learning. The four constructs that make up service-learning are curriculum connections, community needs, student development and behavioral intent. Each item utilised a 6-point Likert scale of 'Strongly disagree' to 'Strongly agree'.

The descriptive analysis of all the variables in this study is discussed in this section. As illustrated in the research framework, the exogenous variables are curriculum connections, community needs, student development and behavioral intent; while the endogenous variables are reflective learning and social impact. Firstly, the overall constructs were identified and thereafter, the analysis for each of the variables was specified into observed variables.

All six observed variables were measured by a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree). Thus, cut-off or midpoint of 3.5 [(3+4)/2] was assigned to indicate the neutrality between the agree and disagree opinions for each statement. The mean and standard deviation for each of the constructs are presented in Table 4.6.

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Reflective Learning received the highest mean score 4.04, which was slightly above the mean score for social impact (4.02) and behavioral intent (4.01). The constructs with the lowest mean scores were student development, curriculum connections and community needs with mean scores of 3.55, 3.71 and 3.96 respectively.

Table 4.6
Descriptive Analysis (Constructs)

Scale Items of Overall Constructs	Mean	Standard Deviation
Curriculum Connections	3.71	0.85
Community Needs	3.96	0.96
Student Development	3.55	0.78
Behavioral Intent	4.01	0.89
Reflective Learning	4.04	0.91
Social Impact	4.02	0.84

The result strengthens the argument on the importance of reflective learning based on Kolb's and Dewey theories. It does show the powerful impact service-learning had on reflective learning and social impact as far as the students' perceptions were concerned.

Figure 4.1 (Appendix B) lists the items for the curriculum connections construct. The item with the highest mean score was CC11 "Service-learning improves students' ability to apply what they have learned in "the real world" with the mean score of 4.18. The statements with the highest mean scores (CC4, CC6 to CC11 and CC13) focuses more on the application aspect of curriculum connections in service-learning, while the rest of the statements reveal how the respondents place a lower importance

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on the understanding aspect of curriculum connections in service-learning. The standard deviation of 1.10 for statement CC2 is the highest among the other items, indicating that item CC2 had the highest variation among other items with data being spread out over a large range of values.

The mean scores and standard deviations for all the items measuring community needs are shown in Figure 4.2 (Appendix B). The item with the highest mean score was CN9 "Service-learning provided a platform for collaborating with community partners to address significant needs" with the mean score of 4.16. The statements with the highest mean scores (CN6 to CN10) focuses more on the engagement aspect of community needs in service-learning, while the rest of the statements reveal the understanding aspect of community needs in service-learning. The standard deviation of 1.06 for item CN5, 1.02 for item CN2 and 1.01 for item CN1 are the highest among the other items, indicating that item CN5, CN2 and CN1 had the highest variation among other items with data being spread out over a large range of values.

The highest mean scores for the Student Development construct as shown in Figure 4.3 (Appendix B) was SD5 (4.08) "The service component was a venue for students to apply what they learned", followed by SD8 (4.05) "The service-learning experience has enhanced my ability to reflect on my actions and learning" and SD6 "I have become more intellectually engaged as a result of my service-learning experience". The mean scores for items SD2-SD3, SD5, SD10, SD13 and SD15 depict the personal growth aspect of student development in undertaking service-learning as perceived by the service learners.

The mean scores were for items SD6-SD8 and SD12 depicts the perception of the service learners' with regards to their interpersonal growth aspect of student development in

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undertaking service-learning activities. Therefore, service-learning facilitators must put more effort in planning service-learning activities that would enhance both personal and interpersonal growth. The highest variation among the item in this construct came from SD15 "I am now more aware of and form opinions from diverse perspectives", indicating that the data capturing the service learners' perception were quite spread out over a large range of values

As for the Behavioral Intent construct, as shown in Figure 4.4 (Appendix B), the highest mean scores were recorded for items BI1: "I didn't know what I wanted to do with my life, but after experiencing service-learning, this is exactly what I want to do", and BI8: "I will take part in future service-learning activities as I enjoyed a sense of fellowship experience while serving the community". The BI1 to BI8 items depict the behavioral intent construct of service-learning as perceived by the service learners. The highest variation among the items in this construct came from BI4: "Service-learning has enhanced my desire to become involved in my community", indicating that the data capturing the service learners' perception were quite spread out.

As far as the Reflective Learning construct is concerned, Table 4.5 (Appendix B) shows that mean scores for scale items of reflective learning which are consistent and above the cut-off value of 3.50 for all nine items, indicating that the service learners positively perceived reflective learning to have taken place.

Items RL1 to RL3 depict the externalised aspect of reflective learning, while items RL4 to RL9 depict a more internalised aspect of reflective learning. The standard deviation of 0.95 associated with item RL5: "I am better able to reflect and think more deeply about issues raised in class as a result of my service-learning experience" was found to have highest variation among the items in this construct.

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Last but not least, the Social Impact construct comprising of 13 items, showed the highest mean score of 4.31 for item SI9: "The service-learning activity developed more civically engaged communities" as displayed in Figure 4.6 (Appendix B). The social impact construct looks into the community engagement aspect as well as the socio-economic aspect. The highest variation among the items in this construct is reflected by item SI5 with a standard deviation of 0.96.

4.7   Structural Equation Modelling

As discussed in methodology chapter, structural equation modelling (SEM) is used to test the hypotheses arising from the theoretical model. In order to perform the SEM analysis, the two-stage approach recommended by Anderson and Gerbing (1988) was adopted. In the first stage (measurement model), the analysis was conducted by specifying the causal relationships between the observed variables (items) and the underlying theoretical constructs. For this purpose, confirmatory factor analysis using SmartPLS 2.0 was performed. Following this, the paths or causal relationships between the underlying exogenous and endogenous constructs were specified in the structural model (second stage). The details of exogenous, endogenous, mediating variables are provided as follows:

- Exogenous constructs includes four variables including Curricular Connections, Community Needs, Students' Development and Behavioral Intent. Amongst these four exogenous variables, two of them are second order constructs as explained below:

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- Community needs is a second order construct having two first order dimensions including Community Needs - Understanding and Community Needs – Engagement.

- Student's development is a second order construct having two first order dimensions including Personal Growth and Interpersonal Growth.

- Endogenous constructs includes two variables including Reflective Learning and Social Impact. Both of these two exogenous variables are second order constructs as explained below:

  - Reflective learning is a second order construct having two first order dimensions including Internal Reflective Learning and External Reflective Learning.

  - Social impact is a second order construct having two first order dimensions including Socio-Economic Social Impact and Community Engagement Social Impact.

- There is only one mediating variable in this study i.e., Social Impact.

4.7.1 Measurement Model

The measurement model is "the portion of the model that specifies how the observed variables depend on the unobserved, composite, or latent variables" (Arbuckle, 2005, p.89). Each one of the constructs under consideration including Curricular Connections, Community Needs – Understanding, Community Needs – Engagement,

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Personal Growth, Interpersonal Growth, Behavioral Intent, Internal Reflective Learning, External Reflective Learning, Socio-Economic Social Impact and Community Engagement Social Impact were analysed in a measurement model. The measurement model aims to specify which items correspond to each latent variable. The basic aim of employing measurement model is to assess construct and convergent validity of the constructs (Pedhazur & Schmelkin, 1991). A Confirmatory Factor Analysis (CFA) using PLS was conducted to assess the convergent and discriminant validity of the constructs in the research model. Hair, Black, Babin and Anderson (2010) mentioned that construct validity can be established by undertaking content validity, convergent validity and discriminant validity.

4.7.1.1 Content Validity

According to Hair *et al.* (2010), the degree to which the items have the ability to measure a particular construct and how closely these items measure the concept they were designed to measure reveals the construct's content validity. As such, we would expect that the items measuring a construct would have higher factor loadings compared to their loadings on other constructs. These items were correctly assigned to their specific construct based on the factor analysis conducted on these items.

Table 4.7 provides a two-prong evidence of the content validity of the measures used. The first evidence reveals that the items designed to measure a particular construct shows evidence of having higher factor loadings on their respective constructs as opposed to the other constructs. The second evidence reveals the significant loading of the items on their respective constructs, validating the content validity of the constructs (Chow and Chan, 2008) used in this study as displayed in Table 4.7.

Table 4.7
Factor Analysis and Cross Loading

Constructs	Items	Behavioural Intent	Curriculum Connections	ECN	ERL	IRL	IPSD	PGSD	CESI	SESI	UCN
Behavioral Intent	BI1	**0.816**	0.635	0.362	0.532	0.719	0.495	0.548	0.525	0.421	0.610
	BI2	**0.833**	0.533	0.340	0.411	0.835	0.401	0.473	0.484	0.404	0.552
	BI3	**0.885**	0.554	0.306	0.451	0.776	0.463	0.533	0.551	0.406	0.637
	BI4	0.790	0.490	0.236	0.316	0.809	0.287	0.399	0.372	0.396	0.594
	BI5	**0.832**	0.549	0.324	0.493	0.573	0.489	0.572	0.587	0.510	0.573
	BI6	**0.825**	0.549	0.411	0.469	0.573	0.546	0.663	0.539	0.399	0.505
	BI7	**0.628**	0.438	0.348	0.353	0.395	0.432	0.623	0.398	0.322	0.445
	BI8	**0.566**	0.379	0.434	0.507	0.322	0.545	0.516	0.486	0.328	0.297
Curriculum Connections	CC1	0.518	**0.739**	0.301	0.395	0.540	0.369	0.443	0.455	0.564	0.621
	CC10	0.346	**0.682**	0.543	0.608	0.196	0.517	0.494	0.594	0.453	0.536
	CC11	0.501	**0.779**	0.596	0.599	0.456	0.535	0.518	0.662	0.427	0.699
	CC12	0.467	**0.661**	0.350	0.322	0.360	0.354	0.457	0.443	0.574	0.566
	CC13	0.486	**0.768**	0.422	0.562	0.477	0.520	0.533	0.595	0.531	0.692
	CC2	0.548	**0.682**	0.271	0.235	0.563	0.230	0.393	0.388	0.379	0.611

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	CC3	0.559	**0.732**	0.202	0.292	0.606	0.322	0.468	0.436	0.453	0.678
	CC4	0.363	**0.696**	0.495	0.630	0.309	0.510	0.507	0.605	0.404	0.494
	CC5	0.645	**0.758**	0.355	0.405	0.621	0.424	0.540	0.557	0.387	0.704
	CC6	0.315	**0.671**	0.496	0.590	0.283	0.385	0.361	0.518	0.469	0.536
	CC7	0.464	**0.700**	0.494	0.508	0.364	0.497	0.563	0.506	0.376	0.512
	CC8	0.361	**0.584**	0.521	0.486	0.232	0.499	0.489	0.453	0.380	0.377
	CC9	0.501	0.695	0.403	0.363	0.408	0.350	0.431	0.505	0.413	0.618
Community Needs – Engagement (ECN)	ECN1	0.299	0.570	0.858	0.505	0.225	0.406	0.337	0.544	0.378	0.432
	ECN2	0.379	0.531	0.879	0.495	0.267	0.429	0.377	0.484	0.464	0.395
	ECN3	0.333	0.456	0.857	0.425	0.146	0.395	0.395	0.414	0.297	0.338
	ECN4	0.496	0.550	0.843	0.523	0.427	0.478	0.417	0.570	0.472	0.519
	ECN5	0.343	0.513	0.919	0.464	0.208	0.464	0.367	0.478	0.421	0.421
	ECN6	0.387	0.452	0.828	0.592	0.286	0.524	0.513	0.580	0.272	0.394
Externalised Reflective Learning (ERL)	RL_ERL1	0.570	0.603	0.461	**0.853**	0.461	0.624	0.556	0.734	0.530	0.584
	RL_ERL2	0.390	0.513	0.459	**0.853**	0.353	0.479	0.440	0.612	0.370	0.453
	RL_ERL3	0.476	0.558	0.572	**0.872**	0.397	0.601	0.553	0.685	0.312	0.509

Internalised Reflective	RL_IRL1	0.692	0.531	0.212	0.395	**0.877**	0.343	0.414	0.450	0.469	0.585
Learning (IRL)	RL_IRL2	0.711	0.528	0.282	0.421	**0.915**	0.338	0.392	0.445	0.443	0.540
	RL_IRL3	0.794	0.554	0.282	0.468	**0.929**	0.425	0.459	0.545	0.422	0.602
	RL_IRL4	0.750	0.534	0.219	0.385	**0.885**	0.384	0.464	0.456	0.359	0.601
	RL_IRL5	0.734	0.554	0.297	0.427	**0.913**	0.404	0.446	0.487	0.389	0.609
	RL_IRL6	0.812	0.566	0.344	0.468	**0.912**	0.432	0.494	0.505	0.384	0.618
Student Development -	SD_IPSD1	0.369	0.453	0.464	0.617	0.275	**0.833**	0.673	0.607	0.334	0.406
Interpersonal Growth (IPSD)	SD_IPSD2	0.591	0.513	0.351	0.490	0.476	**0.827**	0.717	0.580	0.382	0.541
	SD_IPSD3	0.370	0.481	0.457	0.557	0.253	**0.832**	0.706	0.575	0.395	0.398
	SD_IPSD4	0.569	0.527	0.441	0.526	0.407	**0.797**	0.634	0.508	0.434	0.503
Student Development -	SD_PGSD1	0.513	0.538	0.328	0.522	0.345	0.700	**0.824**	0.558	0.382	0.492
Personal Growth	SD_PGSD2	0.593	0.546	0.296	0.438	0.435	0.611	**0.815**	0.539	0.313	0.610
(PGSD)	SD_PGSD3	0.417	0.547	0.524	0.676	0.283	0.745	**0.733**	0.682	0.363	0.471
	SD_PGSD4	0.449	0.456	0.366	0.354	0.279	0.662	**0.782**	0.431	0.412	0.395
	SD_PGSD5	0.599	0.464	0.244	0.350	0.474	0.500	**0.582**	0.460	0.325	0.505
	SD_PGSD6	0.526	0.479	0.294	0.336	0.442	0.473	**0.731**	0.424	0.296	0.505
Community Engagement	SI_CESI1	0.517	0.574	0.525	0.607	0.443	0.666	0.688	**0.730**	0.470	0.555

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Social Impact (CESI)	SI_CESI2	0.377	0.466	0.482	0.514	0.244	0.475	0.416	**0.716**	0.362	0.372
	SI_CESI3	0.524	0.620	0.464	0.635	0.446	0.535	0.538	**0.845**	0.443	0.593
	SI_CESI4	0.573	0.597	0.326	0.533	0.605	0.426	0.505	**0.749**	0.412	0.694
	SI_CESI5	0.405	0.519	0.544	0.670	0.300	0.560	0.498	**0.794**	0.398	0.426
	SI_CESI6	0.522	0.617	0.408	0.702	0.415	0.537	0.558	**0.797**	0.382	0.608
Socio-Economic Social Impact (SESI)	SI_SESI1	0.348	0.445	0.313	0.319	0.307	0.227	0.206	0.310	**0.704**	0.391
	SI_SESI2	0.482	0.544	0.300	0.284	0.411	0.297	0.353	0.385	**0.858**	0.575
	SI_SESI3	0.288	0.510	0.480	0.494	0.142	0.472	0.488	0.510	**0.697**	0.435
	SI_SESI4	0.511	0.563	0.253	0.410	0.489	0.450	0.506	0.486	**0.843**	0.662
	SI_SESI4	0.511	0.563	0.253	0.410	0.489	0.450	0.506	0.486	**0.843**	0.662
	SI_SESI5	0.249	0.353	0.430	0.381	0.175	0.343	0.209	0.339	**0.745**	0.297
	SI_SESI6	0.387	0.486	0.383	0.401	0.384	0.397	0.332	0.446	**0.850**	0.528
	SI_SESI7	0.511	0.543	0.304	0.302	0.534	0.351	0.413	0.410	**0.749**	0.589
Community Needs – Understanding (UCN)	UCN1	0.613	0.709	0.377	0.426	0.644	0.417	0.459	0.574	0.552	**0.858**
	UCN2	0.477	0.693	0.366	0.413	0.532	0.341	0.463	0.457	0.597	**0.856**
	UCN3	0.705	0.746	0.340	0.494	0.652	0.522	0.634	0.640	0.500	**0.851**
	UCN4	0.374	0.512	0.461	0.587	0.221	0.512	0.543	0.569	0.389	**0.591**

4.7.1.2 Convergent Validity

Convergent validity is the degree to which the items of a particular scale measure the same construct. Thus, convergent validity was assessed for all the variables by examining the composite reliability, the Average Variance Extracted (AVE), the item factor loadings (Fornell & Larcker, 1981) and the significance of the outer loadings (Gefen & Straub, 2005). Convergent validity is shown when the AVE for each construct is greater than 0.5, the composite reliability is greater than 0.7, the items load on their respective construct greater than or equal to 0.7, and the t-statistic of the outer loading is greater than 1.96 (Gefen & Straub, 2005).

The internal consistency of the scales used to measure each construct is assessed via Cronbach's alpha and composite reliability (Fornell & Larcker, 1981). Measures of internal consistency are only calculated for the first-order reflective scales (Staples & Seddon, 2004). Nunally (1978) suggests that values of 0.7 or higher are adequate for Cronbach's alpha.

As shown in Table 4.7, Cronbach's alpha for Curricular Connections, Community Needs – Understanding, Community Needs – Engagement, Personal Growth, Interpersonal Growth, Behavioral Intent, Internal Reflective Learning, External Reflective Learning, Socio-Economic Social Impact and Community Engagement Social Impact are all above the 0.7 recommended cut-off.

Composite reliability is another measure of internal consistency. Composite reliability of 0.7 or higher is considered acceptable (Agarwal & Karahanna, 2000; Staples & Seddon, 2004). As shown in Table 4.8, composite reliability for Curricular Connections, Community Needs – Understanding, Community Needs – Engagement,

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Personal Growth, Interpersonal Growth, Behavioral Intent, Internal Reflective Learning, External Reflective Learning, Socio-Economic Social Impact and Community Engagement Social Impact are all above the 0.7 recommended cut off.

Table 4.8
Measures of Internal Consistency

Scale	No. of Items	Cronbach's Alpha	Composite Reliability	AVE
Curricular Connections (CC)	13	0.514	0.781	0.508
Community Needs – Understanding (UCN)	4	0.798	0.872	0.636
Community Needs – Engagement (ECN)	6	0.932	0.947	0.748
Personal Growth (PGSD)	6	0.570	0.717	0.561
Interpersonal Growth (IPSD)	4	0.757	0.976	0.676
Behavioral Intent (BI)	8	0.904	0.973	0.607
Internal Reflective Learning (IRL)	6	0.956	0.965	0.820
External Reflective Learning (ERL)	3	0.824	0.895	0.739
Socio-Economic Social Impact (SESI)	7	0.891	0.916	0.609
Community Engagement Social Impact (CESI)	6	0.864	0.899	0.598

a: Composite Reliability (CR) = $(\Sigma \text{ factor loading})^2 / \{(\Sigma \text{ factor loading})^2) + \Sigma \text{ (variance of error)}\}$
b: Average Variance Extracted (AVE) = $\Sigma \text{ (factor loading)}^2 / (\Sigma \text{ (factor loading)}^2 + \Sigma \text{ (variance of error)}\}$

Peterson and Yeolib (2013) mentioned that composite reliability (calculated from SEM) is a more reliable alternative to Cronbach's alpha which had been found to underestimate the true reliability as it was assessed as being a lower bound.

As further evidence of convergent validity, the AVE for each construct should be greater than 0.5. The AVE shows the percent of variance captured by a construct (Gefen & Straub, 2005). As shown in Table 4.8, all constructs have an AVE greater than 0.5, indicating strong convergent validity (Chin, 1998; Fornell & Larker, 1981).

To show convergent validity, all item loadings (outer loadings) should be greater than 0.6, indicating that more than half of the variance is captured by the constructs (Bassellier & Benbasat, 2004). Table 4.9 shows the item loadings for every item in this study. The following items (highlighted), with their associated loadings, were removed because their respective loadings were below 0.7 (Bassellier & Benbasat, 2004): CC8 (0.584), UCN4 (0.591), PGSD5 (0.582) and BI8 (0.566).

Table 4.9
Item Loadings

Constructs	Items	Loadings	Constructs	Items	Loadings
	CC1	0.739		BI1	0.816
	CC2	0.682		BI2	0.833
	CC3	0.732		BI3	0.885
	CC4	0.696		BI4	0.790
	CC5	0.758		BI5	0.832
	CC6	0.671		BI6	0.825
	CC7	0.700	Behavioral	BI7	0.628
Curriculum	CC8	0.584	Intent	BI8	0.566
Connections	CC9	0.695	Internalised	IRL1	0.877

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	CC10	0.682	Reflective	IRL2	0.915
	CC11	0.779	Learning	IRL3	0.929
	CC12	0.661		IRL4	0.885
	CC13	0.768		IRL5	0.913
	UCN1	0.858		IRL6	0.912
Community	UCN2	0.856	Externalised	ERL1	0.853
Needs –	UCN3	0.851	Reflective	ERL2	0.853
Understanding	UCN4	0.591	Learning	ERL3	0.872
	ECN1	0.858		SESI1	0.704
	ECN2	0.879		SESI2	0.858
	ECN3	0.857		SESI3	0.697
Community	ECN4	0.843		SESI4	0.843
Needs –	ECN5	0.919	Socio-	SESI5	0.745
Engagement	ECN6	0.828	Economic	SESI6	0.850
	PGSD1	0.824	Social Impact	SESI7	0.749
	PGSD2	0.815		CESI1	0.730
	PGSD3	0.733		CESI2	0.716
	PGSD4	0.782		CESI3	0.845
	PGSD5	0.582	Community	CESI4	0.749
Personal Growth	PGSD6	0.731	Engagement	CESI5	0.794
	IPSD1	0.833	Social Impact	CESI6	0.797
	IPSD2	0.827			
Interpersonal	IPSD3	0.832			
Growth	IPSD4	0.797			

4.7.1.3 Discriminant Validity

It is also important to establish the discriminant validity to confirm the construct
validity of the outer model. Discriminant validity is the degree to which the items of a
particular scale measure only the construct they should measure (Whitley, 2002).
Discriminant validity was assessed for Curricular Connections, Community Needs –
Understanding, Community Needs – Engagement, Personal Growth, Interpersonal
Growth, Behavioral Intent, Internal Reflective Learning, External Reflective
Learning, Socio-Economic Social Impact and Community Engagement Social Impact.

Table 4.10
Discriminant Validity

	BI	CESI	CC	ECN	ERL	IPSD	IRL	PGSD	SESI	UCN
BI	0.779									
CESI	0.631	0.773								
CC	0.667	0.734	0.712							
ECN	0.432	0.592	0.594	0.864						
ERL	0.562	0.691	0.652	0.579	0.859					
IPSD	0.576	0.691	0.599	0.520	0.665	0.822				
IRL	0.828	0.532	0.602	0.302	0.473	0.429	0.905			
PGSD	0.681	0.693	0.675	0.462	0.604	0.831	0.492	0.748		
SESI	0.514	0.533	0.634	0.447	0.475	0.469	0.454	0.467	0.780	
UCN	0.687	0.704	0.642	0.484	0.603	0.561	0.654	0.659	0.646	0.797

The rule for assessing discriminant validity is to determine whether the square root of the AVE of a given construct is larger than its correlation with any other construct (Gefen & Straub, 2005).

For a construct to demonstrate discriminant validity, each square root of the AVE should be larger than its correlation with the other constructs (Gefen & Straub, 2005). As shown in Table 4.10, all constructs meet this requirement, thereby indicating discriminant validity. Having established the construct validity of the outer model, it is assumed that the obtained results pertaining to the hypotheses testing should be valid and reliable.

4.7.2   The Goodness of Fit of the Model

The goodness of fit measure was estimated in order to support the validity of our PLS model, as it accounts for the variance extracted by both the outer and inner models. The PLS Structural Equation Modelling has only one measure of goodness of fit, unlike the CBSEM approach.

Tenenhaus et $al.$ (2005) posits that for the PLS path modelling, the global fit measure (GoF) is the geometric mean of the average communality and average R^2 for the endogenous constructs. In order to estimate the GoF to further support our PLS model, we followed the guidelines provided by Wetzels, Odekerken-Schroder, and Van Oppen (2009), utilising the following formula:

$$Gof = \sqrt{(\overline{R^2} \times \overline{AVE})}$$

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Based on the formula, we obtained a GoF value of 0.688 as shown in the working below:

$$Gof = \sqrt{(0.729) * (0.650)} = 0.688$$

The comparison was made with the baseline values of GoF (small = 0.1, medium = 0.25, large = 0.36) as suggested by Wetzels et al. (2009). The results showed that the model goodness of fit measure was large, indicating an adequate level of global PLS model validity.

4.7.3 Structural Model (Testing of the Hypotheses)

Once all constructs in the measurement model (stage one) are proved to be reliable and valid (Anderson & Gerbing, 1988), a structural model can then be tested and presented as a second and main stage of the analysis. The purpose of the structural model in this thesis is to test the underlying hypotheses in order to answer the research questions outlined in Chapter One. In this research, 9 hypotheses were developed in order to answer some of the research questions addressed in chapter one. The hypotheses were related to the relationships between Curricular Connections, Community Needs, Students' Development and Behavioral Intent, Reflective Learning and Social Impact. This hypothesized model was tested using SEM and the path diagram is presented in Figure 4.7. The t-statistics used to interpret the significance of the path coefficients in the structural model were generated via the bootstrap procedure in PLS (Chin, 1998). The bootstrap is a nonparametric and distribution-free approach for estimating the significance of the path coefficients in

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the structural model (Chin, 1998). The bootstrap was performed with 1000 re-samples.

Table 4.11
Path Estimates

	Hypotheses	Beta	S. Error	T-Statistic	Decision
H1	Curriculum Connections -> Reflective Learning	0.150	0.071	2.108	Supported
H2	Student Development -> Reflective Learning	- 0.071	0.067	2.059	Supported
H3	Community Needs -> Reflective Learning	0.011	0.064	2.172	Supported
H4	Behavioural Intent -> Reflective Learning	0.686	0.050	13.754	Supported
H5	Curriculum Connections -> Social Impact	0.338	0.084	4.014	Supported
H6	Student Development -> Social Impact	0.191	0.094	2.018	Supported
H7	Community Needs -> Social Impact	0.295	0.066	4.486	Supported
H8	Behavioural Intent -> Social Impact	0.121	0.067	2.800	Supported
H9	Social Impact -> Reflective Learning	0.158	0.068	2.313	Supported

As shown in Table 4.11 and in Figures 4.7 and 4.8, all the hypotheses are supported. As hypothesized in Chapter 3, curricular connections, community needs, students' development and behavioral intent have a significant effect on reflective learning and social impact. While circular connections, community needs and behavioral intent have a positive effect on reflective learning, student development on the other, has a negative effect on reflective learning. Moreover, social impact also has a positive and significant effect on reflective learning. Inspection of the path coefficients reveals the

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relative importance of the independent variables for explaining adoption (Chin & Gopal, 1995). In terms of predictive ability, curricular connections, community needs, students' development and behavioral intent explain 69.9% of social impact ($R^2 = 0.699$). Furthermore, curricular connections, community needs, students' development, behavioral intent and social impact explain 75.9% of reflective learning ($R^2 = 0.759$).
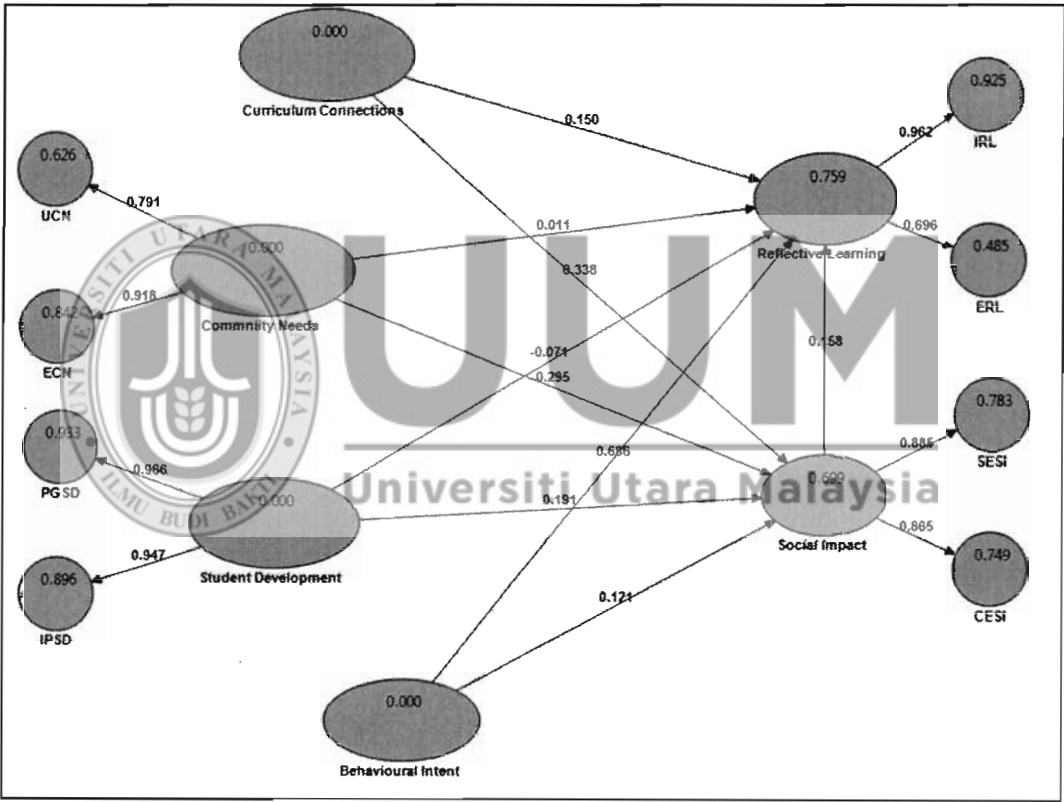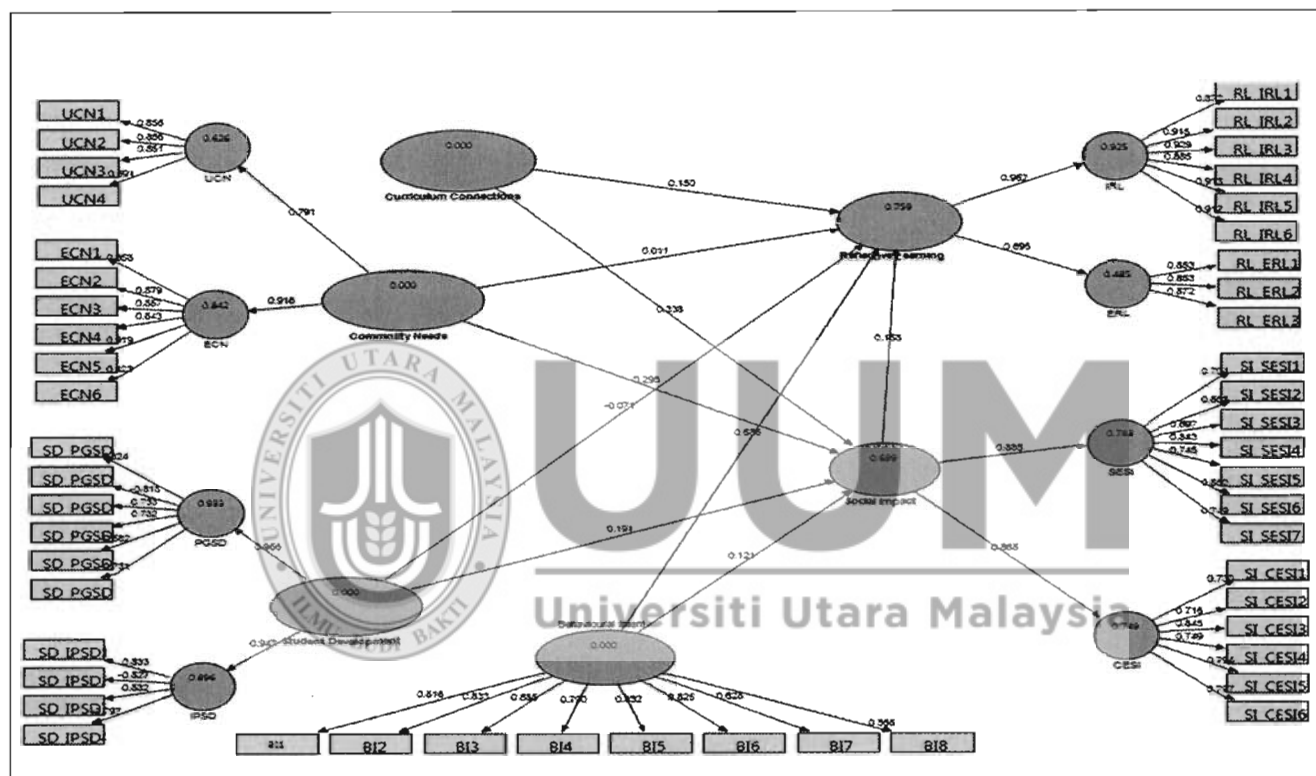

Figure 4.7
Structural Model

Figure 4.8
Structural Model (with items)

4.8   Mediation Analysis

Generally, mediation or indirect effect is believed to occur when the causal effect of an independent variable (X) on a dependent variable (Y) is transmitted by a mediator (M). In other words, a variable is called a mediator *'to the extent that it accounts for the relation between the predictor and the criterion'* (Baron & Kenny 1986, p.1176).

Literature suggests that there are two essential conditions in establishing mediation:

1) showing that the predictor variable (X) is related to the mediator variable (M) and

2) showing that the mediator variable (M) is related to the criterion variable (Y).

In a similar vein, previous researchers (MacKinnon *et al.* 2002) suggest that mediation inferences are justified if the path between predictor variable and mediator variable, and the path between mediator variable and criterion variable are significant. Following these arguments, this research test the mediation effect of social impact in the relationship between the independent variable (service learning comprising of curricular connections, community needs, students' development and behavioral intent) and the dependent variable (students' reflective learning).

This research employed the bootstrapping approach (Precher & Hayes, 2008) to assess the mediating effect. Many researchers advocate the use of this method in assessing indirect effects (Hayes 2009). Bootstrap results are claimed to have more accurate probability estimates as this method can help with mediation problems in which the mediator and outcome variables are not normally distributed (Shrout & Bolger 2002). There are at least two good reasons for applying the bootstrapping method: 1) this method provides a general way to test significance and confidence

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intervals in a wide variety of situations and 2) this method does not require many assumptions, and as such make the result more accurate (MacKinnon, Fairchild, & Fritz, 2007).

To test the significance level of each mediating effect, the bootstrapping method with 1000 bootstrap re-sampling and bias-corrected confidence intervals was utilised (Preacher & Hayes 2008). Bootstrap samples are derived by repeatedly estimating the coefficients with a minimum of 1000 bootstrap samples, each of which comprises N cases randomly sampled with replacement from the original sample ($N= 256$). Convention suggests the effect is significant if the 95% confidence interval (CI) denoted by lower and upper bounds exclude the value of 0. The estimation of mediation is shown in the Table 4.12. The t-statistics for the mediation effect of social impact in the relationship between curricular connections and students' reflective learning (0.588), community needs and students' reflective learning (0.331), students' development and students' reflective learning (0.511) and behavioral intent and students' reflective learning (0.211) are all lower than the cut-off value of 1.96. It indicates that social impact does not mediate the relationship between the independent variable (curricular connections, community needs, students' development and behavioral intent) and the dependent variable (students' reflective learning). Hence H10, H11, H12 and H13 are all rejected.

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Table 4.12
Mediation Analysis

Hypotheses	Paths	Path Coefficients	a * b	St. Dev (a*b)	t value = a*b/St. Dev (a*b)
H10: CC → SI → RL	CC → SI	0.338	0.053	0.090	0.5888
	SI → RL	0.158			
H11: SD→ SI → RL	SD → SI	0.191	0.030	0.090	0.331
	SI → RL	0.158			
H12: CN → SI → RL	CN → SI	0.295	0.046	0.090	0.511
	SI → RL	0.158			
H13: BI → SI → RL	BI → SI	0.121	0.019	0.090	0.211
	SI → RL	0.158			

4.9 Summary of Hypotheses Testing

In total thirteen hypothesized relationships are tested in this research. The results are found to support nine (9) of the thirteen (13) hypotheses and the remaining four (4) hypotheses were rejected. Table 4.13 summarises the results. The implications of these results are discussed further in the next chapter.

Table 4.13
Summary of Hypotheses Testing

Hypotheses	Direct Relationships	Result
H1	Curriculum connection has a significant relationship with students' reflective learning.	Supported
H2	Student Development has a significant relationship with students' reflective learning.	Supported
H3	Community needs has a significant relationship with students' reflective learning.	Supported
H4	Behavioral Intent has a significant relationship with students' reflective learning.	Supported
H5	Curriculum connections has a significant relationship with social impact	Supported
H6	Student Development has a significant relationship with social impact	Supported
H7	Community needs has a significant relationship with social impact.	Supported
H8	Behavioral Intent has a significant relationship with social impact	Supported
H9	Social Impact has a significant relationship with students' reflective learning.	Supported
	Mediating Variable	
H10	Social impact mediates the impact of curriculum connections on students' reflective learning	Rejected
H11	Social impact mediates the impact of student development on students' reflective learning	Rejected
H12	Social impact mediates the impact of community needs on students' reflective learning	Rejected
H13	Social impact mediates the impact of behavioral intent on students' reflective learning.	Rejected

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CHAPTER 5

DISCUSSION OF FINDINGS, IMPLICATIONS AND CONCLUSIONS

5.1 INTRODUCTION

This chapter provides a summary, detailed discussions, conclusion, contributions and policy implications of the findings of this study, as well as the limitations and future research direction. This chapter is organised as follows: Section 5.1 presents the summary of the major findings of this study, followed by Section 5.2 that provides the detailed discussions of the findings of the study. Section 5.3 explains the contributions of the study, while Section 5.4 looks into the policy implications of this study. Section 5.5 deliberates on the limitations and future research direction.
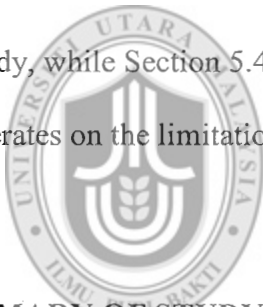
5.2 SUMMARY OF STUDY

The objective of this study was to explore the impact of service-learning on reflective learning as well as on the social impact. The study also investigates whether or not social impact mediates the impact of service-learning on reflective learning. Essentially, this study was greatly motivated by the findings, in the recent relevant literature concerning the relationship between service-learning, reflective learning and the social impact on the community. Most of the studies that have been conducted on service-learning have involved institutions of education in the more developed

countries, while in the developing economies, very few studies have been carried out of the impact of service-learning (Gaines-Hanks & Grayman, 2009 in South Africa; Kesten, 2012 in Turkey; Prasertsang, Nuangchalerm, & Pumipuntu, 2013 in Thailand).

Service-learning has been incorporated as part of the curriculum for a very long time in the American higher education system, beginning in the 19th century and having been revitalized in the 1960s, 1980s, and today (National Service-Learning Clearinghouse, 2008). In recent years, there has been an increasing interest in incorporating service-learning into the curriculum of higher education in many other countries, to provide students with a more holistic education that is believed to enhance their graduate capabilities. Chan *et al.* (2012) pointed that higher education in Taiwan has seen a rapid increase in service-learning components, as many universities incorporate service-learning into the curriculum in an effort to develop and enhance their undergraduates' cognitive abilities. Reflective learning through experiential learning activities has become a major part of the higher education curriculum, in the training of all knowledge domains. As Becker (2000) aptly points out that students are well-prepared for their professional development and take on the responsibility of serving their communities when they undertake service-learning activities as part of their higher education curriculum.

Reflective practice can be enhanced by the incorporation of elements of service-learning such as curricula connections, student development, community engagement and behavioral intent. It has been known particularly in the United States to bridge the gap between community and academia. As far as the Malaysian higher education scenario is concerned, both reflective learning and service-learning are relatively new

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terms but are nevertheless considered very powerful pedagogical tools which have been recognized as providing a dynamic and holistic education for decades in the United States, particularly as that is where it originated. Schon (1983) looks at "reflection-in-action" as the means in which holistic education takes centre stage by connecting higher education to the community with the intent of making a difference to the community being served and to service-learning cognitive and reflective capabilities.

Higher education institutions become the natural link between academia and the real world, in which there exist a structured and designed approach to addressing community needs through academic content. This now changes the dynamics of the classroom into borderless experiential labs where critical reflection and cognitive skills can be developed rather than only descriptive and formatted answers. There is a need for higher education institutions to not only focus on the teaching and learning aspect of higher education, but to also emphasis on the development of positive attitudes among undergraduates. Hence, it is urgent and necessary to examine how service-learning can affect and influence the reflective learning and the social impact it is perceived to have on the community. Thus, the present research is expected to provide an in depth understanding of the different service-learning, reflective learning and social impact constructs and the way these constructs are interrelated.

In the light of the problem of this study and the comprehensive review of the relevant literature conducted in Chapter 2, this study was guided by three broad research questions:

RQ 1: Does service-learning (comprising of the four components of curricula connections, student development, community needs and behavioral intent) have a direct relationship with reflective learning?

RQ 2: Does service-learning (comprising of the four components of curricula connections, student development, community needs and behavioral intent) have a direct relationship with social impact?

RQ 3: Does social impact mediate the relationship between the components of service-learning and reflective learning?

Specifically, this study aimed to achieve the following main objectives.

1. To examine if the components of service-learning (curricula connections, student development, community needs, behavioral intent) have a direct relationship with reflective learning of undergraduate business students.

2. To examine if the components of service-learning (curricula connections, student development, community needs, behavioral intent) have a direct relationship with social impact on the community.

3. To assess if social impact has a mediating effect on the relationship between the components of service-learning and reflective learning.

Based on the conceptual framework of this study as shown in Figure 5.1, the concept of service-learning is divided into four main constructs, namely curriculum connections, community needs, student development and behavioral intent. This study

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investigates the impact that these four service-learning constructs have on both the students' reflective learning and the social impact on the community.

Figure 5.1: Conceptual Framework
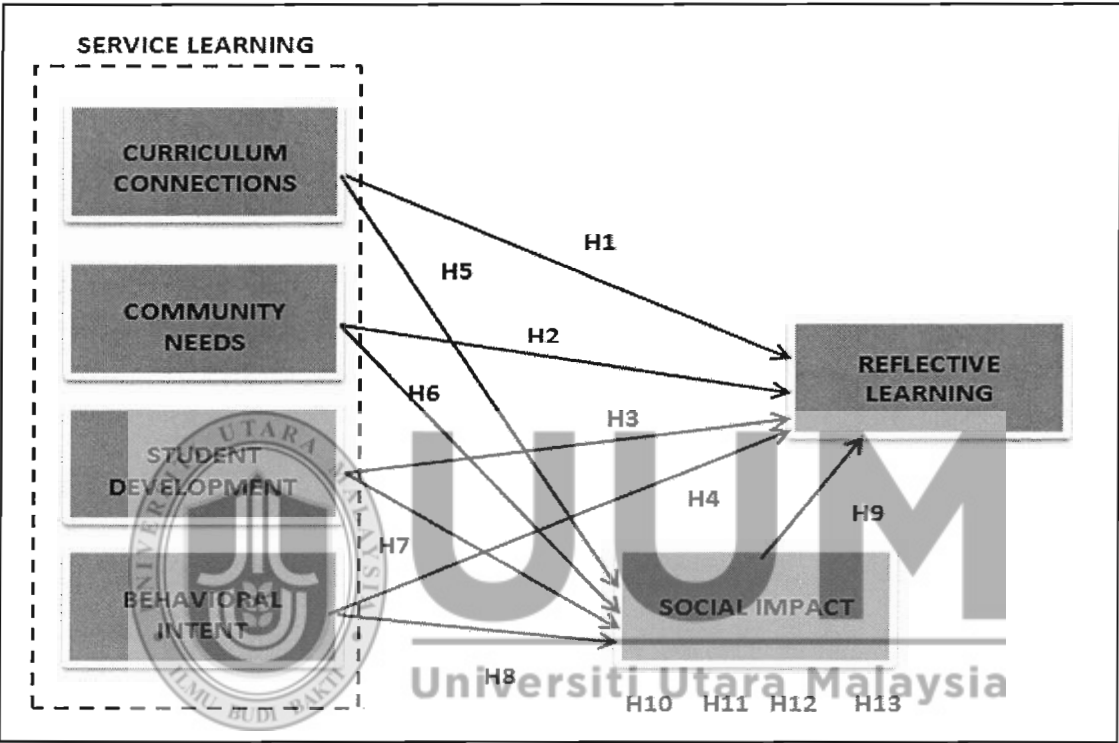
In Chapter 3, thirteen hypotheses were proposed for inclusion in the model. According to Hair *et al.* (2010), the validation of a model is not complete without examining the individual parameter estimates and determining if there are any significant relationships existing in the model. Out of these thirteen hypotheses, nine were supported while four hypotheses were rejected.

The use of the Partial Least Squares-Structural Equation Modelling approach was employed in this study to explore our research questions and let the data speak for

itself in an area of service-learning that requires much empirical research. The structural model that emerged in this study distinguishes the significant path relationships between the factors involved in implementation of service-learning and the outcomes in terms of the reflective learning capabilities of the service learners and the social impact on the community being served. Figure 5.2 provides the graphical representation of the structural model of this study with R^2 coefficients and the significant path coefficients. Figure 5.2 demonstrates the linear relationship between the four constructs of Service-learning (predictors) and the two predicted constructs comprising of Reflective Learning and Social Impact.

The following section will discuss in detail the findings and implications from the PLS analysis to each of the proposed hypotheses as applicable.

5.3 DISCUSSION OF FINDINGS
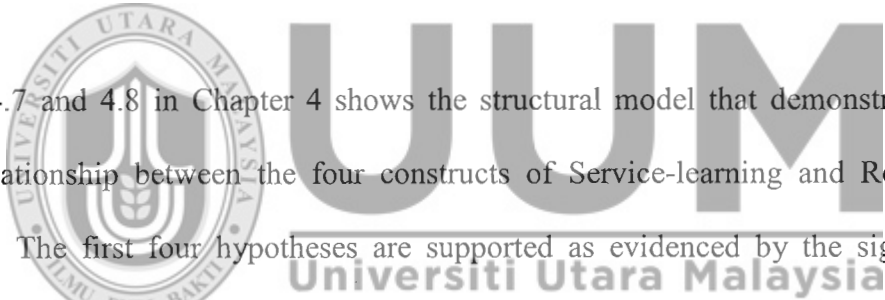
The results reported in Chapter 4 will be further discussed in this by relating them to theoretical requirements and empirical literature. The discussion will center around the impact of service-learning on both reflective learning and social impact, with the main focus being on the impact of the predictor constructs comprising of curriculum connections, community needs, student development and behavioral intent on the predicted contructs comprising of reflective learning and social impact. There is an increased interest in research seeking answers to the all-important question of how service-learning helps in enhancing students' reflective learning and the social impact on the community. With the tremendous challenges faced by todays' students and the urgent need to equip themselves with the much needed life skills, this study hopes to contribute some solutions to this pertinent issue, by investigating the drivers of

reflective learning and social impact, with special interest on the role played by service-learning.

There is evidence to point that the chosen explanatory variables/constructs of service-learning are related to both reflective learning and social impact. A detailed summary of the results based on each regressor and its relationship with both reflective learning and social impact (the regressands) is explained below.

5.3.1 The Impact of Service-learning on Reflective Learning (Hypothesis 1 to 4)

Figures 4.7 and 4.8 in Chapter 4 shows the structural model that demonstrates the linear relationship between the four constructs of Service-learning and Reflective Learning. The first four hypotheses are supported as evidenced by the significant relationships ($p < 0.01$) between the four predictors (curriculum connections, student development, community needs and behavioural intent) and the predicted construct of reflective learning.

Curriculum connections comes in second in terms of its positive and significant impact on reflective learning ($\beta = 0.151$), supporting hypothesis 1, depicting the importance of infusing service-learning strategies into the business curriculum allowing students to establish connections to the community and solve real-world problems in business-related fields such as sustainable businesses, corporate social responsibility, green businesses, environmental studies and ethics and corporate governance, to name a few. Our findings are consistent with the those of Williams

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and Driscoll (1997), Clouder (2009) and Stringfellow and Edmonds-Behrend (2013), that curriculum connections enhances the reflective learning capacity of the service learners.

For students to enhance their reflective capabilities, King and Kitchener (1994) strongly advocated the need for reflection to be supported throughout the curriculum. In the case of service-learning, Williams and Driscoll (1997) supported the notion that curriculum connections to the community service experience of the students facilitated their reflective capabilities. Clouder (2009) posits that the connections to the curriculum provides students with the opportunity to reflect on their learning as reflection acts as a central tenet of learning, teaching and assessment, making it necessary to embed it at a curriculum design level. There are a variety of ways in which curriculum can be conceptualized. As mentioned by Kleiman (2002, p.4, as cited by Clouder, 2009), the conceptualization of curriculum can take the form of content, experience, intentions and/or cultural reproduction.

As emphasized by Black (2002), most businesses today realize the importance of taking a proactive interest in community concerns and how they can contribute back to society. This sense of urgency seems to have trickled into the business educational arena, in which service-learning has begun to take a central role in preparing business students to face the new challenges of the current business world by promoting service-learning in the curriculum to ensure students understand a variety of issues such as diversity, ethics, social responsibility, governance, globalization, and the digital divide. The business students who undertake service-learning will discover that service and learning outside the classroom are vital to their individual and

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professional development, and will thus gain a sense of social responsibility essential for their future business undertakings.

Our results also reveal the significant impact of the student development component of service-learning on reflective learning, supporting hypothesis 2. However, this is the only construct of service-learning that has a negative impact on reflective learning ($\beta = -0.071$) as displayed in Figure 5.3. The student development component of service-learning focuses on the skills and graduate capabilities that students acquire, such as critical thinking, lifelong learning, teamwork and leadership skills. Our results concurs with the findings of Eby (1998) who revealed that an inadequately planned and organized service-learning experience may end up reducing the reflective learning ability of the service learners. Also while the students may develop leadership and teamwork skills, these skills may not translate to better reflective skills, as we found in our case. However, Astin *et al.* (2000) contradicted with our findings as they found the student development aspect of service-learning to have improved the students' reflective learning capabilities.

Our results also reveal that the community needs aspect of service-learning has a smaller but positive role in enhancing reflective learning among the service learners when they partake in service-learning activities ($\beta = 0.151$), supporting hypothesis 3. These service-learning activities provide opportunities for students to establish the needs of the community and find effective solutions to address their community's needs. The research study by Pariola and Goke-Pariola (2006)., Andrews (2007) and Mintz and Hesser (1996) also found the community needs aspect of service-learning to predict reflective learning.

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As far as the behavioral intent aspect of service-learning was concerned, our results show that behavioural intent to have the highest positive magnitude or impact ($\beta=0.686$) on reflective learning, supporting hypothesis 4. This demonstrates how impactful the students' behavioural intent is on their reflective learning capacity. This impact of behavioral intent displays how service-learning strategies infused into the business curriculum can create a platform for students to reconsider their identity as volunteers and the nature of helping, aside from being committed to making a difference in the community they live in, which in turn enhances the students' reflective learning capacity. This finding is consistent with the findings of past studies by McEwen (1996) and Okun and Sloane (2002).

According to Okun and Sloane (2002), behavioral intention was found to predict volunteer enrollment in a campus-based community service-learning programme. Behavioral intent strengthens the need for service learners to serve their communities, which in turn enhances their reflective learning capabilities, as their active participation in serving their communities further transforms their attitudes and behavior.

Approximately 76% of the variance in the Reflective Learning construct was accounted for by the four service-learning constructs comprising of curriculum connections, student development, community needs and behavioural intent.

5.3.2 The Impact of Service-learning on Social Impact (Hypothesis 5 to 8)

The social impact of service-learning is an area that needs much attention. Research on the benefits of service–learning projects on the community partners and the community receiving the service still remains a largely unknown area, as there is a

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lack of structure for identifying and measuring outcomes specific to service–learning. This study will further add to the body of knowledge on this area of interest. \

With reference to Figures 4.7 and 4.8 in Chapter 4, we now discuss the structural model that demonstrates the linear relationship between the four constructs of Service-learning and Social Impact. Our results clearly show that the second four hypotheses are supported as evidenced by the significant relationships ($p < 0.01$) between the four service-learning predictors (curriculum connections, student development, community needs and behavioural intent) and the predicted construct of social impact.

Our results show that curriculum connections has the greatest positive and significant impact on reflective learning ($\beta = 0.338$), supporting hypothesis 5, depicting the importance of connecting the curriculum to the real world by infusing service-learning strategies into the business curriculum, thereby connecting theory to practice. Our results concur with the results of Bringle and Hatcher (1996) and Fiske (2001) that curriculum connections predict social impact on the community being served. The social impact of service-learning covers the impact on the community and the community partners. By connecting the curriculum to the community via service-learning pedagogy, there is a positive social impact on those who receive the service, aside from those who provide the service. As a teaching and learning approach, service-learning integrates community services with the curriculum, thereby enriching the learning experience, promoting civic responsibility and causing a social impact by strengthening communities.

Schmidt and Robby (2002); and Jorge (2003) carried out both qualitative and quantitative methods to study the community impact of service-learning projects.

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Sigmon (1996) states that both the student and the community benefits from this service-learning engagement in various ways, where the students understand the value of their work and how that serves a greater community. The students are able to extend their discipline specific knowledge to meet the community needs through the service-learning process which is structured and designed to meet the intended outcomes.

Our results also reveal the positive and significant impact of the student development component of service-learning on social impact ($\beta = 0.191$), supporting hypothesis 6. The student development component of service-learning focuses on the skills and graduate capabilities that students acquire, such as critical thinking, lifelong learning, teamwork and leadership skills, when they partake in service-learning activities, which then translates into positive social impact on the community, as these students use their newly acquired or developed life skills to strengthen the communities that they serve. Our results concur with the findings of Sikula and Sikula (2005), Billig (2009) and Conway et al. (2009), who revealed that service-learning activities bring positive social impact and changes to the community, by doing the right things while growing personally, socially and academically as purposeful graduates. Service-learning projects provide a good platform for the development and enhancement of life skills that creates a far-reaching social impact on the communities being served by these service learners. Our findings are in line with the three principles of Dewey's educational philosophy which emphasizes that education must: (i) lead to personal growth; (ii) contribute to humane conditions and (iii) engage citizens in association with one another.

Our results also reveal that community needs are an important aspect of service-learning in creating a positive and significant impact in enhancing the social impact on the community (β = 0.295), supporting hypothesis 7. Service-learning activities provide a collaborative platform between the students and the community in addressing the community needs that creates a meaningful social impact on the community. As one of the main goals of service-learning is to improve or help the community, it is important to establish the needs of the community and develop community partnerships that encourage and accept community input on the desired outcomes of the service-learning project. Once the community needs aspect of the service-learning project is established, only then will there be a significant social impact on the community and its partners. Harwood and Radoff (2009) posits that in order for service-learning projects to have a meaningful social impact, it must be carefully planned in such a way that it strengthens community ties and benefits both the community and the students by forming positive relationships. Ammon, Furco, Chi and Middaugh (2002) and Billig (2002) have found an association between strong community partnerships and long-term programme sustainability, indicating the positive social impact of service-learning from the community needs perspective..

The research study by Kovarik (2010) and Barrientos (2010) also found the community needs aspect of service-learning to predict social impact on the community. By linking service-learning with community needs, students are engaged with the community stakeholders and faculty in a collaborative process to bring about social change and improved community well-being. Therefore the community needs aspect of service-learning requires a strong collaborative process that will ensure a positive and significant social impact on the community. Closson and Nelson (2009) had studied the effect of service-learning on the community and concluded that

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service-learning mainly attempts to embrace the goal of engaging students within the community, with the hope of creating a social impact on the community being served. Kovarik (2010) examined the impact of service-learning on interdisciplinary learning and the students' perceived social impact on the community being served and found that students appreciated being involved in service-learning and perceived the community need to be greater than anticipated and that the service-learning experience helped to fulfill this need.

As far as the behavioral intent aspect of service-learning was concerned, our results show that behavioural intent to have a positive and significant impact (β=0.121) on social impact, supporting hypothesis 8. The magnitude of the impact on behavioral intent on social impact was the smallest when compared to the other predictors. The impact of behavioral intent displays how service-learning strategies infused into the business curriculum can create a platform for students to reconsider their identity as volunteers and the nature of helping, aside from being committed to making a difference in the community they live in, will in turn enhance the social impact on the community. This finding is consistent with the findings of past studies by Beling (2003) and Bahl and Hom (2005). In a study conducted at the California State University, Northridge, Beling (2003) found that students who undertook service-learning were greatly impacted by their experience and the perceived social impact it had on the community. Their positive experience further enhanced their behavioral intent to continue serving the community.

Behavioral intent strengthens the need for service learners to serve their communities and bring about positive changes. The social impact on the community is far more positive and impactful as their active participation in serving their communities is

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brought on by their own behavioural intent to serve on a voluntary basis. The students' initial behavioural intent in participating in service-learning activities may result in further behavioral changes that can culminate from the experiential learning they undergo while serving the communities. This initial behavioural intent and the further enhancement of this behavioural intent create a significant social impact on the communities being served. Service-learning thus provides a platform for students to explore their initial behavioral intent and act upon this intent by taking part in the various service-learning activities, which will then further strengthen their intent and conviction to serve the community upon witnessing the social impact their service has on the communities being served.

Sandaran (2012) explains that a strong partnership between learning institutions, business and organisations through service-learning will help in building communities. This partnership can be further enhanced if the service learners had an initial intent towards helping the community, as their initial behavioral intent would act as a catalyst in creating a more impactful experience for both the service providers and recipients.

Finally, our results also indicate that approximately 70% of the variance in the Social Impact construct was accounted for by the four service-learning constructs comprising of curriculum connections, student development, community needs and behavioral intent.

5.3.3 Social Impact has a significant relationship with Students' Reflective Learning (Hypothesis 9)

The linear relationship between social impact and reflective learning was also tested and our results point to a positive and significant relationship ($\beta=0.158$). This indicates that the students' perception of the social impact on the community and on themselves as individuals enhanced their reflective learning abilities. This is in line with the reflective model of Bogg and Challis (2013) that focuses on the role of outcomes (in our case the social impact on the individual and the community) in enhancing reflections and in shaping future experiences. Eyler and Giles (1999) reveal service-learning as a pedagogy that connects community service with academic study in a manner that allows each to strengthen and transform one another. The experience that the students gain through their cognitive and emotional engagement, and the perceived impact their service had on the community at large, will strengthen their reflective learning capabilities.

The social and emotional engagement between students, faculty and the community generates a greater sense of belonging through the establishment of caring, accepting, and supportive relationships, providing the students with a meaningful experience that they can reflect upon. Having undergone this meaningful experience and witnessing the social impact their service-learning activity had on themselves and on the community; these students were in a better position to reflect deeply on their learning. Their reflective learning abilities were sharpened as they realized that the community issue they addressed had an impact on them, motivating them to "do something about the problem." This is in line with the Social Impact Theory (Latane, 1981) which defines social impact as any influence on individual feelings, thoughts, or behavior

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that is exerted by their real, implied, or imagined presence or actions of others. Thus, engagement with the community is absolutely critical for service-learning to be beneficial and for reflective learning to take place.

5.3.4 Social Impact mediates the relationship between Service-learning and Reflective Learning. (Hypothesis 10 to 13)

The third objective of this study was to examine whether social impact has a mediating effect on the relationship between the components of service-learning (curricular connections, community needs, students' development and behavioral intent) and reflective learning. A review of the literature shows the existence of several studies (Astin *et al.*, 2000; Gallini & Moely, 2003) that have examined the mediating effects of various mediating variables on the relationship between service-learning and its outcomes.

In a study on the impact of service-learning activities on student outcomes (students' beliefs, academic skills, and career choice), Astin *et al.* (2000) examined how the other mediating activities taking place in a service-learning experience accounted for the differences in students outcomes. In other words, they examined "*the extent to which the relationship of service with the outcome measure might be "indirect," i.e., accounted for by specific activities associated with service.*" (Astin *et al.*, p.30, (2000)). The mediating factors that their study examined included measures such as reflection, faculty interaction, student interaction, how often a student took interdisciplinary courses, the frequency of cross-racial interactions, and how many hours per week the student spent studying, which they believed might explain the effects of the service experience on the students' outcomes.

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Gallini and Moely (2003) examined the impact of service-learning on college student engagement and retention in a private research university. They also explored the mediating effect of the extent of academic challenge of the courses and the level of student engagement with the course content, on the relationship between service-learning and retention. The authors found that "the academic challenge of the courses and the students' engagement with course content were most important in determining the influence of service-learning courses on plans to continue study at the university." (Gallini & Moely, 2003, p.5).

Based on the previous service-learning studies that have examined a multitude of mediating or indirect effects between service-learning and its outcomes, we were curious to examine whether there existed a mediation or indirect effect in the relationship between the components of service-learning (curricular connections, community needs, students' development and behavioral intent) and its outcome on students' reflective learning. To the author's knowledge, this area is somewhat new and has never been explored. As such, in the interest of adding new knowledge to the existing body of knowledge on the benefits of service-learning on student outcomes, we decided to explore the indirect or mediating effect of social impact on the relationship between service-learning and reflective learning. Wolf and Tieney (2006) found that students are provided with a multitude of opportunities to enhance content driven scholarship and develop meaningful relationships with the community and faculty by applying academic knowledge to solve complex community problems through service-learning projects. As such, we believe that when students undertake service-learning activities, and they witness the social impact of their actions on the communities they serve, their experiences of witnessing this meaningful social impact would strengthen their reflective abilities, as these experiences dig deep inside their

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hearts and souls, creating a profound impact on their cognitive, emotional and social abilities. Eyler and Giles (1999) reveal how service-learning activities promotes reflective learning through the "complexity in analysis of both causes and solutions to social problems" (p. 75) as they witness the impact of their service on the community which translates into a more powerful ability to reflect.

To test the significance level of each mediating effect, the bootstrapping method with 1000 bootstrap re-sampling and bias-corrected confidence intervals was utilised (Preacher & Hayes 2008). Based on the results of the mediating effect of each component of service-learning on reflective learning as shown in Table 4.12 in Chapter 4, we find that social impact does not have a significant mediating or indirect effect on the relationship between service-learning and reflective learning. The t-statistics for the mediation effect of social impact in the relationship between curricular connections and students' reflective learning (0.588), community needs and students' reflective learning (0.331), students' development and students' reflective learning (0.511) and behavioral intent and students' reflective learning (0.211) are all lower than the cut-off value of 1.96. It indicates that social impact does not mediate the relationship between the service-learning (curricular connections, community needs, students' development and behavioral intent) and the students' reflective learning. Hence H10, H11, H12 and H13 are all rejected.

There are several plausible explanations that we believe could have resulted in social impact not being a significant mediator in the relationship between service-learning and reflective learning. Firstly, this study only involved a short-term service-learning project that students undertook, making their experience not as impactful as would be the case for a long-term project. The short period of time taken to complete the

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service-learning activity may not have been profound enough to create a difference in the way the students perceived the social impact that their service-learning activity had on their reflective learning abilities. The time period may have been too short to create a meaningful social impact on both the community and themselves that could impact the way they reflected. Had these service-learning projects continued in the long term and the students had witnessed the long term social impact of their service-learning activity on the community and themselves, their perception of the impact would have enhanced their reflective learning capabilities, with a high possibility of social impact mediating the impact of service-learning (curricular connections, community needs, students' development and behavioral intent) on their reflective learning abilities. This reason is supported by the findings by MacDonald (2009), in which it was revealed that in certain circumstances, the costs of the service-learning experience for the organization and for the students outweighed the benefits, if the experiences are not long enough to allow for proper implementation and reflection.

Yet another plausible explanation for the insignificant mediating effect that social impact has on the relationship between service-learning and reflective learning in this study can be seen from the planning perspective of the service-learning activity or project. Most studies have shown the positive impacts or benefits of service-learning on student outcomes. However, there are studies that have shown the negative or insignificant outcomes of service-learning. Eby (1998) revealed that poorly or inadequately planned service-learning experience might cause a negative impact on students' outcome and could actually reinforce students' stereotypic thinking and increase their perceived distance from the community. Therefore, there is a possibility that our findings on the insignificant social impact mediating effect could have possibly arise from a structural deficit in terms of the planning and organization

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of our service-learning activity. We will need to re-look into this for our future projects and re-visit this mediating effect.

There is yet another plausible explanation for the insignificant mediating effect of social impact on the relationship service-learning and reflective learning. As the service-learning involved different sets of students serving different communities, there was no continuity of service to the communities. The lack of continuity of service may not have created a social impact that was perceived by the students to be profound enough to enable them to reflect in a meaningful manner. If we could plan the service activities to be carried out by the same set of students to serve the same set of communities, there is a high possibility that these students would perceive the social impact on the communities and themselves to be profound enough to affect the way they reflected, hence enabling the mediating effect to be significant. This is yet another possibility that we need to look into for future studies in this area.

5.4 CONTRIBUTIONS OF THE STUDY

The findings of the studies reviewed here suggest a number of practical implications for improving the reflective learning capabilities through the deployment of service-learning opportunities. This study contributed new knowledge to the existing body of research in the field of service-learning and its impact on reflective learning and on the community (social impact). The study focused on the components of service-learning that enhanced the students' reflective learning capabilities and created a meaningful social impact on all stakeholders in the community. This study is also expected to contribute to the Higher Education industry, with the hope that service-learning becomes a major aspect of higher education for every discipline. Aside from

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that, the study will also contribute towards all stakeholders of the community, including the community being served, the community partners and the service learners who serve the community. The study will also provide various recommendations to policy makers with regards to the policy making in the development of human capital and reflective practitioners. The following sections address the contribution to literature and the practical implications of the study.

5.4.1 Theoretical Contribution

This study extended the theoretical framework that was used in the studies by Eyler and Giles (1999); Astin *et al.* (2000); and Ash, Clayton, and Atkinson (2005) by taking into account the four components of service-learning comprising of curriculum connections, community needs, student development and behavioral intent into the framework and investigating its impact on the community at large and on the reflective learning capabilities of the service learners. This study contributes to the literature as it is, to the author's knowledge, the first empirical research that focuses on the specific influence that each component of service-learning has on reflective learning and the social impact on the community. This study also looks into how social impact mediates the impact of each component of service-learning on reflective learning, an area that is new and worth investigating. Thus, by examining the recommended relationships (as stated in the objectives in Chapter 1), the present study has a theoretical contribution.

5.4.2 Contribution to Policy Makers in Higher Education

The landscape of higher education has undergone significant transformation with the onset of globalisation and the privatisation of higher education. In an effort to provide students with a more holistic learning experience, institutions of higher learning have for some time begun emphasising on student-centred learning mechanisms. With the realisation that human capital is an important predictor of economic growth, there appears to be a shift in emphasis on the importance of developing students' core competencies and graduate capabilities. One such core competency is the ability to reflect on one's learning and experience that comes from applying the theories and concepts learned in the classrooms to address needs in the real world. Service-learning opportunities are one option colleges and universities might consider in improving the students' reflective learning capabilities, especially in the early undergraduate years. The past two decades has seen universities, administrators, and faculty paying more attention to service-learning (Banerjee & Hausafus, 2007). Incorporating service-learning into the academic curriculum of higher education have been found to have a positive impact on the community and on the service learners' reflective ability (Bringle & Hatcher, 1999; Zlotkowski, 1999; Andrews, 2007; and Parker & Altman, 2007). As service-learning is an integrative experience, lessons in and out of the classrooms are bridged, providing students with a platform to connect knowledge and varying perspectives from their service-learning experience. Connecting the curriculum to the service-learning strategies allows students to establish connections to the community and solve real-world problems in business-related fields, enhancing the students' reflective learning capabilities, as shown by the findings in this study. Understanding the community needs and infusing these needs into the service-learning curriculum allows students in higher education institutions to

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serve the community based on the community's needs. This study revealed the positive and significant impact that community needs in service-learning had on the students' reflective learning. The student development aspect of service-learning was also found to improve reflective learning. This study also revealed that the behavioral intent of the students was also a predictor of reflective learning. Thus we recommend that service-learning pedagogy be incorporated in the curriculum of higher education across disciplines in an effort to develop the much needed human capital required for economic growth.

The policy makers in the higher education ministry can utilize the research findings of this study to introduce and incorporate service-learning pedagogy into the higher education curriculum to enhance students' academic performance and their reflective abilities. We recommend that the senior management of the higher education institutions emphasize on incorporating service-learning activities into the curriculum of a range of academic programmes to provide students with a holistic education by allowing them to apply knowledge learned while realistically viewing social problems and fulfilling community needs. The service-learning pedagogy must be purposefully designed and have enough flexibility to accommodate dynamic situations and respond to capacity-building needs and opportunities for everyone involved.

5.4.3 Contribution to the Community

Successful service-learning projects have been found to establish strong community ties and develop positive partnerships that benefit both the community partners and the students, while ensuring long-term programme sustainability (Ammon *et al.*, 2002; Billig, 2002; Harwood & Radoff, 2009; Sutheimer, S., Pyles, J., 2011; and

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Varty, Lishawa & Tuchman, 2011). One of the most important outcomes of service-learning is to help the community; and the best way to help the community is to collaborate with them and form community partnerships, soliciting and accepting community input to ensure that their desired needs are met.

The findings of this study reveal the positive and significant impact service-learning had on the community at large, as shown by the positive and significant coefficients of all four service-learning components to social impact. This study contributes to the community by building awareness among community partners of the multitude of service-learning opportunities and possibilities available to uplift the communities and to fulfill the communities' desired needs. With the increased awareness, the community also gains new business knowledge from the institutions and students, especially in the field of social enterprenuership. The possible gain in entrepreneurial knowledge and the opportunity to set up sustainable businesses are some of the contributions that the community gains from this study.

5.4.4 Contribution to the Students

Service-learning activities have been tremendously beneficial for the students undertaking these projects. The extent, to which the student's academic and personal development is enhanced, is directly depended on the student's degree of involvement in the academic experience. How much time, energy and other resources that the students devote to the learning experience will predict how beneficial the academic experience is to them in terms of their academic and personal growth. This is explained clearly in the theory of student involvement by Astin (1984), who defined

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engagement as "the amount of physical and psychological energy that the student devotes to the academic experience (Astin, 1984, p. 297).

This study reveals how impactful service-learning is to the reflective learning abilities of our students. This study contributes towards human capital development as it provides evidence of the positive impact service-learning has on the academic development of the students in terms of their reflective capabilities.

Student involvement and engagement in the service-learning activities also promotes teamwork in a setting that is suitable for collaborative learning. Service-learning activities provide a platform for student integration socially and academically in the institution of higher learning, as well as in the community where the service is carried out. Students build rapport and relationships with their peers, faculty and the local community whom they serve, and this engagement and involvement enhances the students' reflective abilities in bringing meaning and relevance to the concepts and theories learnt in their courses to address the real world needs of the community they serve.

As students are provided with numerous opportunities to integrate socially and academically with their peers, faculty and the community, integration into the university life becomes a seamless process. This would certainly increase the chances of student retention, as they go through a transformative and meaningful service-learning experience. This study contributes an opportunity for students to actively participate in service-learning projects as early as in their first year, as this would help them to be a relevant part of the bigger community, placing importance on their

presence in the university and the community, with the hope of improving student retention and persistence throughout their undergraduate years.

Therefore, current and potential students will seek undergraduate courses that embed service-learning as an important component of the curriculum due to its many benefits.

5.4.5 Contribution to Service-Learning Research

The findings of this study reveal that service-learning has a significant impact on reflective learning and on social impact. As this study investigates the impact of the four components of service-learning(curriculum connections, community needs, student development and behavioral intent) on reflective learning and social impact, there are limited research investigating these variables, more so in the case of Malaysia where research of service-learning and its impact is rare. Therefore, the findings of this study contribute towards research in this field. The current research provides a chance for researchers and policy makers to better understand the inter-relationship between service-learning, reflective learning and social impact; and the mediating role of social impact on the relationship between service-learning and reflective learning.

We believe this study also contributes further to the existing literature on service-learning, as most of the research in this area was conducted in a Western context while not much research has been carried out in the emerging economies like Malaysia. This study will be able to somewhat validate the existing literature in a cross-cultural context by adding the Malaysian service-learning experience. The

present research on the impact of service-learning on reflective learning and social impact in the case of Malaysian undergraduates contributes to a cross-cultural understanding of the impact of different components of service-learning on reflective learning and social impact.

5.5 LIMITATIONS

While the present study does provide several good implications and insights, the contributions of this study, interpretation of the results obtained and the conclusions drawn accordingly should be considered in light of the limitations of the study. The main limitations of this study can be addressed through three main categorizations namely, generalizability, causality and methodology. These three categories are further discussed below.

5.5.1 Generalizability

Certain factors existed that were beyond the control of the researcher, hence giving rise to some limitations of this study pertaining to generalizability.

The results of this study and the subsequent conclusions drawn were totally based on the clean data of 256 business undergraduates from a particular institution of higher education who participated in service-learning activities provided for in their curriculum. This study's conclusions could have been different if undergraduates of various disciplines across a broader spectrum of higher education institutions were included in this survey. Therefore there exist limitations pertaining to generalizability

of utilizing these results in interpreting implications across the higher education industry.

We also believe that this study is limited as far as generalizability is concerned as this study did not consider the long-term cognitive, behavioral and emotional changes in the psychological human aspects of the undergraduates who undertook these service-learning activities as part of their curriculum, and how this could have further impacted their reflective learning abilities had they been continuously exposed to further service-learning activities throughout their undergraduate years of study. Our results was based on data at one-point of time across a cross-section of students, which therefore did not consider the time-series effect of continuous long-term exposure to service-learning and the impact this would have on their reflective learning abilities. Therefore, we believe that our results and conclusion may have been different had the design of our research been longitudinal rather than cross-sectional.

5.5.2 Causality

Our findings revealed the significant causality between the four components of service-learning had both reflective learning and social impact, but did not support the role played by social impact as a mediator between the four service-learning components and reflective learning. This may have been caused by the fact that this study only involved a cross-section of the data at one point of time and not longitudinally. It is our belief that these results could have been different or could have somewhat lack accuracy since our results were dependent on the time of their implementation. Therefore, we strongly advise employing longitudinal studies to

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more accurately examine the impact of service-learning on reflective learning as well as social impact.

5.5.3 Methodology

As far as the methodology is concerned, as with most quantitative research design using primary survey-based data, we were able to identify certain limitations that were inherent in this study that employed primary data based on a survey in the form of a questionairre.

Firstly, the questionnaire utilised in this study consists of statements on a six-point Likert scale, in which the respondents measure their degree of agreement towards statements related to service-learning, reflective learning and social impact. The service-learning concept was sub-divided into four constructs, each containing several statements measuring different aspects of service-learning. These four constructs of service-learning were curriculum connections, community needs, student development and behavioral intent. Another two constructs measured reflective learning and social impact through several six-point Likert-scale statements. As the respondents degree of agreement towards these liket-scale statements were perception-based, their responses could have been influenced by their biased perception of the situation at that point of time (Macinati, 2008). In an effort to further strengthen future studies of this nature, it is recommended that the mixed-mode research design, comprising both quantitative as well as qualitative design, be employed to complement each other and provide checks and balances to any perception-biases that may occur.

The other limitation that may occur with the use of the Likert-scale questionnaire is the possibility of having respondents that may provide arbitrary responses without actually understanding or paying careful attention to the statements in the questionnaire. It is therefore important that ample time and a comprehensive explanation of the questionnaire be provided to the respondents to further improve the quality of the data received. This limitation could also be addressed if this type of study is carried out using the mixed-mode research design, as the quantitative data can be further validated with the qualitative data of the respondents.

Finally, there was also the limitation of the lack of service-learning research being carried out in developing countries, especially with regards to Malaysia. Therefore, this limited our ability to make the much needed comparisons of findings with other sources. Very few studies have been carried out on the impact of service on reflective learning and social impact, especially in the developing countries, particularly in Malaysia. To the author's knowledge, no study has been conducted on the role of social impact in mediating the impact of the four components of service-learning on reflective learning.

5.6 DIRECTIONS FOR FUTURE RESEARCH

The four lines of inquiry represented in this study, i.e. the components of service-learning, the impact of service-learning on reflective learning, the social impact of service-learning and the inter-relationship between service-learning, reflective learning and social impact, have not yet been integrated in a single study such this study. This study addresses the gaps in the literature on the Service-learning-Reflective Learning-Social Impact inter-relationship. Are service-learning features

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such as curriculum connections, community needs, student development and behavioral intent similarly significant in its impact on reflective learning and social impact on the community?

Our findings have shown that service-learning courses are important in enhancing reflective learning and have a significant social impact, but how important is service-learning in enhancing reflective learning among first year, second year and final year students? Is the impact different? Aside from the impact service-learning has on reflective learning and social impact, how does service-learning help enhance first-year experience, and does it help to support student retention and reduce student attrition? In other words, is service-learning relevant in the long-run in reducing student attrition and supporting student retention. Very little research has been carried out on this aspect. This is an important aspect of higher education that needs to be addressed as more and more higher education institutions face budget cuts and intense competition to retain students and stop the onslaught of student attrition.

It would be good to undertake future research that will focus on the impact of service-learning on student attrition and retention and what is it about service-learning that makes it relevant at different points in the students' academic journey and in ensuring students' successful progression and graduation.

5.7 SUMMARY OF THE FINDINGS

The objective of this study was to explore the impact of service-learning on both reflective learning and social impact, with the main focus being on the impact of the

predictor constructs comprising of curriculum connections, community needs, student development and behavioral intent on the predicted contructs comprising of reflective learning and social impact.. The Partial Least Squares Structural Equation Modeling (PLS-SEM) technique was applied in this study. We conducted several rigorous procedures to establish the validity and reliability of the outer model, prior to testing the overall model of this study, inline with the standard SEM data analysis reporting procedure. Upon ensuring that the measurement model was valid and reliable, we then proceeded to test the hypothesized relationships. We also examined the predictive power of the model and confirmed the goodness of the overall model. Thereafter, we examined the structural model and reported the detailed results. As shown in Table 4.11 in Chapter 4, the hypotheses of H1, H2, H3, H4, H5, H6, H7, H8 and H9 were statistically supported by the findings of the study. However, the hypotheses on the mediation effect of social impact on the relationship between service-learning and reflective learning, that hypothesis H10, H11, H12 and H13 were not supported, as shown in Table 4.12 in Chapter 4. Social impact was found not to have a mediate the impact of the four components of service leanring on the students' reflective learning capabilities.

Our findings show that the curriculum connections, community needs and behavioral intent aspect of service-learning has a positive and significant impact on reflective learning and the social impact on the community at large. However, the impact of student development aspect of service-learning on the students' reflective learning, while significant, was not positive. As for the impact of student development on social impact, it was positive and significant. The findings also point to the positive and significant influence that social impact had on the students' reflective learning.

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As for the analysis on the mediation effect of social impact on the relationship between service-learning and reflective learning, we found it to be insignificant in all four components on service-learning. There wasn't any mediation effect of social impact on the relationship between service-learning and reflective learning.

This study contributes to theory, policy making in higher education, community, students and service-learning research.

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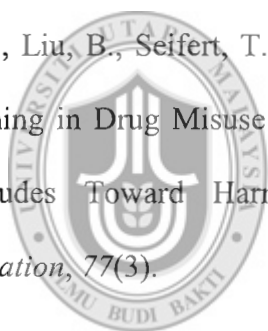
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