



SOCIAL ENTREPRENEURSHIP AT WORCESTER POLYTECHNIC INSTITUTE

An Interactive Qualifying Project Report  
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by

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## **Abstract**

Social entrepreneurship (SE) is the use of entrepreneurial principles to create sustainable social value. This study assesses the feasibility of initiating a SE program at WPI. Student surveys, a focus group, and faculty interviews demonstrated a general lack of understanding of SE. A deeper analysis, however, demonstrated that students and faculty members are interested in SE, especially in the form of sustainability and related fields. This study recommends the gradual implementation of a SE program through extracurricular and academic avenues.

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## 1. Introduction

Whether conducted by nonprofit organizations or through a for-profit venture, social entrepreneurship currently has vast potential for both positive social change as well as potential profitability for a sponsoring organization. This makes social entrepreneurship an attractive topic for an interdisciplinary project for its merits as both a business venture as well as its applications toward social change.

The aim of this project is to determine if there is a need for social entrepreneurship at WPI and, if so, the form it should take. While social entrepreneurship could be involved in many of the current disciplines or the work done at a project center, there is currently no structured category specifically focused on social entrepreneurship. The foundation for the current project is the belief that some form of structure for a social entrepreneurship program would be beneficial to the university and its students. We will therefore investigate the current state of social entrepreneurship at WPI as well as other universities in order to assess the unique value that a structured program could bring to the university. Our goal is to compare and examine the merits of different potential structures for a social entrepreneurship program, including examining interest in a more defined program as well as the feasibility of initiating such a program. Our plan includes taking necessary steps to implement an appropriate structure in order to bring value to the university's project program.



## 2. Literature Review

### 2.1. Introduction

The concept of social entrepreneurship is befitting to our times. The notion combines the compassion of a social mission with the principles of a business discipline and has struck a receptive chord (Dees, *The Meaning of Social Entrepreneurship*, 2001). While it might appear to be a relatively new concept the idea is not a new one. The term was first used in literature on social change in the 1960's and 70's. However, the movement has gained renewed momentum in today's world, which is increasingly separated by the haves and the have-nots. The time is undoubtedly ripe for new models and methods and social entrepreneurs have risen to the call.

As in any field in its infancy there exists a lot of ambiguity about what exactly counts as social entrepreneurship. This paper seeks to provide a clear definition of social entrepreneurship by exploring various existing theories, looking at the past and the progression of social entrepreneurship and examining the current state of the field. The paper also seeks to exhibit the importance of social entrepreneurship and the need for it in today's world.

### 2.2. Evolution of Entrepreneurship

We can attempt to gain a better understanding of social entrepreneurship by splitting the phrase into its two component parts – “social” and “entrepreneur” - and evaluating each individually. The study of social entrepreneurship can be built upon the strong tradition of entrepreneurship theory and research. The term “entrepreneur” originates from a thirteenth-century French verb, “entreprendre”, meaning “to undertake” or “to do something” (Cunningham & Lischeron, 1991; Sobel, 2008). The term came to be used to refer to those individuals who led, managed or undertook an important financial project or activity. The first academic use of the word was by economist Richard Cantillon in the 18<sup>th</sup> century. Cantillon described an entrepreneur as an individual who **“willingly bears the financial risk of a project that arises out of buying at certain prices and selling at uncertain prices; the uncertainty comes from acting in an unstable market in an indecisive world”** (Carton, Hofer, & Meeks, 1998; Hull, 2005; Sobel, 2008). Here the entrepreneur is the risk-bearer. In the early 1800s the term gained additional popularity from its use by economists Jean-Baptiste Say and John Stuart Mill. According to Say, **“The entrepreneur shifts resources out of an area with low productivity into an area with higher productivity and greater yield”** (Dees, *The Meaning of Social Entrepreneurship*, 2001). Say's entrepreneur creates value. Say emphasized the role of an

entrepreneur as “a forecaster, project appraiser, and risk taker. He saw that effective entrepreneurs must possess the moral qualities of judgment and perseverance, and also have a knowledge of the world. He thereby placed the role of the entrepreneur at the hub of economic theory” (Younkins, 2002). Mill referred to the term in his 1848 book, *Principles of Political Economy*, adding an element of knowledge by saying that “**entrepreneurs assume the risk and management of a business**” (Dees, *The Meaning of Social Entrepreneurship*, 2001; Hull, 2005; Sobel, 2008). In this way Mill was able to build on the Cantillon’s definition by distinguishing between entrepreneurs and other business owners such as shareholders of a firm.

The academic understanding of entrepreneurship was further advanced in the 20<sup>th</sup> century by economists Israel Kirzner and Joseph Schumpeter. Kirzner looked at entrepreneurship as a process of discovery where the “**entrepreneur encounters previously undiscovered opportunities and acts upon them**” (Burnett, 2000; Sobel, 2008). Here the necessary entrepreneurial characteristic is alertness. Schumpeter said the following of entrepreneurs and enterprises: “**The carrying out of new combinations we call enterprise; the individuals whose function it is to carry them out we call entrepreneurs**” (Carton, Hofer, & Meeks, 1998; Harfst, 2005). He believed that an entrepreneur “**reforms and revolutionizes the pattern of production.**” Schumpeter’s entrepreneur is innovative, a creative-destructive force in the economy, introducing new technological innovations, new products and new sources of supply of materials. For example the compact disc has rendered both the cassette and the vinyl record obsolete. Through this processes of creating new markets and innovating new methods, Schumpeter’s economists drove the economy forward (Dees, *The Meaning of Social Entrepreneurship*, 2001; Sobel, 2008). Schumpeter was able to identify several differences between entrepreneurship and general management. Firstly entrepreneurship involves the creation of an organization to pursue a discontinuous opportunity. Secondly, Schumpeter did not limit this pursuit to new ventures, but he permitted entrepreneurship to exist within established organizations. Finally, Schumpeter alluded to the fact that one becomes an entrepreneur when they act (Carton, Hofer, & Meeks, 1998).

These Say-Schumpeter theories form the foundation for the modern day concept of entrepreneurship. While the entrepreneurs that Say and Schumpeter have in mind serve their functions by creating new ventures or businesses, modern business and management theorist Peter Drucker focuses on the opportunity. He defines an entrepreneur as “**always searching for**

**change, responding to it and exploiting it as an opportunity.”** These entrepreneurs identify possibilities rather than problems caused by change (in technology, consumer preferences, social norms, etc). Drucker emphasizes that starting a business is neither necessary nor sufficient for entrepreneurship, nor is a profit motive (Dees, *The Meaning of Social Entrepreneurship*, 2001). Not every business that is started up is an example of entrepreneurship. Take for example a local family-owned pizza shop. It does not represent any significant innovation or change. Drucker uses the example of the great American university as an example of a major entrepreneurial innovation. Howard Stevenson, a leading entrepreneurship theorist at the Harvard Business School, identifies an element of resourcefulness that complements the opportunity seeking dexterity of entrepreneurs. He believes that **“entrepreneurs do not allow their initial resources to limit their pursuit of opportunity or execution of ideas”** (Amabile & Stevenson, 1999; Dees, *The Meaning of Social Entrepreneurship*, 2001). Carton, Hofer and Meeks provide an operational definition of entrepreneur, which encompasses key points from the above definitions: **“An entrepreneur is in pursuit of a discontinuous opportunity, involving the creation of an organization (or sub-organization) with the expectation of value creation to the participants. The entrepreneur is the individual (or team) that identifies the opportunity, gathers the necessary resources, creates and is ultimately responsible for the performance of the organization”** (Carton, Hofer, & Meeks, 1998).

### **2.3. Unveiling Social Entrepreneurship**

In the late 1980s and for most of the 1990s entrepreneurs were hailed globally as a vital force in the economy and were recognized as engines of economic growth. Both state and local governments across the United States shifted their focus from large manufacturing firms as the centerpiece of economic development policy and instead began promoting entrepreneurship (Hull, 2005; Sobel, 2008). In addition, the ideas of Say, Schumpeter, Drucker and Stevenson became attractive as they exercised an influence well beyond the business sector, helping to shape social, political, cultural and environmental arenas as well. They emphasized a mindset and a behavior that could be manifest anywhere. The ability of entrepreneurs to discover new ways of combining resources, to create value, stimulated quests for further applications of these principles. The overall result was a shift towards a market-based approach to development, to solving social problems and to distributing or redistributing scarce resources (Canadian Centre for Social Entrepreneurship, 2001).

It was a movement based on the pioneering, value-creating, resourceful outlook described above that inspired the naissance of social entrepreneurship as we know it today. In the summer of 1963, Bill Drayton bore witness to the ability of a simple idea to affect vast social change. A young man named Vinobha Bhave was walking across India on foot and convincing the local landowners and villagers to “gift” their land to him. He amassed thousands of acres of land, redistributed them more equitably to support the untouchables and other landless people, and hence terminated endless cycles of poverty. This movement had a powerful impact on Drayton and he went to India to be a part of it (Steen & VanderVeen, 2008). Drayton is credited with coining the word “social entrepreneur” to describe those individuals who combine the pragmatic and results-oriented methods of a business entrepreneur with the goals of a social reformer. He is also widely recognized for creating Ashoka: Innovators for the Public, in 1980, the world’s first organization dedicated to recognizing and supporting social entrepreneurs. (Davis, *Social Entrepreneurship: Towards an Entrepreneurial Culture for Social and Economic Development*, 2002; Sen, 2007).

### **2.3.1. Historical Examples**

Even though the phrase, “social entrepreneur” and the language behind it are relatively new, the phenomenon is certainly not. There have always been social entrepreneurs even if they were not called that, as can be seen from the following examples of the historical change-makers.

- **Vinoba Bhave: Founder and Leader of India’s Bhoodan or Land Gift Movement.**  
Interested in land reform, he travelled thousands of miles, on foot, accepting donations of land. He ultimately caused the redistribution of more than 7,000,000 acres of land to aid India’s untouchables and landless (Ashoka: Innovators for the Public).
- **Florence Nightingale: Founder of modern nursing.** She established the first school for nursing students. She fought to improve hospital conditions and establish modern nursing practices (Ashoka: Innovators for the Public).
- **Maria Montessori: Developed the Montessori approach to young children’s education.** Through her experience of working with children in 1906, she created a revolutionary method of education that was tailored to suit each child’s unique needs. This approach allows each child to recognize his/her full potential by nurturing social skills, physical and emotional growth as well as cognitive preparation (Ashoka: Innovators for the Public).

- Jane Addams: Founder of Hull-House in 1889, a social settlement to improve living conditions in a poverty ridden neighborhood in Chicago. She served as the founding president for the Women's International League for Peace and Freedom. Her work ultimately resulted in protective legislation for women and children (Startups: Inspiring New Businesses).
- Robert Owen: Founder of the cooperative movement. He applied his entrepreneurial talents to the utopian movement in the US and the labor movement in the UK. Owen instituted revolutionary corporate practices regarding child labor; women's rights; infant, primary, and adult education; employee training; workplace childcare; environmental practices; community responsibility; and care for the elderly and infirm (Temple, The History of Social Innovation and Enterprise, 2008).
- John Muir: John Muir was a naturalist, conservationist, inventor, and writer living in the late 19th century. In 1890, Muir lobbied against the devastation in the Sierra Nevada caused by ranching. This led to the creation of Yosemite, America's first national park. Muir then founded The Sierra Club and collaborated with President Roosevelt to establish the U.S. national park system. Muir was personally responsible for the establishment of Sequoia, Mount Rainier, Petrified Forest, and Grand Canyon national parks (JustAction, 2007).
- Jean Monnet: Jean Monnet was a French politician in the 1950s. He was responsible for the rehabilitation and modernization of the French economy following World War II and was also involved in the establishment of the European Coal and Steel Community (ECSC). The ECSC and The European Common Market were the results of Monnet's dream of seeing a united Europe and were precursors of the European Union, which has shaped the course of European history and global international affairs (Canadian Social Enterprise Foundation, 2006).
- John Woolman: Born into a family of Friends (Quakers), he was responsible for the emancipation of all the Quakers' slaves between 1758 and 1800. He was also involved with the British Society of Friends, a major force behind the British decision to ban slaveholding. The Quakers went on to become a major player behind the U.S. abolitionist movement as well as a key part of the infrastructure of the Underground Railroad (Davis, 2006).

- Margaret Sanger: Sanger was an American birth control activist, an advocate of negative eugenics, and the founder of the American Birth Control League (which eventually became Planned Parenthood). In the face of fierce opposition, she won support, both from the public and the courts and pioneered the idea of letting a woman choose how and when, if ever, she will bear children. She paved the way for family planning efforts across the world (Davis, 2006).
- Gifford Pinchot: Reformed the management and development of US forests and campaigned for their conservation through planning and renewal. He called it "the art of producing from the forest whatever it can yield for the service of man." He helped found the Yale School of Forestry and created the U.S. Forest Service and served as its first chief (NationMaster Encyclopedia).

## 2.4. Defining Social Entrepreneurship

### 2.4.1. Models of Social Enterprises

The formulation of a new name, for this long standing endeavor, is important in that it helps to blur sector boundaries and widen the field. The concept means different things to different people and there are continuing arguments over what precisely counts as social entrepreneurship. Some people associate social entrepreneurship with not-for-profit organizations. Others use the term to describe businesses and for-profit ventures that incorporate social responsibility into their setup. Still others think of hybrid organizations that combine both not-for-profit and for-profit elements into their functioning. This means that the canopy of social entrepreneurship encompasses a wide variety of organizations, from those that rely on income earned primarily from paying consumers to those that perform contracted work for public authorities or receive grants and donations (Martin & Osberg, 2007). The early research on social entrepreneurship was built around the following three main categories of business models (Elkington & Hartigan, 2008).

#### **Non-Profit Model**

- Delivers a public good or service to the most economically frail – those who are not willing or able to pay
- Profit making is not considered.

- There are multiple external funding partners
- Examples: KidsHopeUSA, Compassionate Heart Ministries

### **For-Profit Model**

- Incorporate a social mission into their activities.
- Built around making profits using a socially responsible outlook.
- May not itself produce social benefits but supports some other activity that does
- Examples: Microsoft, Google

### **Hybrid Model**

- Recovers costs by selling goods and services to those that can afford it and by identifying new markets. Discovers methods to deliver the public good or service to the most economically frail.
- Profit making is not out of the question
- Pursue both financial and social returns on investments with an emphasis on social benefits.
- There may be multiple external funding partners.
- Examples: Grameen Bank, Big Issue Magazine

As a field of inquiry, social entrepreneurship is still in its infancy. “We do not yet have the deep, rich explanatory or prescriptive theories that characterize a more mature academic field” (Anderson & Dees, 2006). As the field has gained media attention and financial support, a trend has developed towards describing one's work as a “social entrepreneurship” project. For some, this is an attempt to capitalize on the fundraising power of the term (Whittemore, 2008). Others such as Roger Martin and Sally Osberg have started to worry that a blurrier, more inclusive definition of social entrepreneurship threatens to undermine the uniqueness of the field – a quality that has been a driving force in making so many people interested in the first place (Martin & Osberg, 2007). In addition the handful of expository sources that do exist are often contradictory. The field is ripe for consolidation.

So what exactly is a social entrepreneur and what does it take to be a social entrepreneur? First let us look at various definitions used by authorities on the subject and other sources.

### 2.4.2. Existing Definitions

Author/Organization	Definition
	<b>SOCIAL ENTREPRENEUR</b>
(Alvy, Lees, & Thompson, 2000)	Social entrepreneurs are people who recognize where there is an opportunity to satisfy some unmet need that the state welfare system cannot or will not meet, and who gather together the necessary resources (generally people, often volunteers, money, and premises) and use these to “make a difference”
(Bornstein, 2004)	A path breaker with a powerful new idea, who combines visionary and real-world problem solving creativity, who has a strong ethical fiber, and who is 'totally possessed' by his or her vision for change
( Institute for Social Entrepreneurs)	A social entrepreneur is an individual who uses earned-income strategies to pursue social-objectives, simultaneously seeking both a financial and social return on investment
(LaBarre & Fishman, 2001)	Social entrepreneurs are dedicated innovators who are determined to tackle some of society’s deepest challenges by embracing new ideas from business.
(Skoll Foundation)	A social entrepreneur is society’s change agent: a pioneer of innovation that benefits humanity.
	<b>SOCIAL ENTREPRENEURSHIP</b>
(Austin, Leonard, Stevenson, & Weil-Skillern, 2007)	Social entrepreneurship is an innovative, social-value-creating activity that can occur within or across the nonprofit, business, or government sector.
(Fowler, 2000)	Social entrepreneurship is the creation of viable socio-economic structures, relations, institutions, organizations, and practices that yield and sustain social benefits.



(Hibbert, Hogg, & Quinn, 2002)	Social entrepreneurship is the use of entrepreneurial behavior for social ends rather than for profit objectives, or alternatively, that the profits generated are used for the benefit of a specific disadvantaged group.
(Martin & Osberg, 2007)	The following three components are determinants of social entrepreneurship: “1) recognizing an inherently unjust equilibrium that causes the exclusion, marginalization, or suffering of a segment of humanity that lacks the resources to achieve any revolutionary benefit on its own; (2) discovering an opportunity in this unjust equilibrium, developing a social value proposition, and bringing to bear inspiration, creativity, direct action, and fortitude, thereby challenging the stable state’s supremacy; and (3) forging a new, stable equilibrium that releases trapped potential or alleviates the suffering of the targeted group, and through the creation of a stable ecosystem around the new equilibrium ensuring a better future for the targeted group and even society at large.”
(Canadian Social Enterprise Foundation, 2006)	Social Entrepreneurship is about applying practical, innovative and sustainable approaches to benefit society in general, with an emphasis on those who are marginalized and poor. It a unique approach to economic and social problems, an approach that cuts across sectors and disciplines.

These definitions highlight various aspects of a social entrepreneur and social entrepreneurship. The Alvy, Lees and Thompson (2000) definition emphasizes the opportunity recognition aspect and the use of people, money and other resources to ‘make a difference’. However it does not specify what exactly this difference might be or how it can be made. Bornstein’s (2004) definition looks at the characteristics of social entrepreneurship rather than

actually defining a social entrepreneur. Austin, Leonard, Stevenson, and Weil-Skillern (2007) imply that social entrepreneurship spans across all sectors - the nonprofit, business, or government sectors. Most definitions call attention to the ability of social entrepreneurs to bring about social change and create social value through innovation. While some stress that social entrepreneurship must be focused on creating social value rather than making monetary profit, others believe that social value must be created in conjunction with profits that can be used to sustain the venture. All these varying definitions exacerbate the lack of a concise, unified vision of social entrepreneurship and can be said to have give rise to antagonistic schools with disparate views on social entrepreneurship. In “Framing a Theory of Social Entrepreneurship: Building on Two Schools of Practice and Thought,” J. Gregory Dees and Beth Battle Anderson claim that the best way of framing this new field lies at the intersection of the two dominant schools of practice and thought: the Social Enterprise School and the Social Innovation School. The views of the Ashoka fellows fit can be categorized into yet another school. The defining features of each school are summarized below (Anderson & Dees, 2006; IfYouOnlyReadOneThingThisWeek, 2007).

## **Schools of Practice and Thought**

### **Social Enterprise School** (Boschee & McClurg, 2003)

Definition: A social entrepreneur is any person, in any sector, who uses earned income strategies to pursue a social objective, and a social entrepreneur differs from a traditional entrepreneur in two important ways:

- Traditional entrepreneurs frequently incorporate a socially responsible outlook into their activities: They donate money to nonprofits; they use environmentally safe materials and practices, etc. Social entrepreneurs are different because their earned income strategies are tied directly to their mission: They either employ people who are developmentally disabled, physically challenged, poverty stricken or otherwise disadvantaged; or they sell mission-driven products and services that have a direct impact on a specific social problem.
- Secondly, traditional entrepreneurs are ultimately measured by financial results: The success or failure of their companies is determined by their ability to generate profits for their owners. Alternatively, social entrepreneurs are driven by a double bottom line, a

virtual blend of financial and social returns. Profitability is still a goal, but it is not the only goal, and profits are re-invested in the mission rather than being distributed to shareholders.

Distinguishing characteristics (Anderson & Dees, 2006):

- Identifies entrepreneurs as individuals who start their own businesses
- Focuses on the generation of “earned-income” to serve a social mission
- “Sector-bending” - blurring the lines between the business and social sectors
- Experimentation with market-based solutions to social problems that seek to align economic and social value creation
- Differentiates between innovation and entrepreneurship on the basis of earned-income.

Major proponents: Jerr Boschee and Jim McClurg

**Enterprising Social Innovation School** (Anderson & Dees, 2006)

Definition: Social Entrepreneurs carry “out innovations that blend methods from the worlds of business and philanthropy to create social value that is sustainable and has the potential for large-scale impact. They play this role of the “change agent in the social sector”, by:

- Adopting a mission to create or enhance social value (not just provide value).  
Furthermore, the intention must be to add value that will be sustainable or amplifiable over time.
- Recognizing and relentlessly pursuing new opportunities to serve that mission.
- Engaging in a process of continuous innovation, adaptation, and learning. Innovations (what Schumpeter would call “new combinations”) include the creation of a new good or service as well as producing or delivering an existing good or service in a new way or to a new market.
- In order to be considered ‘enterprising,’ the innovation must involve some business-inspired elements whether through the adaptation of business methods to create social value, the operation of a social purpose business, or the formation of cross-sector partnerships.
- Acting boldly without being limited by resources currently in hand, and
- Exhibiting greater accountability to the constituencies served and for the outcomes produced

Distinguishing characteristics:

- Descends from the traditions of Jean Baptiste Say, Joseph Schumpeter, Peter Drucker, and Howard Stevenson.
- Identifies entrepreneurs as innovators who carry out “new combinations” that “reform or revolutionize the pattern of production” (Schumpeter)
- Focuses on establishing new and better ways to address social problems or meet social needs. Recognizes the intimate connection between social and economic realities and the role of markets in the social sector.
- Not defined around organizational structure, i.e., nonprofit or for-profit. Challenges the artificial barriers between business and the nonprofit sector.
- Often incorporates themes of effecting large scale, lasting, and systemic change

Major proponents: J. Gregory Dees and Beth Battle Anderson

**Seeds of Change School** (Ashoka: Innovators for the Public)

Definition: “Motivated by altruism and a profound desire to promote the growth of equitable civil societies, social entrepreneurs change the performance capacity of society and pioneer innovative, effective, and sustainable approaches to meet the needs of the marginalized, the disadvantaged, and the disenfranchised.”

Distinguishing characteristics:

- Identifies social entrepreneurs as individuals with innovative solutions to society’s most pressing problems.
- Social entrepreneurs are possessed by their ideas and commit their lives to implementing them on a large scale thereby affect lasting change.
- They play an analogous role to business entrepreneurs in education, health-care, environmental protection, disability, and many other fields.
- In altering the patterns of societies, social entrepreneurs bring about revolutionary change. Therefore, they represent the source of creative destruction necessary for major social advances.
- Accompanying this disruption of old patterns or action and perception, they catalyze local change makers into being.

Major proponents: David Bornstein and Bill Drayton

### 2.4.3. Our Definition

In spite of the varying definitions of social entrepreneurship, one commonality emerges in almost every description: the ‘problem-solving nature’ of social entrepreneurship, and the corresponding emphasis on developing and implementing innovative initiatives that reform the current system and produce measurable results in the form of changed social outcomes and/or impacts. In order to consolidate our research and understanding of the subject, we picked out those definitions and characteristics from these various schools that are most closely aligned with our perceptions of social entrepreneurship and have come up with a working definition for “social entrepreneurship.” We believe this to be a suitable explication of the concept for the purposes of this project.

**Social entrepreneurship is the use of entrepreneurial principles to solve a social problem and create sustainable social value. It is exercised when a person or group of persons or an organization, across any sector, aims to create sustainable social value and pursues that goal through (1) recognizing and exploiting opportunities to create this value, (2) employing innovation and revolutionizing existing systems, (3) understanding the positive effects of economic forces on development, (4) involving some business-inspired elements whether through the adaptation of business methods to create or enhance social value, or the creation and operation of a social purpose business that may generate profits to benefit the entrepreneur, the business, and the social cause, and (5) brushing aside limitations in available resources.**

### 2.5. Social Entrepreneurship vs. Commercial Entrepreneurship

As we have seen the theories of traditional economic entrepreneurship can be employed in the social sector as well. Social entrepreneurs can be seen as one species of the genus entrepreneur – entrepreneurs with a social mission. We have seen that business entrepreneurs harness opportunities and growth to fuel economic advancement. A business entrepreneur might typically measure performance in terms of pecuniary profit and return (Ashoka: Innovators for the Public). Here wealth creation is a measure of value creation because business entrepreneurs are subject to market regulation. If a business cannot create value or profit, it is driven out of business. Social entrepreneurs are similar, in that they use innovation, creativity and courage to start ventures and create value. However, they measure their performance in terms of transformational change that benefits society. Social entrepreneurs pursue the double bottom line

– a financial and social return on their investment. Other differences stem from varying abilities to mobilize resources. The economics of a social entrepreneurial venture may make it difficult to compensate staff as competitively as in commercial markets. In fact, many employees in social entrepreneurial organizations place considerable value on non-pecuniary compensation from their work (Austin, Stevenson, & Weil-Skillern, *Entrepreneurship: Theory and Practice*, 2006). Therefore, it can be said that the main differences between the two kinds of entrepreneurship lies in the value proposition, in the focus and mission of the business, in resource mobilization and in how the performance of the business is measured.

## **2.6. Characteristics and Motivations of Social Entrepreneurs**

Some of the important characteristics and traits of social entrepreneurs have been identified as alertness to opportunity, ambition, innovation, resourcefulness, mission-driven, and results-oriented (Skoll Foundation; Ashoka: Innovators for the Public; Canadian Social Enterprise Foundation, 2006). Social entrepreneurs share an unwavering belief in the inborn capability of all people to contribute meaningfully to social development. They do not sit back and wait for change to happen; instead they are the drivers of change.

Identifying and solving large-scale social problems necessitates commitment, vision, and determination in the face of daunting odds. So why get involved in this intimidating venture? Sometimes business entrepreneurs are motivated to ‘give back to society’ once they have become successful and have made a lot of money. Other individuals would like to utilize their business backgrounds to have a significant impact on society (Elkington & Hartigan, 2008). They are fascinated by the challenges presented by the double bottom line – developing a business that is profitable and also benefits the community. Other individuals like the numerous ‘recovering social workers’ who are disillusioned with the current social support system, are looking for new methods to put their talents to work (Skoll Foundation).

## **2.7. Social Entrepreneurship Today**

Along with many others, the historical figures mentioned earlier established the foundations for social entrepreneurship. Though they created revolutionary and significant benefit to the societies they were a part of, the undertaking was not widespread or given much support and importance. Nevertheless, the past two decades have seen an explosion of entrepreneurship in the social sector. Today social entrepreneurship is attracting growing

amounts of money, interest and attention. Rather than focusing on individuals as the change-drivers, the structure of social entrepreneurship now involves various groups and corporations as well. Non-profits and non-governmental organizations, corporate foundations, governments and individuals promote, fund, and advise social entrepreneurs around the planet. A growing number of colleges and universities are establishing programs focused on educating and training social entrepreneurs. Some of the new methods are geared towards creating sweeping, long-term change instead of immediate, small-scale effects.

Michael Young, labeled by Professor Daniel Bell at Harvard University as ‘the world’s most successful entrepreneur of social enterprise’, created more than 60 organization worldwide, including a series of Schools for Social Entrepreneurs’ in the UK. Another well known contemporary social entrepreneur is Muhammad Yunus, founder and manager of the Grameen Bank, and the father of microcredit. He began offering microloans to impoverished people in Bangladesh in 1976, thereby empowering them to become economically self-sufficient and proving the microcredit model that has now been replicated around the world. His idea has helped millions around the globe dramatically improve their lives and the economic health of their communities (Canadian Social Enterprise Foundation, 2006). Another widely recognized social entrepreneur is the late Anita Roddick, founder of the Body Shop. The Body Shop defined itself by its promotion of recycling and the sourcing of ingredients from indigenous people in developing countries. Anita Roddick had an unwavering commitment and passion for operating her business in an outwardly ethical and socially conscious manner (Startups, 2007). Today the Body Shop works directly with over 30 Community Trade suppliers to build businesses in more than 20 countries, helping 25,000 people to earn a sustainable income (The Body Shop, 2009).

The International Business Leaders Forum, an NGO that promotes responsible business practices, has shown how multinational companies can support social entrepreneurship – through their businesses or engaging in public policy debate. In the UK in 2002 seven leading non-profit organizations established UnLtd - The Foundation for Social Entrepreneurs. It holds a £100 million endowment especially to invest in social entrepreneurs in the UK. UnLtd provides individuals with coaching, training and networking opportunities to help develop community projects. UnLtd Ventures is the in-house consultancy division of UnLtd and focuses on a number of outstanding social entrepreneurs, providing them with business support. Another of their operations, UnLtd Research, is fast becoming the world's primary source of evidence and

thinking around Social Entrepreneurship. Its central purpose is to lead the global business, public policy and academic debates about the role of Social Entrepreneurship in community development, employment and growth strategies (UnLtd, 2004).

The examples are simply overwhelming and have drawn numerous investors to support the cause. The potential benefits of social entrepreneurship are evident by the numerous supporters and promoters of these activities. Organizations such as Ashoka: Innovators for the Public, the Skoll Foundation, the Omidyar Network, the Schwab Foundation for Social Entrepreneurship, the Canadian Social Entrepreneurship Foundation, New Profit Inc. and Echoing Green among others, focus on highlighting these hidden change-makers who are scattered across the globe.

This support becomes increasingly important in light of the changing social environment. Conventionally non-profits were major contributors to social change and development. Unfortunately, while more nonprofits are competing for government and philanthropic funds traditional forms of funding for these organizations are becoming smaller and less reliable. For example, in the United States, federal and state funding for non-profits decreased by 23 percent in the 1980s, and continued to decline in the 1990s (McLeod, 1997). In addition, community needs are growing in size and diversity. Governments at different levels have found themselves grappling with wide demands on public funds. In light of these changes major governmental and altruistic efforts have fallen short of meeting social needs. The increasing concentration of wealth in the private sector has shifted the focus to corporate responsibility. New for-profit businesses are competing with nonprofits to serve community needs. Funders and donors are demanding more accountability (McNamara, 2006).

This increased competition for resources has forced these organizations to be innovative in their use of resources, to demonstrate organizational effectiveness, and to unite under a common cause. With its pioneering solutions to social problems, social entrepreneurship has provided an avenue for the afore-mentioned sectors to come together and combine their resources.

## **2.8. Conclusion**

As we have seen social entrepreneurs act as agents of change for society, humanizing existing systems, discovering new approaches and creating sustainable solutions that are tremendously valuable to society. Social entrepreneurs are the emerging catalysts and innovators



of social progress. This revolution is fundamentally changing the way we manage ourselves and approach our society's problems. Social entrepreneurship signals the imperative requisite for social change and it is that potential payoff, along with its lasting, transformational benefit to society, that sets the field and its practitioners apart.

### **3. Methodology**

The objective of this project was to identify and evaluate ways in which some type of structure for social entrepreneurship, formally or informally, could be created at WPI. The university currently has entrepreneurship programs, including courses, a minor, clubs, workshops and competitions, but there is no formal recognition of social entrepreneurship. In order to determine a potential place for social entrepreneurship in the WPI curriculum or community in general, the following goals were set:

- Research the field of social entrepreneurship in order to establish a working definition of the term and determine the current state of the field outside of a university setting.
- Contact other major universities in order to gather information about existing academic programs and create a database of relevant information.
- Identify the possibilities for a social entrepreneurship structure at WPI and determine the steps that would be necessary in order to implement these.
- Gauge faculty and student interest in the subject and its possible applications in the community by conducting interviews, focus groups and surveys, and making appropriate analysis where necessary.
- Evaluate the possible applications of social entrepreneurship at WPI and make a proposal based on this analysis.

#### **3.1. Background Research**

Many definitions of social entrepreneurship currently exist, spanning a wide range of definitions falling between pure for-profit entrepreneurship and helping a social cause without the application of business principles. Our team created a definition of social entrepreneurship to use throughout the project by finding many definitions from various sources, and looking for commonality between them. Once a working definition of what social entrepreneurship is for this project was established, research was done into the progression of social entrepreneurship. This was in order to gain insight into where the field began, where it is now, and what is being done outside of academic settings and why it is important. This information is found in our literature review.

### **3.2. Past Five Year IQPs and MQPs**

In addition to a review of definitions, a review of IQPs and MQPs from the past five years was conducted in order to find projects that have already involved social entrepreneurship. This allowed the team to see how social entrepreneurship has been implemented on campus through the projects program, without a formal structure in place. A list of these projects along with the descriptions of each can be found in Appendix A of this report.

### **3.3. University Database**

When examining potential programs at WPI, it is important to see what is already being done in the academic field by looking at the ways social entrepreneurship has been implemented at other universities across the country. Schools with social entrepreneurship programs were chosen based on various sources, including Ashoka rankings, AACSB information, national university program rankings and articles on the subject. There were 32 universities that were selected to be contacted about their respective programs. The goal of contacting these schools was to create an easy to view and comprehensive database for each school listing key information about their social entrepreneurship program. In order to determine the information that needed to be collected from the pre-selected universities, it first had to be concluded what data would be useful in creating a program at WPI. We first brainstormed what we thought would be valuable and enticing to students in a SE program. Another factor was the structure of a program – what is offered, what works and does not work, and what is common. Important data used for comparisons and benchmarking included faculty and student involvement, along with the university's unique definition of SE. Questions were also created to gauge how campus activities and the organizational structure (center or department) of the program affected involvement. A list of these questions can be found in Appendix B of this report.

After creating a list of relevant and important information needed from each school, research was initially done on each university's website to gather all available information. A set of questions for each specific university was then created based on the information still missing from the database for the respective school. Contact information was found through university websites. These schools were contacted initially through email, and follow-ups were made to those that did not initially respond. While an interview with a program representative over the phone was preferred, respondents were also provided with an email version of the survey if they preferred to respond in that manner. Some departments responded that they were unable to meet

the group's request due to budget constraints or other obligations, so not all cells in the database were able to be filled. The database can be found in Appendix C of this report.

### **3.4. Potential Structures**

In terms of social entrepreneurship at WPI, consulting with our advisor, our team began with a list of all possibilities for how social entrepreneurship could be integrated into WPI's curriculum. Finding a place for social entrepreneurship in the IQP program became a central part of our project early on, due to the interdisciplinary nature of the IQP. The focus of the program is for students to investigate how science and technology relate to, and can address, a societal problem or need, which matches very closely with the goals of social entrepreneurship. Our team began by interviewing Professor Richard Vaz, dean of the Interdisciplinary and Global Studies division, which oversees all IQPs conducted off-campus at project centers. Professor Vaz was interviewed about how project centers are run, how projects are found, and what steps would need to be taken to get social entrepreneurship IQPs started.

### **3.5. Student Interest**

Two methods were used to gauge student knowledge of and interest in entrepreneurship, social entrepreneurship, and the various forms it could take in the WPI curriculum. This inquiry into student awareness and interest in social entrepreneurship was important as any structure implemented by the administration or faculty would need sufficient support and participation from the student body in order to be successful. The first method was to conduct a survey of the undergraduate student body. Initially, research was done into appropriate methods and into creating appropriate survey questions. In all a total of 21 questions were asked on the final survey and they can be found in Appendix D of this report.

The first questions were asked in order to determine students' familiarity and interest in both entrepreneurship and social entrepreneurship on a scale. This would allow us to compare both students' familiarity versus their interest in the topics, as well as the differences in student opinion between each topic. We asked the question about these two topics because we believe there is a clear interest among the WPI student body in helping social causes; however, their perceptions of entrepreneurship and social entrepreneurship are much less clear. Our next two sets of questions were posed in order to identify students' experiences with the IQP and MQP programs, and whether their experience had involved social entrepreneurship in any way. The

next series of questions was posed to determine current participation and student interest in the other formal structures, classes and activities that we identified earlier. The final questions of the survey were to gather demographic information about the student respondents.

The team chose to conduct the survey using WPI's subscription to the online service Survey Monkey, as there were multiple advantages to using this service. Conducting an online survey permitted the team to reach a significant portion of the undergraduate student body, more so than a physical survey would have allowed us to do. Survey Monkey allows logic coding to be used in the survey, so that a certain response made to a specific question will cause a later question to be shown or skipped based on the previous response. It also has automatic collection of data, which can then be converted into multiple formats for analysis. The service also helps in analysis of the questionnaire, as it can automatically crosstab responses and show descriptive analysis, saving a significant amount of time and effort on the groups end. The response to the survey was reasonable, receiving responses from 565 people from a population of 3,009 undergraduates. The results of our survey are explained in our analysis, and the survey data itself can be found in Appendix E.

Focus groups are also often conducted to help develop appropriate questions for a questionnaire (*Alreck and Settle, 1995*), but the team decided to conduct it after the survey for the purpose of deeper understanding of responses as we felt this would be more beneficial to our analysis of student interest. The full results of the focus group are discussed in our analysis. Students in the focus group responded to an email request for participants sent out to the undergraduate body. Six students participated in the focus group session held on Wednesday, February, 25<sup>th</sup> 2009 at 12pm. Each class year was represented in the group, which was comprised of a freshman, two sophomores, two juniors, and a senior. More men (4 out of the 6) attended than women. The participants represented all class years as well as each representing a unique major within the group.

Our team researched proper focus group methods, moderating and questions, and then created a structure for the focus group questions to follow, though a benefit of focus group methods is that it allows the moderator to ask additional questions or probe further into certain topics based on participant responses. The focus group was moderated by one team member, while the other two wrote individual transcripts of students' responses in order to create a comprehensive transcript. Notes were taken in a word document, and nothing was taped or

recorded. The full list of questions can be found in Appendix F, the basic initial structure of the questions was:

- *Introductions: who we are, our IQP, and purpose of the focus group.*
- What do you know about entrepreneurship?
- What do you know about Social Entrepreneurship?  
*Give our project's definition of SE*
- Have you completed an IQP? On/Off Campus? What was it about?
  - Did you look for/choose a specific project or type of project, or did one come to you? What did you mainly look for in your IQP?
  - Did you see opportunity for entrepreneurship/social entrepreneurship when choosing an IQP?
  - If you had the opportunity for these types of projects, would you interested? Why?
- If you haven't been involved in anything regarding SE, what are your reasons for not being involved?
- If you knew more about the topic, would you be more inclined to be involved in the field in some way?
- Would more structure/exposure at WPI possibly get you more involved?
- What kind of events would most interest you? Why? (Give examples.)
- Ideally, what would you like to see happen at WPI regarding Ent. /SE? Why?

The actual questions discussed in the focus varied from this initial structure in order to expand on key points. This question structure was made to closely follow the questions posed on the undergraduate survey in order to gain deeper insight into those responses. This includes the questions about familiarity and interest in the topics presented, students IQPs, and how students have been or would like to be involved in the future. The full transcript of the focus group can be found in Appendix G.

### **3.6. Faculty Interest**

While social entrepreneurship programs may work at other universities, and may sound good in theory, any structure that is implemented would need sufficient support from the school faculty in addition to the demand of the students. In order to determine faculty knowledge, interest and support in social entrepreneurship, interviews were conducted with a number of key faculty members. These interviews focused on program directors of off-campus IQP sites, general IQP advisors, as well as various management staff.

The faculty and staff interviewed were:

<b>Faculty/Staff Name</b>	<b>Department</b>	<b>Project Advising</b>
Diran Apelian	Mechanical	
Holly Ault	Mechanical	Australia Project Center Director
Chrysanthe Demetry	Mechanical	Thailand Center Director
Arthur Gerstenfeld	Management	Wall Street Center Director
Hossein Hakim	ECE	IQP Advisor
J. Scott Jiusto	IGSD	South Africa Center Director
Robert Krueger	IGSD	Worcester Center Director
Fred Looft	ECE	IQP Advisor
Jerome Schaufeld	Entrepreneurship	
Susan Vernon-Gerstenfeld	IGSD	Costa Rica/ Puerto Rico Center Director

The purpose of the professor interviews was to inquire into a few major areas. The first was to learn about work already being done with social causes, sustainability and social entrepreneurship. The next was to learn faculty’s personal experiences with IQP structure, if they think it could be modified, and what they believe would be the best way to approach making changes. The final general topic of the questions inquired into their personal opinions on SE, their perception of student interest, and what they believe would be the best place for SE in the school community, the projects program, and the curriculum. The full list questions posed to each faculty member can be found in Appendix H of this report. The full transcripts of the professor interviews can be found in Appendices I – S.

## **4. Results**

The results presented here demonstrate the findings of our research to understand the current status of social entrepreneurship at WPI, and the feasibility of the implementation of a formal structure for social entrepreneurship. General topics present in our results include student and faculty views on, and interest in, social entrepreneurship, as well as the various formal and informal structures that could be applied to the WPI curriculum and their respective feasibilities. Information was gathered from five major sources: previous IQPs involving social entrepreneurship, programs at other universities, a survey of the undergraduate student body, a student focus group, and various interviews with faculty and staff. Our findings have been categorized into sections by source.

### **4.1. Previous IQPs involving Social Entrepreneurship**

After researching the database of IQPs that are accessible online, eight projects were found out of approximately 583 searched, that incorporate social entrepreneurship in some way or another. The projects were chosen because they either attempted to, or did, provide a solution to a social problem afflicting a group of people and thereby, provided social value. Because the projects were IQPs and not MQPs, the majority of these projects researched and set the foundation for social entrepreneurship to occur. However, one or two showed the full implementation of social entrepreneurship. Of the eight projects found, only two occurred in the United States. This is most likely due to the higher social need in less developed countries and in the locations of our U.S. project centers.

### **4.2. University Database**

We surveyed 32 universities to gather data about their social entrepreneurship programs. These data were used to draw conclusions about what works best in a program and what is most popular amongst the students. Following are the results of the survey.

Of the 32 institutions from which we collected data from, only the University of the Pacific, Stanford University, and Seattle University offer a social entrepreneurship major and all are restricted to graduate students. Universities offering a minor or concentration in social entrepreneurship were more common. Four universities have a minor available (Samford University, Seattle University, University of North Carolina at Chapel Hill, and Wake Forest University) and four also have a concentration (Duke University, Samford University, University



of North Carolina at Chapel Hill, University of Oregon). These make up a total of six universities because the University of North Carolina at Chapel Hill and Samford University offer both a minor and a concentration. UNC's concentration is really in entrepreneurship, but it contains social entrepreneurship elements. At Samford University the minor is available only to students enrolled outside of the business school while the concentration is available to any student in the business school. Seattle University offers a major for graduate students and the minor for undergraduates.

Through a phone interview with Philip Powell from Indiana University (IU) we learned that IU created the certificate in response to increased interest in the not for profit sector by the graduate students in the Public Policy school. The university said the Public Policy school needed to partner with the business school in order to bring management knowledge to the courses offered for the certificate. The certificate is offered by both the Public Policy and business schools. Previous to the certificate being offered, there had been no MBA interest but it has been growing in the last two years. At IU the challenge is the split between the policy students and the MBA students. There is difficulty getting MBAs involved because of their preconceived notions of no compensation.

The database shows that the most common non-credit earning activities on campuses are competitions, typically for business plans. There are 19 universities that participate in these competitions. The majority of the competitions include both entrepreneurship and social entrepreneurship business plans, however, it is not uncommon for social ventures to win.

Out of the universities selected, 17 have projects as a component of their program. These projects are all very similar in foundation. The topics are selected by the students and the goal is to create a social venture idea that leads to either a business plan or in some cases a functional business or organization. The structure of the universities' project component is very similar to the IQP structure, but on a smaller scale. There is a team of students that attempt to solve a problem (most commonly of their own choosing) using their educational backgrounds and are guided throughout the process by a faculty advisor, and in some instances a company sponsor.

From 32 selected universities, only nine were found to have a specified definition available either on their campus or on their website (Babson College, Duke University, Harvard University, Indiana University, Miami University, New York University, Pace University, University of Arizona, and University of the Pacific). These nine schools have the most robust

programs offering the most diverse options to their students. Eight of these nine definitions specify that social entrepreneurship can include a hybrid organization model. Indiana University is the only one that defines it as being strictly non-profit.

The student involvement numbers recorded (many numbers were not obtained due to lack of response and availability of data) are low yet consistent among the programs with the exception of Duke University and Miami University. These two universities have a substantially higher number of students in their social entrepreneurship programs. Miami has approximately 100 students while Duke has approximately 300. The remaining universities average 25 students in their programs.

The infancy of the social entrepreneurship field is quite evident from the data we gathered recording the years the various programs have been in existence. Data were available for nine of the 32 universities. Of those nine, eight of the programs were initiated in the last decade. The longest running program is that of Ball State University, which began in 1983.

The most common component of the programs studied is courses. A few of the universities offering courses actually have no formal program and one or two courses complete their social entrepreneurship curriculum.

Five universities offer students the option to obtain a certificate in social entrepreneurship (Indiana University, Pace University, Stanford University, University of North Carolina at Chapel Hill, and University of the Pacific). These certificates are only offered to students enrolled in the graduate program, with the exception of the University of the Pacific (their certificate is in the process of being created and it is not shown on their website whether it is offered to only graduate students). Philip Powell stated that Indiana University would not offer anything more involved than a certificate because of limited interest. From the phone interviews, it was gathered that many MBA students complete a certificate to supplement their degree because of an interest in working for a non-profit.

Colorado State University offers a five day workshop (Learn how to move your idea from the lab to the marketplace with the Green Technology Entrepreneurship Academy) teaching students how to move their social entrepreneurship ideas to market.

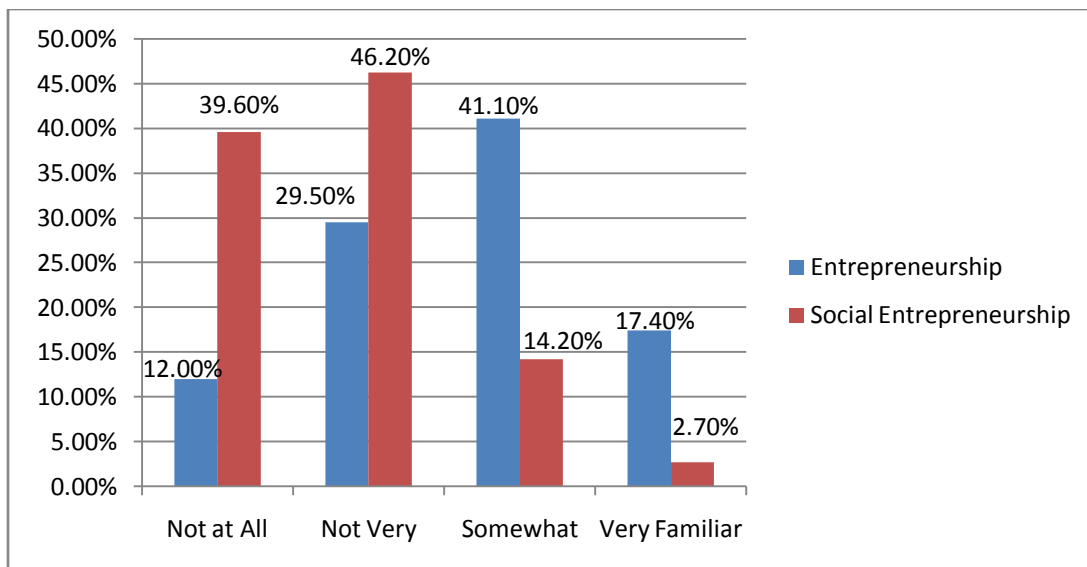
These results gave us an expansive idea of what is offered at other universities. All of these data aided us in creating recommendations that would be feasible and attractive for a social entrepreneurship program at WPI.

### 4.3. Undergraduate Student Survey

As any program implemented at the university would require interest and participation by members of the student body, a survey of WPI undergraduates was conducted electronically. The WPI undergraduate body has 3009 students, of which 565 responded, for a response rate of 18.8 percent. Students were contacted through the WPI undergraduate email list, and were provided a link to the electronic survey. Respondents to the survey included 128 seniors (23.6 percent), 124 juniors (22.8 percent), 135 sophomores (24.9 percent), 156 freshman (28.7 percent), while 26 did not provide a class year.

Before answering any questions, students were first given an overview of the IQP project, and provided with concise definitions of both entrepreneurship and social entrepreneurship. Respondents were first asked two questions to determine their attitudes toward both entrepreneurship and social entrepreneurship. The first question set asked, “How familiar are you with the concept of...” “...entrepreneurship” and “social entrepreneurship.” A disparity can be seen between the students’ familiarities with the two general concepts. A majority of respondents were either “somewhat” or “very” familiar with entrepreneurship (58.5 percent total), while a majority of students were either “not at all” or “not very” familiar with social entrepreneurship (85.8 percent). These results can be seen in Figure 1.1.

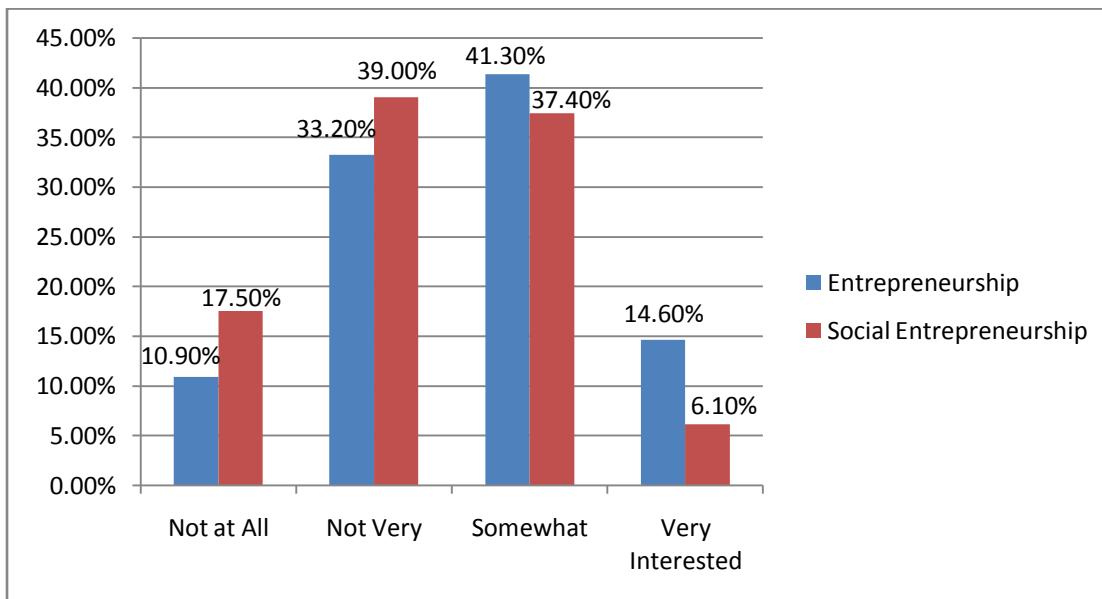
Figure 1.1. Familiarity with...



The second survey question set asked respondents “How interested are you in the field of...” “...entrepreneurship” and “social entrepreneurship.” This question set shows a similar,

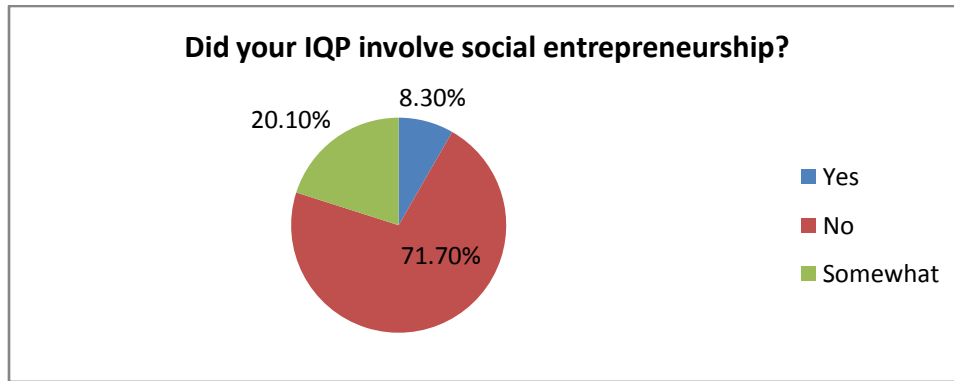
though lesser, inequality between the two concepts as the first set. For entrepreneurship, 55.9 percent of respondents total were either somewhat or very interested in the field. For social entrepreneurship, only 43.5 percent of students responded as being somewhat or very interested. These results are presented in Figure 1.2. While the student body previously responded as being unfamiliar with social entrepreneurship, it appears there is still interest in the topic even if students have not been exposed to it in depth. The significance of this result is in question due to the identified lack of students' real knowledge of the term, but may identify students being interested in the idea of the application of entrepreneurship to social issues.

Figure 1.2. Interest in...



The next series of questions pertained to students' IQP projects, the tabbed results of which are listed below. There were 255 responding students who have completed or are now working on an IQP, 41.3 percent of which were on campus projects, and 58.7 percent of which were off campus projects. This shows that there may be equal opportunity in implementing social entrepreneurship either on or off campus, due to a similar number of projects being completed among the two types. The third question asked if respondents' projects involved social entrepreneurship, to which 8.3 percent answered "yes" and 20.1 percent answered "somewhat."

Figure 1.3. IQP Involvement with Social Entrepreneurship



The next question in the set asked “Is the social entrepreneurship component what drew you to the project?” Of the 70 respondents who had IQP projects involving social entrepreneurship, only 8.6 percent identified that social entrepreneurship is what drew them to the project, while 22.9 percent felt that it ‘somewhat’ drew them to the project. Forty three students also provided an open response to “How did your IQP involve social entrepreneurship?” Select unedited responses to the question are provided below after tables for each IQP question response.

Table 1.1. IQP Completion Status

Have you previously completed, or are you currently working on, an IQP?		
Answer Options	Response Frequency	Response Count
Yes	45.1%	255
No	54.9%	310
<i>answered question</i>		<b>565</b>

Table 1.2. IQP Location

Was your IQP on campus or off campus?		
Answer Options	Response Frequency	Response Count
On Campus	41.3%	105
Off Campus	58.7%	149
<i>answered question</i>		<b>254</b>

Table 1.3. IQP Involvement with Social Entrepreneurship

<b>Did your IQP involve social entrepreneurship?</b>		
<b>Answer Options</b>	<b>Response Frequency</b>	<b>Response Count</b>
Yes	8.3%	21
No	71.7%	182
Somewhat	20.1%	51
<i>answered question</i>		<b>254</b>

Table 1.4. Is the social entrepreneurship component what drew you to the project?

<b>Is the social entrepreneurship component what drew you to the project?</b>		
<b>Answer Options</b>	<b>Response Frequency</b>	<b>Response Count</b>
Yes	8.6%	6
No	68.6%	48
Somewhat	22.9%	16
<i>answered question</i>		<b>70</b>

**Select open responses to “How did your IQP involve social entrepreneurship?”**

“we tried to influence high school aged kids, and especially females to pursue an education and career in engineering”
“We are designing a computer educational tool, which needs to be marketable and attractive to our target audience”
“I worked with students from a local high school completing a gender equity study. The focus of this study was proving or disputing the stereotype that women tend to prefer biology and dislike chemistry and physics whereas men are the opposite.”
“Created a Science and Engineering Club for an inner city high school, ran it, and helped the students”
“deaf services and access to interpreters”
“Work with SIFE an organization in Thailand that promotes entrepreneurship to integrate a hydroponic system in a curriculum in a middle/high school while incorporating business activities.”
“It was a feasibility study for an organization that helps starting entrepreneurs.”

<p>“We were updating the exhibits at a public science museum in order to increase visitation.”</p>
<p>“Creating a link between WPI students and resources and non-profit organizations.”</p>
<p>“I worked with a nonprofit organization to help with a project that uses digital photography to monitor the environment. I guess that could be considered social entrepreneurship.”</p>
<p>“We are studying the impact of Stem Cell research and product development on the economy so although our project directly deals with monetary impact, most people involved in the field are social entrepreneurs.”</p>
<p>“We used what resources were available to develop a recycling program.”</p>
<p>“Our IQP involves a theme park created to provide jobs and entrepreneurial training to residents of poor communities nearby.”</p>
<p>“we did market research to help determine if it would be profitable for freshwater fish farmers to "Go Green"”</p>
<p>“Our IQP analyzed Hong Kong's harbour front from the perspective of tourists, looking for ways to improve the quality, activity, and draw of the area.”</p>
<p>“We created a laboratory program with the aim of having Thai teachers encourage creativity, speculation and the adherence to the scientific process (esp trial and error and hypothesizing) in their students.”</p>
<p>“working on a redevelopment plan for a poor community”</p>
<p>“IN Costa Rica, a group called Project Link worked with Angel Investors to make high risk/high return investments in local startups. The goal of this organization was to support innovation that was occurring in Costa Rica rather than having entrepreneurs go abroad for funding. Our group also worked with local universities to bridge them with Project Link to foster an environment of entrepreneurship in Costa Rica. This would be accomplished via entrepreneurship seminars/courses.”</p>
<p>“RFID is a failry new technology. We are going to use it to develop a working system to aid the blind with the organization of items as well as indoor navigation.”</p>
<p>“My project was in South Africa and my group created a set of best practices for the New Housing Department to build healthy communities--basically instead of just building houses wherever, recreational centers and health centers and job opportunities should be created at the same time.”</p>

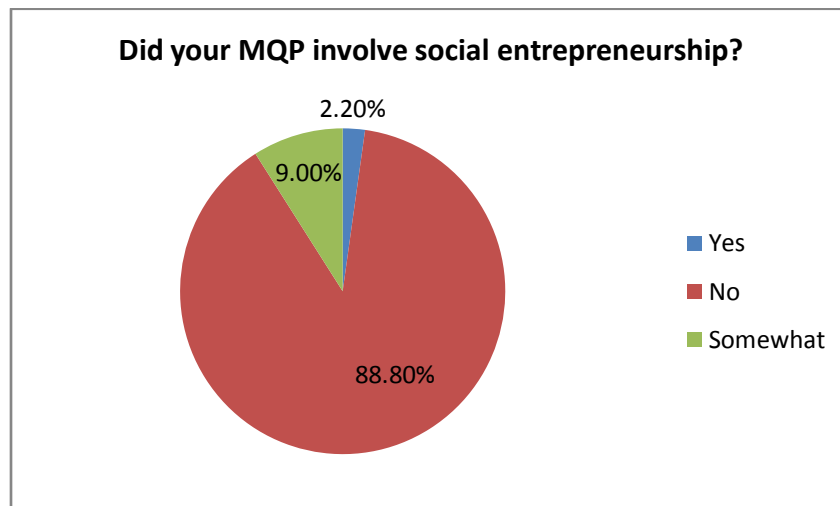
“Tied in ways for students in a university awareness program to participate and volunteer in social entrepreneurship programs.”

“My IQP was in Venice, and our goal was to assess the handicapped mobility of the city. The social aspect was to take what we had learned about the city and attempt to give suggestions to change the city to make it more handicapped accessible. Assuming I understood the description of social entrepreneurship, our project was related to the concept.”

“Medical Device Design for Third World Countries”

The next series of questions in the questionnaire is identical to the previous set on IQPs, but instead inquires about MQPs. Of the students surveyed, 134 (24.0 percent) are working on or have already completed an MQP. Of these, 76.1 percent were on campus and 23.9 percent were off campus. When asked if their MQP involved social entrepreneurship, only 2.2 percent of students responded “Yes” and 9.0 percent responded “Somewhat.” Only one student identified that social entrepreneurship is explicitly what drew them to their MQP. Open responses to how the applicable MQPs involved the subject generally involved projects working with social causes instead of applying entrepreneurial principles.

Figure 1.4. MQP involvement with Social Entrepreneurship

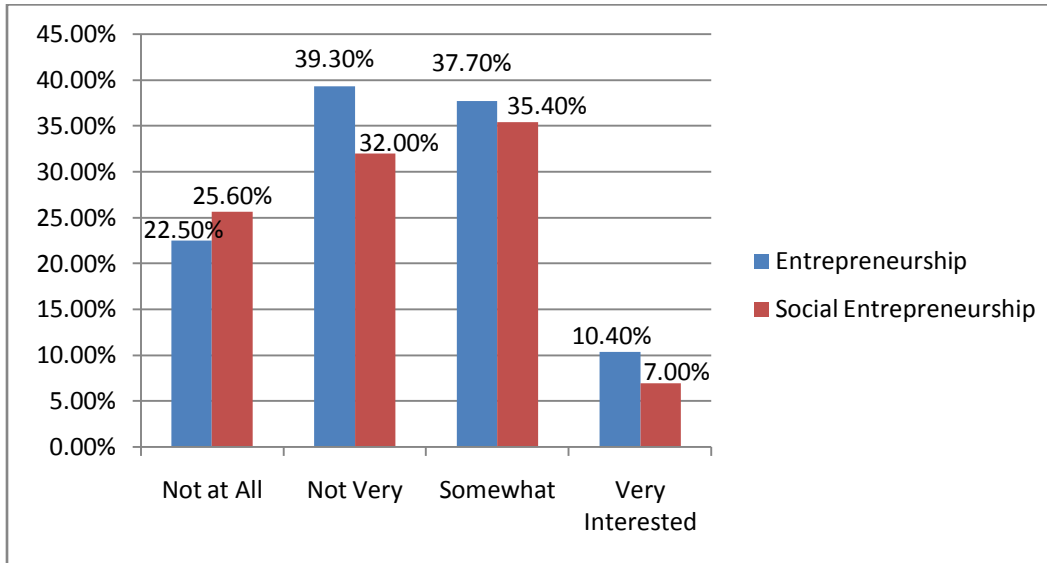


Next, students were asked how interested they would be in completing an IQP in entrepreneurship and an IQP in social entrepreneurship. Results for entrepreneurship (48.1



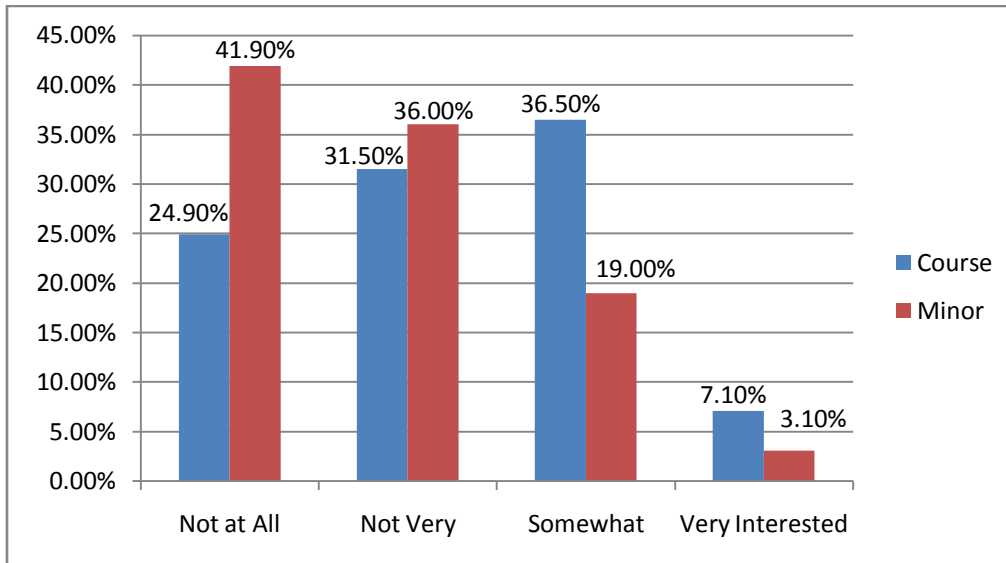
percent somewhat or very interested) and social entrepreneurship (42.4 percent interested) were similar. These results can be seen in Figure 1.5.

Figure 1.5. Interest in Completing an IQP in...



Very few students identified taking or having previously taken the currently available entrepreneurship courses at the university. Twenty-seven of the 565 students surveyed (4.8 percent) have taken a course. The vast majority of students, 93.1 percent have not been involved in any entrepreneurship events or activities at WPI. This shows a very low level of participation in entrepreneurship on campus in general. The vast majority, 94.7 percent of students have not previous started a business or non-profit, though this would be a relatively serious undertaking, so this result was expected by the team. When asked how interested they would be in taking a course in social entrepreneurship 43.6 percent of students were somewhat or very interested, while only 22.1 percent were somewhat or very interested in a minor. These results can be seen in Figure 1.6. When asked how interested they would be in a social entrepreneurship club or event on campus, 31.8 percent responded as being somewhat or very interested. There is a strong disparity between the interest in entrepreneurship reported by students and actual participation in events. Further insight into this point can be found in our teams analysis of the focus group conducted after this survey.

Figure 1.6. Interest in Taking a Social Entrepreneurship...



#### 4.4. Student Focus Group

The responses obtained during the focus group were categorized based on common themes that emerged and also by using the following questions.

- What was known and then confirmed or challenged by the focus group data?
- What was suspected and then confirmed or challenged by the focus group data?
- What was new and not previously known or suspected?

#### What was known and then confirmed or challenged by the focus group data?

- **Students were more familiar with the concept of entrepreneurship than social entrepreneurship** – Our survey demonstrated that WPI students were more familiar with the concept of entrepreneurship and the understanding of the subject was more widespread than that of social entrepreneurship. Out of the 565 that responded, 232 were somewhat familiar with entrepreneurship while only 78 said the same with social entrepreneurship. This fact was confirmed during the focus group. The students' ideas and definitions of entrepreneurship were pretty accurate and they seemed to have the gist of the idea. However, the students' knowledge of social entrepreneurship was minimal and their explanations did not accurately capture the concept. In fact, most of the students (5 out of 6) had not heard of social entrepreneurship up until this point.

### **What was suspected and then confirmed or challenged by the focus group data?**

- **Once students understood what social entrepreneurship was, they might be as interested in it as entrepreneurship** – The survey results caused us to suspect that once students really understood what social entrepreneurship was all about they might be as interested in it as commercial entrepreneurship. Out of the 565 that responded, 206 students said that they would be somewhat interested in an entrepreneurship IQP while 191 students were somewhat interested in a social entrepreneurship IQP. Our focus group data proved this to be correct and even told us that the students might be more interested in social entrepreneurship. One of the participants stated that social entrepreneurship is actually more interesting than entrepreneurship. When asked what aspect of social entrepreneurship appealed to them, the majority (4 out of 6) replied that it was the opportunity of getting involved and helping with a social cause. Only one participant replied that it was the double bottom line of social entrepreneurship - developing an organization that is profitable and also benefits society – that appealed to him. This surprised us as our survey of universities has shown that social entrepreneurship programs focused primarily on the social aspect did not attract students due to the lack of profit-making abilities.

### **What was new and not previously known or suspected?**

- **Time constraints and workloads might prevent students from getting involved with social entrepreneurship. This might also cause students to be more interested in less time consuming activities like workshops and seminars than in several courses or a minor** – Some of the students who responded to the survey said that they would not want to get involved with courses, minors, or other academic components of the curriculum related to social entrepreneurship. We perceived this to be a general lack of interest in the topic, but we used the focus group to get more insight into the reasons behind this. The students stated that the main reason they would not want to get involved was time constraints. WPI has seven week terms with three courses per term. Each course has a very demanding schedule and is associated with rigorous project work and other assignments. Students said they had a hard time finishing their requirements on time let alone getting involved with other activities. Even if they did have time for extracurricular activities, sororities, fraternities and varsity

games would probably take priority over a social entrepreneurship workshop that might be considered more academic in nature. The students said they would be more apt to consider an activity that was less time consuming (once every week or every two weeks), but where they could still learn a lot. From the survey we learned that more students (198) would be interested in taking a class on social entrepreneurship than an entire minor focused on the subject. The focus group data corresponded with these findings as a number of students (5 out of 6) also said that they would take a single social entrepreneurship course as an elective while the option to take a minor only interested one student.

- **The manner in which the idea is marketed and explained is very important** – As stated above students were more interested in social entrepreneurship once they knew what it was. Students who do not know too much about a particular topic will not be very interested in getting involved with it if they already have other activities consuming their time. The idea needs to be explained really well to clear up any misinterpretations of the concept. One of the students said that her interest in completing an IQP involving social entrepreneurship would depend on how well the term was explained and marketed. Some students might be interested in a business focus while others might be interested in a social focus. Another student perceived a lot of interest among students if the “word really got out about social entrepreneurship offerings at WPI.” Other students said that one the reasons for their non-participation in entrepreneurship events on campus was lack of follow-up and proper marketing of these events. Most of these events are advertised too early and when the actual date came around the students forgot about the event or had made some other appointments. The students also need to understand what they are getting out of their involvement. They expressed interest in big events like a speaker series with renowned speakers or a networking event with experienced professionals.

Overall the focus group satisfied its purpose in that it enabled us to get deeper insight into some of the students’ reasons behind their responses on the survey.

#### 4.5. Faculty Interviews

In order for a program to be successful it needs the support of the faculty and staff. Therefore, WPI’s faculty and staff were important sources of information in the evaluation of the

feasibility of a social entrepreneurship program. Major points and common themes that emerged across the interviews discussed below.

Almost all of the professors interviewed have been involved with projects or research related to social entrepreneurship, only half of them had a thorough understanding of the concept behind it. The others were only vaguely familiar with it or were not aware of the term, 'Social Entrepreneurship'. Professor Susan Vernon-Gerstenfeld was more interested in sustainability than social entrepreneurship even though the two are interrelated.

A common theme that emerged was the need to have an organized collection of all WPI resources related to SE. This would include a comprehensive list of literature, previous IQPs/projects/research, and organizations that might be interested in sponsoring projects. This would be available to both faculty and students who are interested in getting involved with SE and would like to learn more about the field. Professor Apelian recommended that a link to a listing of all events, projects, and research pertaining to SE or social causes be placed on WPI's home page. A similar issue that became apparent during these interviews was the vast disconnect between efforts in similar fields, across campus. It seems that professors might not be aware of research or projects being worked on by other professors outside of their departments, even if they were in the same or related fields. Professor Schaufeld expressly stated the need for a center or collaborative to bring these efforts together and he sees SE as a way to do this. In this center professors could come together to discuss SE issues and how they may incorporate these issues into their courses. Professor Juisto stated that the field has wide scope and that no boundaries should be placed on its integration into the WPI curriculum. Professor Apelian also agreed that any SE program needs to be an interdisciplinary, campus wide initiative.

Out of the ten professors that were interviewed, eight agreed that there needed to be some form of social entrepreneurship program on campus. Those who agreed that SE needs to be brought to WPI gave good reasons to support their decisions. Many professors agreed that it was an important movement in today's world and that we cannot ignore it. They also believe that funding for the program should be relatively easy to obtain as support for these kinds of initiatives is increasing in today's society. Professor Schaufeld said that a good SE program would provide students with a platform and the credentials to compete in this space and thereby, also attract incoming students. Professor A. Gerstenfeld stated that WPI was entrepreneurial and innovative and SE was an innovative way of providing solutions to social problems, therefore,

the two were a good fit. Further, the nature of the IQP provides WPI with a running start. Professor Krueger believes that this initiative supports the WPI plan of creating professionals who are critical thinkers that understand their role as a citizen in society.

Five of the professors interviewed said that in order to create a successful social entrepreneurship program, the integration needed to start out very slowly and eventually progress up to something larger such as a minor. Professor Hakim made the comment that students need to be made more aware of what is happening in the world socially before there could be large student involvement on campus. He proposed to achieve this through various speaker seminars and events on campus. Professor Krueger stated that he liked “the idea of extracurricular activities, if there is going to be a major; it has to be really set up so that students can take it seriously. You need to cultivate the intellectual environment of those students through extracurriculars and also through rigorous coursework - need to cultivate the mindset.” Professor Apelian believes that the best way to create a program is to start in the students’ First Year Experience. Professor Schaufeld said that it would be very beneficial to have faculty workshops on social entrepreneurship so that they may collaborate and learn more about it in order to integrate the concept into coursework.

Four out of the ten professors interviewed, expressly stated that hosting a speaker series would be a great way to initiate a SE program on campus. These four professors were of the opinion that speakers could incite interest on campus which would in turn encourage students to get involved with SE. Professor Looft thought that a Food for Thought lunch would be a good way to get the campus involved in SE. This activity would involve rotating faculty members speaking about various SE topics, at lunches available to the WPI campus. In hosting these various events, the professors also suggested that it might be beneficial to collaborate with the other Colleges of the Worcester Consortium as well as with members of the Worcester community.

Seven professors identified that they would personally be interested in seeing social entrepreneurship IQPs. When asked about how SE might be integrated into the IQP, five professors stated a need for better quality on campus IQPs. Professor Juisto was quoted as saying, “This has been an unmet market and I think there are many entrepreneurial opportunities in [Worcester].” These professors also stated the possibility of working in conjunction with the Worcester Project Center due to its focus on projects that could be categorized as social

entrepreneurship. Professor Krueger, the Director of the Center, recently put together a proposal for over \$1 million to create a business development initiative for under employed people in the Worcester community. He works to promote a broader sense of social good and sees a definite correlation between the Center and SE.

Professor Krueger was interested in the idea of creating a minor. He commented that it would be a great fit with the environmental studies major. The combination of an environmental studies major with a social entrepreneurship minor would create a very skilled job candidate. Professor Krueger stated that “to have someone who understands environmental science and also has business skills would have a great opportunity to develop business ideas.” The ideal method of creating a well-rounded minor would be to have cross-disciplinary partnerships to shape the minor.

Through these interviews we were able to gain perspective on various professors’ opinions of social entrepreneurship and their level of involvement with the field. The professors also expressed their ideas on the need for such a program and the feasibility of its implementation.

## 5. Analysis

The results obtained were analyzed and interpreted to determine the feasibility of implementing a formal structure for social entrepreneurship. The analysis is organized based on common themes gathered from the results. Common themes found across the data, which we collected from various sources, include a lack of awareness and understanding of social entrepreneurship on campus, lack of a single definition or vision of social entrepreneurship, a significant disconnect between the topic and related fields such as sustainability, and insufficient connection between existing resources. However, it is clear that there is certainly interest in social entrepreneurship among students and faculty, especially in its related fields.

### 5.1. Awareness

Our results from the university surveys show that the campuses that have ongoing research in the social entrepreneurship field also have the most activities on campus. One conclusion that can be drawn from this is that research on a campus justifies involvement in other ways such as course development, student projects, and extracurricular activities and therefore, results in a large awareness and interest on the campus. The absence of these activities at WPI, in relation to social entrepreneurship, has resulted in a lack of awareness of the field.

The survey of the undergraduate student body showed a significant disparity between the students' familiarities with entrepreneurship and social entrepreneurship. A majority of the respondents were either "somewhat" or "very" familiar with entrepreneurship (58.5 percent total), while a larger majority were either "not at all" or "not very" familiar with social entrepreneurship (85.8 percent). These results demonstrate a lack of awareness of both topics, but significantly more so for social entrepreneurship. However, we think this is understandable as our research has demonstrated that as a field of study, social entrepreneurship is still in its infancy. While the academic use of the term, "entrepreneurship", dates back to the 18<sup>th</sup> century, social entrepreneurship only became known in the 1960s. Furthermore WPI currently has an entrepreneurship program, consisting of five courses in its curriculum, as well as entrepreneurship workshops, competitions and other events that spread awareness of the subject among its students. Therefore, we think it is understandable that students are more familiar with entrepreneurship than social entrepreneurship. This lack of awareness must be overcome to establish a social entrepreneurship program at the university.



It is interesting to note, nonetheless, that 55.9 percent of the respondents were either somewhat or very interested in entrepreneurship while for social entrepreneurship, 43.5 percent of students responded as being somewhat or very interested. The gap between the two fields has decreased in the second question. Though the student body previously responded as being unfamiliar with social entrepreneurship, it appears there is an interest in the topic even if students have not been exposed to it in depth. While this result may seem puzzling, due to the identified lack of students' real knowledge of the term, we believe it suggests that students are intuitively interested in the idea of the application of entrepreneurship to social issues.

This fact is also supported by the results of both the focus group and the faculty interviews. Though a majority of the participants were not aware of social entrepreneurship there was a definite interest in the topic once they understood the concept. The lack of awareness and the subsequent interest reinforce the fact that social entrepreneurship needs to be formally integrated into WPI's curriculum. This is what has been done for entrepreneurship already and it must also be done for social entrepreneurship.

## **5.2. Unified Vision**

The lack of understanding of social entrepreneurship on campus has also led to some misinterpretations of the phrase. All of the professors interviewed had been involved in some way, shape or form with either social causes or entrepreneurship. This was due to the fact that the professors were specifically chosen for their involvement in these areas. Remarkably, only half of them had a thorough understanding of social entrepreneurship. The others were only vaguely familiar with it or were not aware of the phrase. Professor Susan Vernon-Gerstenfeld was more interested in sustainability than social entrepreneurship even though the two are interrelated. This preference may be due to a preconceived notion that entrepreneurship and profit generating activities should be kept separate from social causes and sustainability. However, the idea behind social entrepreneurship is that the generated profits would enable sustainability and thereby provide greater social value. These relationships between social entrepreneurship, sustainability and other areas must be clearly explained.

Philip Powell from Indiana University (IU) stated that there was little interest in the social entrepreneurship certificate among the MBA students at IU. His reasoning for this was that the MBA students associate social entrepreneurship with very low profits and compensation because of its non-profit categorization at IU. To qualify only non-profit organizations as social

entrepreneurship ventures severely limits the possibilities and boundaries of a social entrepreneurship program. It is ironic that, at IU, MBA interest is low because at the five universities that offer a major, minor, or concentration, their MBA students are the largest group of students involved. This example demonstrates that a program must suit the needs and interests of the students involved.

In order for a program to be successful, its goals, structure, topics, and scope need to be properly defined and suitable for the target audience. It is important for each university to have a definition of social entrepreneurship that resonates with the students interested in the program. Outlining this definition and the program goals will attract students because they know exactly what they will be getting out of the program. This fact is supported by our focus group results where students expressed that one of the stipulations to their participation in such a program is the provision of a clear definition of social entrepreneurship as well as the program objectives.

### **5.3. Organized Resources**

One of the most surprising issues that recurred across the professor interviews was the vast disconnect between efforts in related fields. This can be accounted for by the lack of awareness previously identified, by the misinterpretation of the phrase and its relationship with sustainability and by the absence of an organized collection of all resources at WPI related to social entrepreneurship

There are efforts currently occurring all across the WPI campus that are related to social entrepreneurship but are not specifically labeled as social entrepreneurship. Consequently there is seemingly little to no communication between these efforts. Due to this lack of an established program on campus, the currently available resources are difficult to discover and access and appear much more limited than they actually are. Having a program will enable these efforts to collaborate under the umbrella of social entrepreneurship and will increase the value created by these activities.

### **5.4. Capturing Current Interest**

Research into IQPs from the past five years revealed projects that were based on elements of social entrepreneurship. This can be seen as a result of the fact that the purpose of the IQP is to challenge students to address a problem that lies at the intersection of science or technology with social issues and human needs.

Results from all our resources showed that further interest and awareness must be generated gradually. Data from the focus group and faculty interviews told us that any effort to integrate social entrepreneurship into the curriculum must start slow and then gather momentum.

Data collection from universities around the country has demonstrated a much higher popularity in offering a minor or concentration rather than offering a major. The reason given for this is a lack of interest for a more complex program. This was the same reason given for the universities that offer only a few courses in lieu of a full program. The trend in the universities selected for data collection seems to be that interest is cultivated in undergraduates through extracurricular activities and research projects while the graduate programs are more formally structured. This structure was inadvertently mentioned in several faculty interviews. Professors stated that the best way to initiate a social entrepreneurship program is to start by increasing awareness in the first year through workshops and seminars and as the students progress through their four years, the integration becomes more complex through projects and courses. However, this might be hard to complete at WPI where the seven week terms would make it very difficult to incorporate even more material into the individual courses.

Colorado State University offers a five day workshop (Learn how to move your idea from the lab to the marketplace with the Green Technology Entrepreneurship Academy) teaching students how to move their social entrepreneurship ideas to market. Workshops were found to be of great interest on WPI's campus among the students that participated in the focus group. Workshops of this format would be a beneficial piece of a social entrepreneurship program to implement before or after the Great Problems Seminar is taken or IQP is completed. This activity would help students to be able to recognize parts of their projects that could be expanded on and possibly turned into a venture in order to maximize impact of the project.

In the student survey, when asked if their projects involved social entrepreneurship, 8.3 percent of respondents answered "yes" and 20.1 percent answered "somewhat." This can be seen as a positive result, as a reasonable percentage of students believe their projects involved aspects social entrepreneurship. While only seven percent of respondents later identified being 'very interested' in completing a social entrepreneurship IQP, this may identify a smaller group of students with significant interest in the topic. This may not necessarily indicate a lack of student interest, as no topic will appeal to all students. Survey results also suggest that social entrepreneurship has a negligible presence in the MQP program, which is likely due to the nature of the program. While IQP is inherently

interdisciplinary, allowing for different fields to come together to complete such a project, MQP follows a major-oriented approach, likely limiting the possibilities for social entrepreneurship.

Overall the analysis of findings gathered from existing university programs as well as supporting evidence from surveys and interviews of our own campus community, identifies a strong potential and need for implementing a successful social entrepreneurship program at WPI. The data collected from all our sources on campus reflects current interest in social causes and problems. What is missing is the knowledge of appropriate methods to solve these issues. Social entrepreneurship is rapidly emerging as an innovative and sustainable way of providing these solutions and enhancing social value. The focus must now be placed on implementing a program that will capture the current interest by educating students in social entrepreneurship.

## **6. Conclusions and Recommendations**

We need social entrepreneurs to create new avenues for social improvement. In order to capitalize on the momentum around social entrepreneurship and reap its true benefits, the sustainability of the efforts that are being made in this field needs to be ensured. This can be done through educating the next generation of social entrepreneurs. Only recently, however, has an academic approach to the study of social entrepreneurship started to develop. Students need a more complete, better-structured knowledge of what social entrepreneurship is and how its practice can be enhanced. Many top business schools such as Duke, Harvard, and Stanford have taken the initiative and incorporated social entrepreneurship education into their curricula. In order for today's students to be the innovators of social progress of tomorrow's world, they need to be well versed in the field.

Our recommendations for a social entrepreneurship program are divided into the following three categories.

### **6.1. Lack of Awareness on Campus**

After performing research of the undergraduate student body and faculty, it was clear that there was a lack of awareness on campus about the field of social entrepreneurship. This inference can be made through the responses gained through an undergraduate survey and focus group, and various faculty interviews.

While lack of awareness could be construed as lack of interest, the activities and projects being done on WPI's campus clearly illustrate interest in this subject. It has been documented by other IQPs that a large percentage of students choose their IQP with a purpose of 'making a difference' in mind. This is the essential drive behind social entrepreneurship. It was found in the focus group and also subtly in a few faculty interviews, that once the term 'entrepreneurship' is heard – daunting ideas of creating a large venture come to mind.

It is clear that issues of significant interest to the student body and faculty advisors such as sustainability and the application of innovation, especially to social causes, are closely linked to the principles of social entrepreneurship. Community interest in these areas has been strongly evidenced by the current IQP projects program. However, there is clearly significant hesitation in the community's acceptance of the need for entrepreneurial principles in order to create sustainable social value, which has created a strong divide in the perception of social entrepreneurship in comparison to sustainability.

Data collected from the university surveys demonstrated a direct correlation between how clearly the concept of social entrepreneurship is explained and student involvement. This correlation is also supported by the responses obtained from our focus group. Therefore, **we recommend that the first step in starting a new program should be the identification of a comprehensive definition of social entrepreneurship that can be used as a foundation for the program. We believe that a suitable definition is the one that we have come up with during this project.** Once a definition has been agreed upon, it can be permeated through various events that will be held to raise levels of awareness of social entrepreneurship.

One of the most common themes that arose from our data collection was that the program needs to be implemented gradually or in phases. The initial events should be non time consuming activities that will generate interest amongst the students and faculty alike. **We recommend that the initial support and organization of the social entrepreneurship program be integrated into the Collaborative for Entrepreneurship and Innovation's (CEI) existing structure.** This center already has the resources and the know-how required to organize entrepreneurship events and is in the best position to do the same for social entrepreneurship. The CEI could collaborate with organizations, such as the Social Entrepreneurship and Education Consortium (SEEC, 2007) and The Indus Entrepreneurs' Social Entrepreneurship Group (TIE Boston, 2006) to name a few, that are interested in promoting the education of social entrepreneurship.

The focus group results demonstrated that students would be interested in attending workshops on social entrepreneurship topics. The faculty interviewed also suggested that workshops would be a good way of getting professors better acquainted with social entrepreneurship. **We recommend that WPI incorporate social entrepreneurship workshops into the social entrepreneurship program.** Colorado State University offers a five day workshop intended to teach attendees how to take their idea and bring it to fruition. A workshop such as this could be very useful at WPI. Primarily, the best time to take it would be before or after completion of the Great Problems Seminar or IQP and MQP. More information on the workshop can be found in the database.

**We recommend that a speaker series be launched.** The speakers would be social entrepreneurs or people who have done research on social entrepreneurship. These speakers would engage students' interests by telling them about their experiences as a social entrepreneur

and also discuss the many social problems in our world and how solutions are rooted in social entrepreneurship.

Currently, there are leadership lunches on campus that involve a WPI professor or administrator giving a speech about leadership and their experiences. It is very informal and allows for great speaker-listener interaction. **We recommend integrating additional leadership lunches, specifically focused on social entrepreneurship, into the schedule so that professors who are working in the field may speak to the students and relate what is happening on campus.** This would give students the opportunity to see which people at WPI are involved in this field, should they be interested in pursuing research or a project in social entrepreneurship.

Often times at WPI, groups have showed a movie on the quad to help them increase awareness about a certain cause, for example, films shown during Human Trafficking Awareness Week. **We recommend at least one social entrepreneurship movie or documentary be shown on the quad per year.** *The New Heroes*, a four –hour series by PBS, would be a great movie to show at this type of activity. *The New Heroes* features 14 social entrepreneurs that have developed innovations to bring life-changing tools and resources to people in need of viable solutions (PBS , 2005).

All these events should give students a good understanding of social entrepreneurship and its merits. At this point, they might want to learn more about the dynamics of becoming a social entrepreneur. Networking is a great way to learn more about a field of interest. **We recommend that a networking series be established for social entrepreneurship. This series would follow a structure similar to that of the already existent ‘Dinner with Entrepreneurs’.** This will give students a great opportunity to speak with the social entrepreneurs and make connections. The series would also be beneficial for the campus because the social entrepreneurs will become familiar with WPI.

## 6.2. Inadequate Organization of Resources

While resources do exist in various forms at the university, there is seemingly little to no communication between elements of social entrepreneurship across campus. Due to this lack of a unified structure on campus, the currently available resources are difficult to discover and access and appear much more limited than they actually are.

While performing the faculty interviews it became very clear that professors were unaware of what other professors were doing and what was being taught on campus, unless they

had a personal interest in the research or courses. To remedy this problem, **we recommend that a comprehensive online resource be made available, that links all social entrepreneurship faculty research; past, present, and future IQPs (possibly MQPs); issues being addressed through the Great Problems Seminar; and all events and activities on campus that involve social entrepreneurship.** This online resource would enable faculty, company sponsors, social organizations, and current and prospective students to view what WPI has done and is doing in the field of social entrepreneurship.

Similar to the online resource, **we recommend a monthly newsletter be written and e-mailed to the campus community that details all of the work that occurred in that month in social entrepreneurship. It would also list upcoming social entrepreneurship events and reviews of events from the previous month.** This newsletter would enhance the sense of community at WPI in regards to social entrepreneurship.

### **6.3. Sustaining a Thriving Social Entrepreneurship Program**

After awareness of social entrepreneurship has been increased and a solid foundation for a program has been established, it is important to engage in activities and actions that will ensure further growth and sustainability of the program. All resources must continue to be available to all the students, especially those who have shown an interest through attendance at events, and GPS courses.

**We recommend that research continue in the future in order to grow and develop the program.** For example, the creation of a social entrepreneurship graduate program would require further research and inquiry into the interests of graduate students. In other university programs, the undergraduate program is made up primarily of extracurricular activities, while the graduate program is based on academics.

There are more extracurricular activities that could be added to WPI's campus in order to further students' involvement with social entrepreneurship. **We recommend incorporating a student club into the social entrepreneurship program.** This club could then undertake the organization of events that will initially be handled by the CEI. Students in Free Enterprise (SIFE) is a popular student club on many campuses, and some incorporate social entrepreneurship activities along with their conventional entrepreneurship activities (SIFE, 2007). Professor Demetry has worked with a chapter of SIFE in Bangkok. She believes that a chapter would do well at WPI and that it would be very beneficial to students. Another



interesting student activity that a few campuses around the country currently take part in is EDUN LIVE on campus (EDUN, 2008). EDUN LIVE on a campus is a business whose mission is to create sustainable job opportunities in Africa. They do this by employing otherwise unemployed Africans to make 100 percent organic cotton t-shirts. The Africans do everything from growing the cotton, harvesting it, and creating the t-shirts. EDUN LIVE then sells these t-shirts to a campus who in turn sells them to campus organizations and they create a unique design for the t-shirts.

Further research needed to sustain a robust social entrepreneurship program could easily be achieved through another on-campus IQP. Many professors expressed a need for better quality on-campus IQPs. Once the social entrepreneurship program is successful, it would be relatively easy to browse the online resources and discover professors and topics for a high quality on-campus IQP. The Worcester Project Center is also a great center to really advertise social entrepreneurship IQPs. Many of their IQPs are based in this field. **We recommend that the Worcester Project Center be very active in recruiting students interested in social entrepreneurship into their IQPs. The Worcester Project Center also has unique connections that could be used to help find student higher-quality IQPs.** Furthermore, tie-ups with organizations at various Project Center locations outside of Worcester, such as UnLtd Ventures in London, could be further looked into.

Further research into the field of social entrepreneurship for the benefit of WPI would enable many students to submit their findings to various competitions and poster/project competitions. **We recommend that WPI hold a second project presentation day dedicated to social entrepreneurship projects. Similar to the President's IQP Award, the best project could win an award created by the university.** Competitions on and off campus would really enable WPI to get their name out into the public for their social entrepreneurship program. **We also recommend research into sources for grants and other forms of funding that can be used to further students' education in social entrepreneurship.** The availability of funding would encourage more students to get involved in the program.

Our findings have shown that WPI would benefit greatly from a cohesive vision of social entrepreneurship and a unified program to support that vision. We have seen that social entrepreneurship already exists at WPI in various forms that are not explicitly labeled as social entrepreneurship. The innovative, entrepreneurial WPI mindset and the nature of the IQP make

this integration that much simpler. WPI's students are very interested in finding solutions to social problems. A social entrepreneurship program would provide these students with a platform to get involved and compete in this space. It would also improve WPI's rankings and thereby, attract prospective students. The social entrepreneurship program we are recommending would establish WPI as an innovator in the field; a thought center educating a new class of thinkers that understand their role as a citizen in society.

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## Appendix A – Project Proposal

### Introduction

Whether conducted by nonprofit organizations or through a for-profit venture, social entrepreneurship currently has vast potential for both positive social change as well as potential profitability for a sponsoring organization. This makes social entrepreneurship an attractive topic for an interdisciplinary project for its merits as both a business venture as well as its applications toward social change.

The aim of this project is to determine a possible place for social entrepreneurship at WPI. While social entrepreneurship could be involved in many of the current disciplines or the work done at a project center, there is currently no structured category specifically focused on social entrepreneurship. The foundation for the current project is the belief that some form of structure for a social entrepreneurship program would be beneficial to the university and its students. We will therefore investigate the current state of social entrepreneurship at WPI as well as other universities in order to assess the unique value that a structured program could bring to the university. Our goal is to compare and examine the merits of different potential structures for a social entrepreneurship program, including examining interest in a more defined program as well as the feasibility of initiating such a program. Our plan includes taking necessary steps to implement an appropriate structure in order to bring value to the university's project program.

### Literature Review

#### *Definition and History of Social Entrepreneurship*

The concept of social entrepreneurship is well suited to our times. The notion combines the compassion of a social mission with the principles of a business discipline and has struck a receptive chord (Dees, *The Meaning of Social Entrepreneurship*, 2001). The idea is not a new one. The term was first used in literature on social change in the 1960's and 70's. However the movement has gained renewed momentum in today's world, which is increasingly separated by the haves and the have-nots. The time is undoubtedly ripe for new models and methods and social entrepreneurs have risen to the call.

To get a better understanding of the issue let us compare the facets of the more traditional business entrepreneurship to those of social entrepreneurship. Business entrepreneurs harness opportunities and growth to fuel economic advancement. A business entrepreneur might



typically measure performance in terms of pecuniary profit and return. Social entrepreneurs are similar, in that they use innovation, creativity and courage to start ventures and create value. However, they measure their performance in terms of transformational change that benefits underprivileged societies and inequitable systems. The main difference lies in the value proposition itself. For the business entrepreneur the value proposition is structured to serve markets that can easily afford the new product or service. However, for social entrepreneurs the value proposition targets a neglected or disadvantaged population that lacks the political clout or financial means to achieve transformative benefits on their own (Ashoka).

Even though the term, “social entrepreneur” and the language behind it are relatively new, the phenomenon is certainly not. There have always been social entrepreneurs even if they were not called that. The following are historical examples of leading social entrepreneurs:

- Vinoba Bhave: Founder and Leader of India’s Bhoodan or Land Gift Movement. Interested in land reform, he travelled thousands of miles, on foot, accepting donations of land. He ultimately caused the redistribution of more than 7,000,000 acres of land to aid India’s untouchables and landless (Ashoka).
- Florence Nightingale: Founder of modern nursing. She established the first ever school for nursing students. She fought to improve hospital conditions and establish modern nursing practices (Ashoka).
- Maria Montessori: Developed the Montessori approach to young children’s education. Through her experience of working with children in 1906, she created a revolutionary method of education that was tailored to suit each child’s unique needs. This approach allows each child to recognize his/her full potential by nurturing social skills, physical and emotional growth as well as cognitive preparation (Ashoka).
- Jane Addams: Founder of Hull-House in 1889, a social settlement to improve living conditions in a poverty ridden neighborhood in Chicago. She served as the founding president for the Women’s International League for Peace and Freedom. Her work ultimately resulted in protective legislation for women and children (Startups).
- Robert Owen: Founder of the cooperative movement. He applied his entrepreneurial talents to the utopian movement in the US and the labor movement in the UK. Owen instituted revolutionary corporate practices regarding child labor; women’s rights; infant, primary, and adult education; employee training; workplace childcare; environmental

practices; community responsibility; and care for the elderly and infirm (Temple, *The History of Social Innovation and Enterprise*).

The formulation of a new name, for this long standing endeavor, is important in that it helps to blur sector boundaries and widen the field. The concept means different things to different people and there are continuing arguments over what precisely counts as social entrepreneurship. Some people associate social entrepreneurship with not-for-profit organizations. Others use the term to describe businesses and for-profit ventures that incorporate social responsibility into their setup. Still others think of hybrid organizations that combine both not-for-profit and for-profit elements into their functioning (Martin & Osberg, 2007). This means that the canopy of social entrepreneurship encompasses a wide variety of organizations, from those that rely on income earned primarily from paying consumers to those that perform contracted work for public authorities or receive grants and donations.

So what exactly is a social entrepreneur and what does it take to be a social entrepreneur? First let us look at various definitions used by authorities on the subject and other sources.

- To put it simply a social entrepreneur identifies social problems and uses entrepreneurial principles to create and manage a venture that can solve these problems.
- According to the Skoll Foundation, a social entrepreneur is "society's change agent: a pioneer of innovation that benefits humanity." (Skoll Foundation)
- The Center for Advancement of Social Entrepreneurship at Duke University defines social entrepreneurship as "an approach to creating social value that embraces the fundamental principles of entrepreneurship" (Dees, *The Meaning of Social Entrepreneurship*, 2001)
- Robert Martin and Sally Osberg at the Stanford Graduate School of Business identify the following three components as determinants of social entrepreneurship: "1) recognizing an inherently unjust equilibrium that causes the exclusion, marginalization, or suffering of a segment of humanity that lacks the resources to achieve any revolutionary benefit on its own; (2) discovering an opportunity in this unjust equilibrium, developing a social value proposition, and bringing to bear inspiration, creativity, direct action, and fortitude, thereby challenging the stable state's supremacy; and (3) forging a new, stable equilibrium that releases trapped potential or alleviates the suffering of the targeted

group, and through the creation of a stable ecosystem around the new equilibrium ensuring a better future for the targeted group and even society at large.” (Martin & Osberg, 2007)

Some of the important characteristics and traits of social entrepreneurs have been identified as alertness to opportunity, ambition, innovation, resourcefulness, mission-driven, strategic, and results-oriented. Social entrepreneurs share an unwavering belief in the inborn capability of all people to contribute meaningfully to social development. They do not sit back and wait for change to happen; instead they are the drivers of change.

Identifying and solving large-scale social problems necessitates commitment, vision, and determination in the face of daunting odds. So why get involved in this intimidating venture? Sometimes business entrepreneurs are motivated to ‘give back to society’ once they have become successful and have made a lot of money. Other individuals would like to utilize their business backgrounds to make a significant impact on society. They are fascinated by the challenges presented by the double bottom line – developing a business that is profitable and also benefits the community. Other individuals like the numerous ‘recovering social workers’ who are disillusioned with the current social support system, are looking for new methods to put their talents to work. Ultimately social entrepreneurs are driven by their ability to produce measurable impact, through the creation of new avenues of independence and opportunity for the marginalized and destitute, who would otherwise be locked into lives without hope.

Along with many others, the historical figures mentioned established the foundations for social entrepreneurship. Though they created revolutionary and significant benefit to the society’s they were a part of, the undertaking was not widespread or given much support and importance. Nevertheless, the past two decades have seen an explosion of entrepreneurship in the social sector. Today social entrepreneurship is attracting growing amounts of money, interest and attention. Rather than focusing on individuals as the change-drivers, the structure of social entrepreneurship now involves various groups and corporations as well. Non-profits and non-governmental organizations, corporate foundations, governments and individuals promote, fund, and advise social entrepreneurs around the planet. A growing number of colleges and universities are establishing programs focused on educating and training social entrepreneurs. Some of the

new methods are geared towards creating sweeping, long-term change instead of immediate, small-scale effects.

Michael Young, labeled by Prof Daniel Bell at Harvard University as ‘the world’s most successful entrepreneur of social enterprise’, created more than 60 organization worldwide, including a series of Schools for Social Entrepreneurs’ in the UK. Another well known contemporary entrepreneur is Muhammad Yunus, founder and manager of the Grameen Bank, the father of microcredit, and the man behind the capitalist revolution. He began offering microloans to impoverished people in Bangladesh in 1976, thereby empowering them to become economically self-sufficient and proving the microcredit model that has now been replicated around the world. His idea has helped millions around the globe dramatically improve their lives and the economic health of their communities. Kailash Satyarthi has dedicated his life to saving the millions of children in India who are forced into slavery by powerful and corrupt businesses. Today Kailash heads Bachpan Bachao Andolan, South Asian Coalition on Child Servitude, and the Global March Against Child Labor, a conglomeration of 2000 social purpose organizations and trade-unions in 140 different countries.

The International Business Leaders Forum, an NGO that promotes responsible business practices, has shown how multinational companies can support social entrepreneurship – through their businesses or engaging in public policy debate. In the UK in 2002 seven leading non-profit organizations established UnLtd - The Foundation for Social Entrepreneurs. It holds a £100 million endowment especially to invest in social entrepreneurs in the UK. UnLtd provides individuals with coaching, training and networking opportunities to help develop community projects. UnLtd Ventures is the in-house consultancy division of UnLtd and focuses on a number of outstanding social entrepreneurs, providing them with business support. Another of their operations, UnLtd Research, is fast becoming the world's primary source of evidence and thinking around Social Entrepreneurship. Its central purpose is to lead the global business, public policy and academic debates about the role of Social Entrepreneurship in community development, employment and growth strategies (UnLtd, 2004).

The examples are simply overwhelming and have drawn numerous investors to support the cause. The potential benefits of social entrepreneurship are evident by the numerous supporters and promoters of these activities. Organizations such as Ashoka: Innovators for the Public, the Skoll Foundation, the Omidyar Network, the Schwab Foundation for Social

Entrepreneurship, the Canadian Social Entrepreneurship Foundation, New Profit Inc. and Echoing Green among others, focus on highlighting these hidden change-makers who are scattered across the globe.

As we have seen social entrepreneurs act as agents of change for society, humanizing existing systems, discovering new approaches and creating sustainable solutions that are tremendously valuable to society. Social entrepreneurs are the emerging catalysts and innovators of social progress. This revolution is fundamentally changing the way we manage ourselves and approach our society's problems. Social entrepreneurship signals the imperative requisite for social change and it is that potential payoff, along with its lasting, transformational benefit to society that sets the field and its practitioners apart.

### *Previous IQPs Involving SE*

After researching the database of IQPs that are accessible online, 8 projects were found that incorporate social entrepreneurship in some way or another. The projects chosen to have included SE were chosen because they either attempted to provide or did provide, a solution to a social problem afflicting a group of people. Because the projects are IQPs and not MQPs, the majority of these projects research and set the foundation for SE to occur. However, one or two showed the full implementation of SE. Of the eight projects found, only two occurred in the United States. This is most likely due to the higher social need in less developed countries and in the locations of our U.S. project centers.

The first project found was *Irrigation Development to Improve the Lives of Impoverished Children* in Kanchanaburi, Thailand (2005). This project developed an irrigation system for the New Life for Abused Children Project created by the Duang Prateep Foundation (DPF). Because the Project wanted a way to sustain itself other than through donations they decided to use the 32 hectares of land surrounding the Project to create an oil palm plantation. However, there was not enough water to do this. The IQP group designed a model irrigation system and a fundraising brochure to procure the money for the irrigation system and also an irrigation educational manual (Beckwith et al. 3-5).

*Composting for Sustainable Waste Management* (2005) took place in Puerto Rico in conjunction with McNeil Consumer Healthcare. The need in this project was created by the limited amount of space available to place the vast amount of waste that Puerto Rico produces.

Currently they have 29 landfills, 25 of which are full. McNeil wanted to invest in a large-scale composting system to aid in waste reduction. The IQP group assessed McNeil's current disposal methods and determined the available resources in order to evaluate the feasibility of the composting interest. At the end of the project a feasible composting solution was presented and also a plan for its implementation (Bourgault et al. ii-iv).

Three of the projects found took place in the informal settlements of Windhoek, Namibia. The first was *Communication and Sanitation: The Case of the Informal Settlements of Windhoek, Namibia* (2007). This project dealt with the community's rejection of sanitation facilities in the settlement. This was a problem because it had led to the spread of disease and also stunted social growth because functioning sanitation facilities are a very important component in furthering a settlements development in terms of social and economic ventures. The IQP team evaluated the situation regarding the facilities and found that communication was the main problem. They proposed a solution to this issue along with alternative forms of sanitation that would better fit the needs of the settlement residents (Gao, Jackson, and Staunch 4).

The second Namibian Project was *HIV/AIDS Prevention Education: A Look at the HIV/AIDS Awareness Activities at the Polytechnic of Namibia* (2007). This group found that while the Polytechnic of Namibia has excellent HIV/AIDS prevention education, the awareness of the program is very low. After the team performed extensive research on prevention programs in general and then evaluated the Polytechnic's program they recommended better ways to stimulate awareness of the program and also other ways to further the goals of preventing HIV/AIDS (DeConti et al. viii).

The third project found in Namibia was *Rainwater Harvesting in the Informal Settlements of Windhoek, Namibia* (2007). This project was founded out of the need for water in the settlements of Windhoek. In this very dry area water is hard to come by and is often too expensive for the populations of the settlements to afford. In order to enable the people of Hakahana (the informal settlement that was used for the implementation) to obtain water, harvesting rainwater from rooftops was explored. The team left Hakahana with a sustainable water source created with found or recycled materials so that it may be implemented elsewhere and continued (Baker et al. 1-2).

The next project took place in Denmark, *GPS Technology to Aid the Blind and Partially Sighted in Copenhagen, Denmark* (2007). This project was jointly sponsored by the Danish

Association of the Blind (DBS) and the Euman Company. The purpose was to evaluate the feasibility of using the Euman Company's LifePilot GPS technology to help the blind and partially sighted citizens of Denmark. The team found that there was a need for this technology and navigational aids in general. They also recommended a variety of features for a GPS based device. These recommendations stemmed from input found during research with the blind and partially sighted (Coverstone, Cronin, Kniazeva 3-6).

The other project performed in the United States was *Renewable Energy with Photovoltaic Systems* (2007). The project was performed in response to the need of the U.S. to become less dependent on oil as an energy source. The team focused mainly on solar energy as an alternative source and also when it would be economically feasible to install solar energy units on a house in Worcester, MA. After extensive research the group concluded that without any further advancement in the technology of photovoltaic systems it would not be economically feasible to use solar energy through the systems in the residential sector before 2025 (Bebel, Hagopian, and Larson 2-3).

The final project found was *Tire Waste Reduction in Hong Kong* (2007). The need for this project stemmed from the large amount of waste that was being produced from tires. Vehicle tires are bulky and non-biodegradable, so Hong Kong needed alternative uses for old tires other than throwing them away. The solutions that the team found included using rubberized asphalt on their roads and also using the old tires for retreading new tires (Carmichael et al. viii).

### *University Programs*

A brief search was conducted to ascertain the number and scope of universities in the United States that offer a SE program. Twenty universities were found; however, it is likely that there are many more with informal SE programs that are not recognized on their websites or through search engines.

All the universities offering a SE program have varying degrees of difference but are for the most part quite similar. For example, the majority of the programs only offer SE initiatives at the graduate level. In terms of education, the SE courses are more to prepare students to lead or consult with non-profit organizations. These courses do not prepare students to leave the classroom and become innovators that create solutions to help solve social problems.

WPI currently has a unique position that if used to full potential would provide a SE program unlike any other SE programs found at other universities. Other universities' SE projects involve such activities as consulting to U.S. non-profit organizations for a short period of time to identify problems they have and try to solve them. As seen above, WPI sends students out to the field, often in different countries, to solve social problems affecting large groups of people. At the end of these projects, a clear result is seen in the improvement of the situation. So while WPI students are not taking formal SE courses in the classroom, they are leaving their homes and *practicing* SE in many areas of most need.

## **Methodology**

Our work on the project will fit roughly into three components, which will be completed in order, though significant overlap between parts is expected. We will begin the project with research into what is considered social entrepreneurship in order to gain a working definition of the term as well as to produce a hypothesis that will guide the purpose and scope of our project and its end goal. This research will also explore current theories and applications of social entrepreneurship. This will give us some insight into how projects with a social focus are being managed and the different directions social entrepreneurship has taken in recent years.

After research into social entrepreneurship itself, we will look into how the WPI projects system operates, as well as projects that have been completed or are currently in progress. By looking at past projects and project topics we can see how social entrepreneurship would fit into the current system. As somewhat of a continuation of the first section of research into the project, we will also contact other universities and social entrepreneurship groups. This will allow us to see what sorts of structures are currently implemented and how they are and are not successful at their respective institutions.

The third component of the project will involve the possible implementation of a social entrepreneurship structure into the university in some capacity. We plan on determining student and faculty interest in the idea of a new project structure for social entrepreneurship using methods including surveys, focus groups, or interviews. We would also look into funding for whatever social entrepreneurship entity is created, both from within WPI as well as outside sources willing to fund such a project. This would also involve learning about the process for proposing a new formal entity, so that we may undertake this task towards the end of the project.



If a more formal structure is determined to be valuable to the university and its students, the project will culminate with a proposal for an appropriate project structure, division or project center.

## Appendix B – Questions for University Questionnaire

1. What is (name of university)'s definition of Social Entrepreneurship?
2. How many students are involved in your Social Entrepreneurship program (only include students involved in credit earning activity, do not count clubs or organizations)?
3. If you offer any credit earning Social Entrepreneurship programs, how many students are involved? (For universities that we do not know about their SE program).
4. How many professors are involved in Social Entrepreneurship programs at (university name) (include both credit and non-credit programs)?
5. How long has your formal Social Entrepreneurship structure been in existence?
6. (If unknown) Does (university) offer courses in the Social Entrepreneurship field?
7. (If courses offered is known, but not what courses) Can you provide a course list and description of the Social Entrepreneurship courses offered at (university)?
8. (If unknown) Does (university) offer a Certificate Program? If so, what is required in order to obtain this certificate? Please provide a course list with descriptions.
9. (If known) What does (university) require in order to obtain a certificate in Social Entrepreneurship? Please provide a course list with descriptions.
10. Does (university) have a department for Social Entrepreneurship that is separate from the Entrepreneurship department?
11. Does (university) have a center for Social Entrepreneurship? If yes, what does this center offer?
12. Does (university) incorporate projects into the Social Entrepreneurship curriculum? If yes, please describe the projects (purpose, length, credit?).
13. Does (university) offer a major/minor/concentration in Social Entrepreneurship? If yes, what are the requirements to obtain a major/minor/concentration?
14. Are mentorships/fellowships/internships a part of (university)'s Social Entrepreneurship program?
15. Are there clubs on (university)'s campus for Social Entrepreneurship? If yes, what are they, what do they do? (Is it possible to get in touch with the student or professor leaders?)
16. Does (university) hold any competitions for Social Entrepreneurship endeavors?

17. Is there any research being done at (university) in Social Entrepreneurship? If yes, what kind and whom may we contact for further information on their research?
18. Does (university) offer anything in Social Entrepreneurship that you feel has been overlooked? Or something that you would like to share with us about (university)'s involvement in Social Entrepreneurship?
19. Does Social Entrepreneurship occur in any other area of the university that you are not in charge of or involved in?

## **Appendix C – Database**

A full version of the database can be found in the uploaded excel file named University SE database Final.

## Appendix D – Questions for Undergraduate Student Body Survey

1. How familiar are you with the concept of entrepreneurship? The concept of social entrepreneurship?
2. How interested are you in the field of entrepreneurship? The field of social entrepreneurship?
3. Have you previously completed or are you currently working on an IQP?
  - 3.1. Was your IQP on campus or off campus?
  - 3.2. Did your IQP involve social entrepreneurship?
    - 3.2.1. Is social entrepreneurship what drew you to the project?
    - 3.2.2. How did it involve social entrepreneurship? *Please explain.*
4. Have you previously completed or are you currently working on an MQP?
  - 4.1. Was your MQP on campus or off campus?
  - 4.2. Did your MQP involve social entrepreneurship?
    - 4.2.1. Is social entrepreneurship what drew you to the project?
    - 4.2.2. How did it involve social entrepreneurship? *Please explain.*
5. How interested would you be in completing an IQP involving entrepreneurship? Involving social entrepreneurship?
6. Have you previously taken or are you currently taking any courses in entrepreneurship?
7. How interested would you be in taking a course focused on social entrepreneurship? A minor in social entrepreneurship?
8. Have you been involved in any entrepreneurship events or activities at WPI? (Specify)
9. How interested would you be in a social entrepreneurship club or event on campus?
10. Have you started a non-profit? If yes, please provide name and brief description.
11. Class Year
12. Major(s)/Minor

## Appendix E – Survey Results

How familiar are you with the concept of...					
Answer Options	Not at All	Not Very	Somewhat	Very Familiar	Response Count
entrepreneurship	68	167	232	98	565
social entrepreneurship	206	255	78	15	554
<i>answered question</i>					<b>565</b>
<i>skipped question</i>					<b>0</b>

How interested are you in the field of...					
Answer Options	Not at All	Not Very	Somewhat	Very Interested	Response Count
entrepreneurship?	62	187	234	82	565
social entrepreneurship?	97	215	205	33	550
<i>answered question</i>					<b>565</b>
<i>skipped question</i>					<b>0</b>

Have you previously completed, or are you currently working on, an IQP?		
Answer Options	Response Frequency	Response Count
Yes	45.1%	255
No	54.9%	310
<i>answered question</i>		<b>565</b>
<i>skipped question</i>		<b>0</b>

Was your IQP on campus or off campus?		
Answer Options	Response Frequency	Response Count
On Campus	41.3%	105
Off Campus	58.7%	149
<i>answered question</i>		<b>254</b>
<i>skipped question</i>		<b>311</b>

Did your IQP involve social entrepreneurship?		
Answer Options	Response Frequency	Response Count

Yes	8.3%	21
No	71.7%	182
Somewhat	20.1%	51
<i>answered question</i>		<b>254</b>
<i>skipped question</i>		<b>311</b>

<b>Is the social entrepreneurship component what drew you to the project?</b>		
<b>Answer Options</b>	<b>Response Frequency</b>	<b>Response Count</b>
Yes	8.6%	6
No	68.6%	48
Somewhat	22.9%	16
<i>answered question</i>		<b>70</b>
<i>skipped question</i>		<b>495</b>

<b>How did your IQP involve social entrepreneurship?</b>	
<b>Answer Options</b>	<b>Response Count</b>
	43
<i>answered question</i>	<b>43</b>
<i>skipped question</i>	<b>522</b>

2. we tried to influence high school aged kids, and especially females to pursue an education and career in engineering

5. We are designing a computer educational tool, which needs to be marketable and attractive to our target audience.

6. I worked with students from a local high school completing a gender equity study. The focus of this study was proving or disputing the stereotype that women tend to prefer biology and dislike chemistry and physics whereas men are the opposite.

8. Working with a local municipality to upgrade current database and information dynamics.

9. Created a Science and Engineering Club for an inner city high school, ran it, and helped the students

10. deaf services and access to interpreters

11. Work with SIFE an organization in Thailand that promotes entrepreneurship to integrate a hydroponic system in a curriculum in a middle/high school while incorporating business activities.

**13.**We needed to develop a way to encourage children to be more interested in natural science. In order to do this, we needed to advertise open houses and meet with teachers to convince their students to participate.

**14.**We interviewed local authorities in Namibia and collected information to determine how they managed water and sanitation. Then we presented our data to the sponsor who is currently forming a committee to improve communication in the water basin. You may say the sponsor used social entrepreneurship by forming the committee... maybe?... I'm not positive on the exact definition

**15.**Not sure if I understand the term correctly, but in rural Thailand, there is limited laboratory learning so we designed and implemented three science lab activities at schools in rural Thailand.

**16.**It was a feasibility study for an organization that helps starting entrepreneurs.

**17.**We were updating the exhibits at a public science museum in order to increase visitation. Sat,

**18.**Creating a link between WPI students and resources and non-profit organizations.

**22.**I worked with a nonprofit organization to help with a project that uses digital photography to monitor the environment. I guess that could be considered social entrepreneurship.

**24.**We are studying the impact of Stem Cell research and product development on the economy so although our project directly deals with monetary impact, most people involved in the field are social entrepreneurs.

**25.**We used what resources were available to develop a recycling program.

**26.**Our IQP involves a theme park created to provide jobs and entrepreneurial training to residents of poor communities nearby.

**27.**we did market research to help determine if it would be profitable for freshwater fish farmers to "Go Green"

**28.**Our IQP analyzed Hong Kong's harbour front from the perspective of tourists, looking for ways to improve the quality, activity, and draw of the area.

**29.**We had to try to engage the community to help itself.

**30.**We created a laboratory program with the aim of having Thai teachers encourage creativity, speculation and the adherence to the scientific process (esp trial and error and hypothesizing) in their students.

**32.**working on a redevelopment plan for a poor community



33.developing an outreach programs for engineering diploma students

35.It is a study of the social and economic effects brought about by the advancement of automotive technology in motorsports.

36.IN Costa Rica, a group called Project Link worked with Angel Investors to make high risk/high return investments in local startups. The goal of this organization was to support innovation that was occurring in Costa Rica rather than having entrepreneurs go abroad for funding. Our group also worked with local universities to bridge them with Project Link to foster an environment of entrepreneurship in Costa Rica. This would be accomplished via entrepreneurship seminars/courses.

37.RFID is a fairly new technology. We are going to use it to develop a working system to aid the blind with the organization of items as well as indoor navigation.

38.My project was in South Africa and my group created a set of best practices for the New Housing Department to build healthy communities--basically instead of just building houses wherever, recreational centers and health centers and job opportunities should be created at the same time.

39.Tied in ways for students in a university awareness program to participate and volunteer in social entrepreneurship programs.

40.My IQP was in Venice, and our goal was to assess the handicapped mobility of the city. The social aspect was to take what we had learned about the city and attempt to give suggestions to change the city to make it more handicapped accessible. Assuming I understood the description of social entrepreneurship, our project was related to the concept.

43.Medical Device Design for Third World Countries

<b>Have you previously completed, or are you currently working on, an MQP?</b>		
<b>Answer Options</b>	<b>Response Frequency</b>	<b>Response Count</b>
Yes	24.0%	134
No	76.0%	425
<i>answered question</i>		<b>559</b>
<i>skipped question</i>		<b>6</b>

**Was your MQP on campus or off campus?**

Answer Options	Response Frequency	Response Count
On Campus	76.1%	102
Off Campus	23.9%	32
<i>answered question</i>		<b>134</b>
<i>skipped question</i>		<b>431</b>

<b>Did your MQP involve social entrepreneurship?</b>		
Answer Options	Response Frequency	Response Count
Yes	2.2%	3
No	88.8%	119
Somewhat	9.0%	12
<i>answered question</i>		<b>134</b>
<i>skipped question</i>		<b>431</b>

<b>Is the social entrepreneurship component what drew you to the project?</b>		
Answer Options	Response Frequency	Response Count
Yes	6.3%	1
No	81.3%	13
Somewhat	12.5%	2
<i>answered question</i>		<b>16</b>
<i>skipped question</i>		<b>549</b>

<b>How did your MQP involve social entrepreneurship?</b>	
Answer Options	Response Count
	8
<i>answered question</i>	<b>8</b>
<i>skipped question</i>	<b>557</b>

had to deal with lab results and discuss them with companies about the quality of their product

We are making an educational toy that has to be as affordable and scalable as possible.

Project required a change of thinking for entire company group; social change was needed in accepting

new ways of thinking and new methods of practice.

cancer research

Development of Medical Device

<b>How interested would you be in completing...</b>					
<b>Answer Options</b>	<b>Not at All</b>	<b>Not Very</b>	<b>Somewhat</b>	<b>Very Interested</b>	<b>Response Count</b>
an IQP involving entrepreneurship?	122	158	206	57	543
an IQP involving social entrepreneurship?	138	173	191	38	540
<i>answered question</i>					<b>544</b>
<i>skipped question</i>					<b>21</b>

<b>Have you previously taken, or are you currently taking, any courses in entrepreneurship?</b>		
<b>Answer Options</b>	<b>Response Frequency</b>	<b>Response Count</b>
ETR 3633 – Entrepreneurial Selling	32.3%	10
ETR 3910 – Recognizing and Evaluating New Venture Opportunities	16.1%	5
ETR 3920 – Planning and Launching New Ventures	19.4%	6
ETR 4930 – Growing and Managing New Ventures	16.1%	5
Other (please specify)	54.8%	17
<i>answered question</i>		<b>31</b>
<i>skipped question</i>		<b>534</b>

<b>How interested would you be in taking...</b>					
<b>Answer Options</b>	<b>Not at All</b>	<b>Not Very</b>	<b>Somewhat</b>	<b>Very Interested</b>	<b>Response Count</b>
a course focused on social entrepreneurship?	135	171	198	39	543
a minor in social entrepreneurship?	228	195	103	17	543
<i>answered question</i>					<b>544</b>
<i>skipped question</i>					<b>21</b>

<b>Have you been involved in any entrepreneurship events or activities at WPI? (i.e. Entrepreneurship club, Workshops, Kalenian Award, etc.)</b>		
<b>Answer Options</b>	<b>Response Frequency</b>	<b>Response Count</b>
Yes	7.0%	38
No	93.0%	506

If yes, please specify.	31
<i>answered question</i>	<b>544</b>
<i>skipped question</i>	<b>21</b>

<b>How interested would you be in a social entrepreneurship club or event on campus?</b>		
<b>Answer Options</b>	<b>Response Frequency</b>	<b>Response Count</b>
Not at All	24.6%	134
Not Very	43.6%	237
Somewhat	28.9%	157
Very Interested	2.9%	16
<i>answered question</i>		<b>544</b>
<i>skipped question</i>		<b>21</b>

<b>Have you started a business or non-profit?</b>		
<b>Answer Options</b>	<b>Response Frequency</b>	<b>Response Count</b>
Yes	5.3%	29
No	94.7%	515
If yes, please provide a name and description.		23
<i>answered question</i>		<b>544</b>
<i>skipped question</i>		<b>21</b>

<b>Please select your class year:</b>		
<b>Answer Options</b>	<b>Response Frequency</b>	<b>Response Count</b>
2009	23.4%	127
2010	22.9%	124
2011	24.9%	135
2012	28.8%	156
2013	0.0%	0
<i>answered question</i>		<b>542</b>
<i>skipped question</i>		<b>23</b>

## Appendix F – Questions for Focus Group

1. What do you think entrepreneurship is?
2. Do you have any prior experience or have you been involved with entrepreneurship? Have you seen or heard of any events on campus?
3. Have you taken any classes on entrepreneurship?
4. What do you think social entrepreneurship is?
5. Have you seen or heard of social entrepreneurship?
6. Have you finished or are you currently working on your IQP? What was it about?
7. When you found your IQP, had you looked for a certain project or did one just come your way?
8. If you had a choice between a regular IQP and one with entrepreneurship or social entrepreneurship, would you be more interested in picking one with on entrepreneurship or social entrepreneurship?
9. What would be the draw of choosing a project with social entrepreneurship, for you?
10. If you've heard about entrepreneurship or social entrepreneurship events and have not gotten involved with any, what are your reasons for doing so?
11. If you were to get involved with social entrepreneurship, what would be most appealing to you – seminars and workshops, IQPs, courses, etc?
12. Are you interested in a setup similar to Women's Industry Network?
13. Do you have any additional comments?
14. Would you like social entrepreneurship to come to WPI?

## Appendix G – Transcript of Focus Group Session

Moderator: Dave Mullen (D)

Note Takers: Divya Mathew, Jillian McMillen

Date & Time: Wednesday, February 25<sup>th</sup>, 2009, 12:00pm

Location: Morgan Room, Campus Center

Participant Information:

Number	Class Year	Major
P1	Freshman	Computer Science
P2	Sophomore	Robotics Engineering
P3	Junior	Environmental Engineering
P4	Senior	Biology and Bio-Technology
P5	Sophomore	Interactive Media and Game Development
P6	Junior	Management Information Systems - c

Focus Group Notes:

- D: What do you think entrepreneurship is?
  - P1 – Starting and running a business
  - P2 – Someone takes their ideas and designs and starts a business
  - \*Other participants agreed with these explanations
  
- D: Do you have any prior experience or have you been involved with entrepreneurship? Have you seen or heard of any events on campus?
  - P5 – Is in the process of starting a photography business. Uses connections from an art job to gain information on what to do and how to go about it
  - P2 – Has attended ‘Dinner with Entrepreneurs’ events, seminars and workshops during entrepreneurship week; thinks that events occur rarely and with intervals in between
  - P1 – Has heard of the elevator pitch contest; has attended entrepreneurship workshops
  - P6 – Has participated in a number of events – ‘Dinner with Entrepreneurs’, seminars and workshops during entrepreneurship week, the WPI Venture Forum, the elevator pitch contest
  - \*All participants have seen or heard of events taking place around campus
  
- D: Have you taken any classes on entrepreneurship?

P6 – Has taken the first entrepreneurship class (ETR 3910)

P1 – Has taken the Great Problem Seminar course; thinks it might have elements of entrepreneurship in it

\*Other participants have not taken courses on entrepreneurship

- D: What do you think social entrepreneurship is?

P6 – Starting a business with a social mission in mind or to accomplish a social mission

P2 – Entrepreneurship as a group or social exercise. An individual has an idea and other people latch on to it and start a business as a group

P4 – Has never heard of the term

P5 – Entrepreneurial ventures involving a social topic or something that benefits society

- D: Have you seen or heard of social entrepreneurship?

P6 – Has heard about the course on clean energy and the sustainability team, thinks these involve social entrepreneurship

P5 – Heard of it for the first time through this project

\*Other participants agreed with P5

At this point in time, the participants were given our definition of social entrepreneurship. The definition was displayed on a PowerPoint slide and was further explained by us verbally.

- D: Have you finished or are you currently working on your IQP? What was it about?

P2, P3, and P4 – Have finished their IQPs

P6 – Is in the process of completing the IQP

P1, P5 – Have yet to do their IQPs

P3 – Analyzed the feasibility of developing a place/organization (incubator) that helps entrepreneurs start their business in order to help the Worcester economy

P4 – Created an aquaculture database in Costa Rica

P2 – Created an information database to act as an information hub to gather current resources that will be presented in an easy format

- D: When you found your IQP, had you looked for a certain project or did one just come your way?

P2– IQP just “fell in my lap”

P6– Wanted to have a good IQP and looked for one; found an innovation IQP and thought it might be interesting

P3 – Was assigned to IQP

P4 – Chose Costa Rica Project Center and then rated interest in available projects; was assigned to one of the projects

P5– Worked on extending a previous IQP that he was interested in

P2, P3, P4 – Were more concerned with finding an IQP in time than what the topic was about

P5, P6 – Were concerned with finding an IQP that was interesting
- D: If you had a choice between a regular IQP and one with entrepreneurship or social entrepreneurship, would you be more interested in picking one with on entrepreneurship or social entrepreneurship?

P1, P2, P6 – Are definitely interested

P3 – Thinks it depends on how it is defined and marketed; Needs the concept to be thoroughly explained because the term is too vague.

P4 – Thinks it depends on the project and how entrepreneurship or social entrepreneurship would fit into it

P5– Thinks it depends on how the project is marketed and explained
- D: What would be the draw of choosing a project with social entrepreneurship, for you?

P1, P3, P4, P5– The ‘social cause’ aspect

P1 – Thinks it’s a good opportunity because you also gain business skills while helping a social cause
- D: If you've heard about entrepreneurship or social entrepreneurship events and have not gotten involved with any, what are your reasons for doing so?

P4 – Is mildly interested depending on what the event is but usually doesn’t have time to attend the event; does not know a lot about the subject



P2 – Is interested in the events but thinks there is not much follow up on the events

P3– Thinks it takes a big time commitment to start something new [start a business]; thinks entrepreneurship is not really for everyone; enjoys learning about it and talking to people about it, but would never get very involved in entrepreneurship or social entrepreneurship by starting a business

P1 – Thinks that since there is so much stuff to do in seven weeks with regards to classes, it's hard to really work on your own venture ideas

- D: If you were to get involved with social entrepreneurship, what would be most appealing to you – seminars and workshops, IQPs, courses, etc?

P1 – Thinks workshops would be good idea; thinks one can gain different business skills and practice them every two to three months

P5 – Thinks a minor that didn't take too much extra work to get done would be interesting; it should be substantial but not schedule crippling

P4 – Thinks doing something outside of class gets overwhelming; thinks workshops would be great as they are less formal and time consuming

P3 – Has heard of Assumption having business plan competitions and thinks we could follow the same model; also thinks we can have entrepreneurs coming in as speakers

P1 – Thinks we can follow The Investment Club (TIC) model which is not too time consuming but one learns a lot in the allotted time and there's a lot of follow up from the teacher; thinks something similar with regards to social entrepreneurship would be interesting.

- D: Are you interested in a setup similar to Women's Industry Network?

P3– Thinks it would have to be well organized and would have to bring in experienced professionals

P2– Thinks that would be a great idea

P4 – Thinks it does not seem to be a huge time commitment; believes it would be a great idea and more people would be able to attend due to undemanding time commitments.

- D: Do you have any additional comments?

P3 – Thinks we should consider starting a club or having a course for credit; thinks students can go and visit Martin Luther King Center if interested in starting a business

- D: Would you like social entrepreneurship to come to WPI?

P3– Would not join a club or course but would be interested in a workshop series

P4 – Thinks social entrepreneurship is actually more interesting than entrepreneurship; would take an elective class (if I wasn't a senior)

P5 – Would take an elective, if time was available

P1 – Is definitely interested in the topic

P3– Thinks a lot of people would be interested if the word really got out about Social entrepreneurship offerings at WPI

## Appendix H – Questions for Professor Interviews

1. What is your experience working with social causes?
2. What do you consider social entrepreneurship to be? Do you have any experience/have you been involved with social entrepreneurship in any way?
3. Is social entrepreneurship something that you would be interested in?
4. Where have your previous/current projects' topics come from? (Project Sponsors/Program Director/Advisors/Students)
5. Do any projects that you have advised or research that you have performed fit into our definition of social entrepreneurship? Have any of you heard of any projects/personal research/events on campus that fit into this definition?
6. Do you see potential to add entrepreneurship to any of these projects/personal research or project centers that you have worked with as a 'next step'? If so, how do you think that would happen – is it something you or another professor is interested in?
7. What do you think it would take to get social entrepreneurship into IQPs – Professors /sponsors/students/others?
8. Do you perceive student interest in social entrepreneurship?
9. Do you think we should include some form of Social Entrepreneurship into WPI's curriculum? Why?
10. Here is a list of possibilities for the curriculum/activities on campus
  - i. Workshops
  - ii. Seminars
  - iii. Club/networking
  - iv. Minor
  - v. Courses
  - vi. Formal IQP structure
  - vii. Informal IQP categorization
  - viii. No IQP categorization

Do you think any of these are a good idea? If so, which one(s) and why?
11. Do you have any additional comments or suggestions for us?

## Appendix I – Transcript of Interview: Professor Diran Apelian

Interviewer: Jillian McMillen (J)

Interviewee: Professor D. Apelian

Date & Time: Thursday, April 9, 2009, 11:00 am

Location: Professor D. Apelian's office

Professor Apelian, Sc.D., is a Howmet Professor of Mechanical Engineering and the Director of the Metal Processing Institute at Worcester Polytechnic Institute. Professor Apelian's IQP advising interests include conservation; energy demand & supply; energy policy; strategic materials; effect of technology on social systems; entrepreneurship (Apelian).

Brief Introduction (explanation of our IQP; what has been accomplished so far; the goal of the project).

- Prof. Apelian: Start in freshman year as we are with the GPS, the projects are very similar to IQPs – they could actually lead to a very robust IQP or a highly technical MQP in their field – there's frequently no continuity in the IQP and MQP.

If anything, need to make a case for first year.

I personally wouldn't want to see a niche called SE but I think it should be permeated throughout the whole chain of courses. If I'm teaching fluid dynamics, wouldn't it be wonderful to use an application or example to make a point of how it connects with people with real societal issues.

- J: What do you consider SE to be and do you have any experience/been involved with SE or social causes in any way?

Prof. Apelian: Using your know how/skills to have an outcome that makes society a better place in a sustainable way.

- J: Is SE something that you have an interest in?

Prof. Apelian: Yea, of course, I'm very much in favor of SE but it needs to be meshed in with everything else we do, not a separate course. Start from first year.

- J: Have any of your projects/personal research/events on campus so far fit into this definition? Do you see potential to add entrepreneurship to any of these projects/personal research or project centers that you have worked with as a 'next step'? If so, how do you think that would happen – is it something you or another professor is interested in?

Prof. Apelian: Absolutely, all three [projects/personal research/events]. With most everything I do there is a unifying theme, a big recycling project, a \$2.8 million grant for aluminum mini mills – recycling of aluminum.

- J: Do you perceive a student interest in SE?

Prof. Apelian: More so today than ever, this generation has more efficacy and connection – maybe it's the Facebook generation, but it's a very different generation.

- J: Do you think we should include some form of SE into WPI's curriculum?

Prof. Apelian: Yes, but not as a separate course. It should be melded in and permeated through all the courses, IQP, and the first year experience, can also be done in the entrepreneurship course.

- J: Do you like any of the options we are considering as recommendations for WPI?

Prof. Apelian: Need to make Engineers without Borders more out there because it fits very well, or just have on our website something that has all the social activities listed.

## Appendix J – Transcript of Interview: Professor Holly Ault

Interviewer: Jillian McMillen (J)

Interviewee: Professor H. Ault

Date & Time: Friday, March 27, 2009, 9:00 am

Location: via email

Professor Ault is an Associate Professor of Mechanical Engineering at Worcester Polytechnic Institute. Professor Ault is very interested in social causes and some of her IQP advising interests include rehabilitation and design of assistive devices for the disabled and technological transfer for assistive devices.

- J: What do you consider Social Entrepreneurship to be and what is your experience(s) with it? What is your experience with social causes?

Prof. Ault: I had not heard the term used before, so I really do not have a definition. That is why I asked for yours.

I have been active with the youth group in my church for over 30 years. Each summer, my husband and I lead a group of high school youth on a “work camp” to help out in disadvantaged neighbourhoods and communities in both urban and rural settings. Usually our projects involve construction, food pantries, soup kitchens and similar activities. Many of these work camps have been done in conjunction with Habitat for Humanity and other similar organizations.

I have also been to New Orleans to work on construction projects associated with hurricane Katrina relief efforts (three week-long trips) and associated efforts to provide books, toys, and other items.

At WPI, I have been involved with incorporating assistive technology design projects into courses such as ME2300 and ME3506. Assistive technology and rehabilitation engineering involves designing devices for persons with disabilities. I also try to raise awareness of disability issues and accessibility through my interactions with others.

I occasionally do volunteer work for agencies such as Heifer Project. I am also interested in promoting engineering to young people, particularly girls, and as such I have worked with Camp REACH since its inception.

- J: Our definition of SE:

*Social entrepreneurship is exercised where a person or group of persons or an organization, across any sector, aim/s to create sustainable social value of some kind, and pursues that goal through (1) recognizing and exploiting opportunities to create this value, (2) employing innovation and revolutionizing existing systems, (3) understanding the positive effects of market forces on development, (4) involving some business-inspired elements whether through the adaptation of business methods to create or enhance social value, or the creation and operation of a social purpose business, or the formation of cross-sector partnerships, and (5) brushing aside limitations in available resources.*

- J: Do you have an interest in SE?

Prof. Ault: Based on your definition, I would probably say no, as the business and development activities are not of interest to me.

- J: Do any projects that you have advised or research that you have performed fit into our definition of SE? If yes, which projects/research?

Prof. Ault: A number of IQPs might be categorized in this way. In particular, some of the projects that I am advising this term in Namibia involve looking at economic development opportunities.

- J: Do you see any potential to add entrepreneurship to any of these projects/personal research or project centers that you have worked with as a 'next step'? If so, how do you think that would happen – is it something you or another professor is interested in?

Prof. Ault: I do not see “entrepreneurship” as being a focus or element in a project center. Rather, it may be appropriate for some specific projects, on a case-by-case basis.

- J: Do you perceive there to be student interest in SE?

Prof. Ault: I have no data on this.

- J: Do you think WPI should integrate some form of a SE program into its curriculum?

Prof. Ault: I do not view this as a curriculum element, but perhaps as a co-curricular activity.

Thus, a-c below would be suitable activities.

- J: These are the possible recommendations that we have come up with so far for the curriculum or campus activities (if you have any questions about these, feel free to ask me for further clarification):

- i. Workshops
- ii. Seminars
- iii. Club/networking
- iv. Minor
- v. Courses
- vi. Formal IQP structure
- vii. Informal IQP categorization
- viii. No IQP categorization



## Appendix K – Transcript of Interview: Professor Chrysanthe Demetry

Interviewer: Jillian McMillen (J)

Interviewee: Professor C. Demetry

Date & Time: Wednesday, April 1, 2009, 3:00 pm

Location: Professor C. Demetry's office

Professor Demetry is an Associate Professor of Mechanical Engineering at Worcester Polytechnic Institute. Professor Demetry's IQP advising interests include water quality; environmental issues related to mountains; assessments of college life, including WPI; introducing new teaching materials (Demetry).

Brief Introduction (explanation of our IQP; what has been accomplished so far; the goal of the project).

- J: Is SE something that you have an interest in?

Prof. Demetry: Yes, from a personal perspective, definitely these types of projects make ideal IQPs and MQPs.

- J: Have any of your projects/personal research/events on campus so far fit into this definition?

Prof. Demetry: Not my personal research, but definitely some IQPs that I've advised or set up as a Bangkok advisor – the hydroponic project (should be listed online very soon, was completed in C term). There might be additional projects with the SIFE (Students in Free Enterprise) chapter in Bangkok in the future. An IQP where a renowned chef wanted a better food cart design for micro enterprise.

- J: Do you see potential to add entrepreneurship to any of these projects/personal research or project centers that you have worked with as a 'next step'? If so, how do you think that would happen – is it something you or another professor is interested in? What do you think it would take to get SE into IQPs? Professors/sponsors/students/other?

Prof. Demetry: The challenge is that you can only do so much in a term. Professor Jiusto has come up with a great way of making sure projects are interconnected. Best way to do it would be to create follow up projects.

- J: Do you perceive student interest in SE?

Prof. Demetry: Absolutely, the students who apply to Bangkok say they are looking for a project that makes a difference in a tangible way.

- J: Do you think we should include some form of SE into WPI's curriculum?

Prof. Demetry: The more avenues that students can be involved in the better. Many students might be interested in a student group (SIFE), something that's very involved would be best. It would be great if more students were exposed to business principles.

- J: Do you like any of the options we are considering as recommendations for WPI?

Prof. Demetry: They all sound really exciting. Trust what students say. I don't really think any are infeasible. There are potential SE IQPs in the Worcester Youth Program. What's really important is a professor who is a champion for SE. It would be great to have some on campus SE IQPs.

- J: Any comments or suggestions for us?

Prof. Demetry: Have some kind of resource for information for faculty who are not familiar with SE and might be advising a SE IQP.

## Appendix L – Transcript of Interview: Professor Arthur Gerstenfeld

Interviewer: Divya Mathew (D)

Interviewee: Professor A. Gerstenfeld

Date & Time: Wednesday, March 25, 2009, 11:15 am

Location: Professor A. Gerstenfeld's office

Professor Gerstenfeld is a Professor in the Department of Management and the Director of the Wall Street Program at WPI. His IQP advising interests lie in the areas of natural resource management, environmental conservation and preservation, effect of technology on social systems, impact of technical change on job & business, safety management, occupational safety & health, economics in developing countries, technological transfer, appropriate technology, and computers & education (Gerstenfeld).

Provided brief introduction (explanation of our IQP; what has been accomplished so far; the goal of the project).

- D: What do you consider Social Entrepreneurship to be? Do you have any experience/have you been involved with Social Entrepreneurship or social causes in any way?

Prof Gerstenfeld: Social Entrepreneurship is about starting a new organization or business that is more focused on a social cause than the product. It can and should involve profit to sustain the venture. I really don't know very much about it.

I was involved with starting the entrepreneurship program at WPI,

Let me tell you what I've done and you can decide if it is social entrepreneurship. I started a company to develop a better system for training air traffic controllers. I think that might count as social entrepreneurship. The social aspect would be the training and improvements to air safety. The profit comes from the traffic control system which is the product. The social cause is separate from the product.

Provided our definition of social entrepreneurship.

- D: Is Social Entrepreneurship something that you have an interest in?

Prof Gerstenfeld: Definitely

- D: Have any of your projects/personal research/events on campus so far fit into this definition?

Prof Gerstenfeld: I am advising this new project that is analyzing ways to lower the impact of the ozone level on the atmosphere by reducing carbon monoxide levels. We are focusing on the hybrid car as method to do this. The students are gathering data from different areas to understand causes and effects.

We are forming a new Kenya Scholarship program. This year we will bring our first student from Kenya to WPI to study for two years in our MBA program fully paid for. He or she will then return to Kenya and use the tools he learned about while at WPI in order to help Kenya. The plan is to grow the program from one student to three students and then five. The money I raised for the program is all from outside sources but once underway we will apply for government funding from USAID and Ford Foundation.

I have also heard of a Cape Town group that is combining six projects into one big project on improving living conditions in very poor settlements. The project is divided into different categories like water, housing, etc.

- D: Do you see potential to add entrepreneurship to any of these projects/personal research or project centers that you have worked with as a ‘next step’?

Prof Gerstenfeld: Sure, the hybrid car is a perfect example of an innovation that has social impact.

- D: What do you think it would take to get Social Entrepreneurship into IQPs – Professors /sponsors/students/others?

Prof Gerstenfeld: I would be interested in advising these projects

- D: Do you perceive student interest in Social Entrepreneurship?

Prof Gerstenfeld: Definitely, if they understand what it is all about. It needs to be clearly defined and explained.

- D: Do you think we should include some form of Social Entrepreneurship into WPI's curriculum? Why?

Prof Gerstenfeld: Yes. There are a lot of good IQPs that can be channeled to this area. WPI is an innovative school, and is entrepreneurially minded so it's almost a natural step to take. It would fit in perfectly as the nature of the IQP provides a running start.

Furthermore, there is a movement in the country to greatly increase new products and processes. President Obama is now pushing for more innovations and Social Entrepreneurship is an innovative way of approaching social problems

Provided list of possibilities for the curriculum/activities on campus

- ix. Workshops
- x. Seminars
- xi. Club/networking
- xii. Minor
- xiii. Courses
- xiv. Formal IQP structure
- xv. Informal IQP categorization
- xvi. No IQP categorization

- D: Do you think any of these are a good idea? If so, which one(s) and why?

Prof Gerstenfeld: All of them are very good ideas. The minor is a good possibility and we could do a social entrepreneurship IQP as part of the minor.

- D: Do you have any other comments or suggestions?

Prof Gerstenfeld: You should give examples so people know exactly what you are talking about.

You can look into funding sources to provide grants for scholarships, travel, projects, etc. The department of education might be interested in funding these kinds of ideas or programs due to the whole Obama push.

## Appendix M – Transcript of Interview: Professor Hossein Hakim

Interviewer: Jillian McMillen (J)

Interviewee: Professor H. Hakim

Date & Time: Wednesday, April 8, 2009, 3:00 pm

Location: Professor H. Hakim's office

Professor Hakim is an Associate Professor and Associate Department Head of Electrical and Computer Engineering at Worcester Polytechnic Institute. Professor Hakim's IQP advising interests include air pollution; water pollution; natural resource management; energy demand & supply (modeling); electric utilities; economics of health care; resource management; international comparisons; science & society studies; foreign policy; economics in developing countries; assessing educational experience (Hakim).

Brief Introduction (explanation of our IQP; what has been accomplished so far; the goal of the project).

- J: What do you consider SE to be and do you have any experience/been involved with SE or social causes in any way?

Prof. Hakim: Maybe it is entrepreneurship applied to social problems. Various IQPs could be qualified as SE – only some have elements of entrepreneurship though.

- J: Is SE something that you have an interest in?

Prof. Hakim: It's interesting to advise projects of a SE nature - working on projects that create social value. Raised \$6000 for Abby House through an IQP - had to be innovative to do that, which is an entrepreneurial talent.

- J: Where have your previous/current project topics come from? Did you create them? Did they come from a project sponsor/program director/students?

Prof. Hakim: I come up with the projects myself. One for next year about building a website for homeless people to find different shelters and what they offer/require. A project

evaluating SNAP, sponsored by SGA. I have a project that is almost finished about improving APO. Abby's House and social volunteering match-up project. So far it has been mostly me to find projects; I try to create value for student government. Pushing dances into the community.

- J: Have any of your projects/personal research/events on campus so far fit into this definition? Do you see potential to add entrepreneurship to any of these projects/personal research or project centers that you have worked with as a 'next step'?

Prof. Hakim: I advised student government to have a board so that more experienced people can give them more ideas. Now seven faculty members get together twice a year for a meeting with the students to provide suggestions. Must find students that are interested enough and have the capability to do it on their own - creative students.

- J: What do you think it would take to get SE into IQPs? Professors/sponsors/students/others?

Prof. Hakim: Sponsors want something specific; they usually already know exactly what they want. The method as to how it is approached can be entrepreneurial and innovative.

Prof. Hakim: I think what is lacking on this campus is an awareness of major social issues. If you want to create more SE, need to focus more on social issues on this campus. Unless faculty comes up with an idea, students don't typically have these kinds of ideas.

- J: Do you perceive a student interest in SE?

Prof. Hakim: There is interest in social issues and social problems. Good students have the capacity to be innovative, but many of them have no awareness of social issues. Need to find ways to get them to know about these issues - more social type courses could help this.

- J: Do you think we should include some form of SE into WPI's curriculum?

Prof. Hakim: Absolutely - emphasis on the social.

- J: Do you like any of the options we are considering as recommendations for WPI?

Prof. Hakim: It's really good to have all students involved and gain active momentum so that students are studying the world, and because we are so low on that, it is necessary.

Maybe lectures once a semester – a big name. Also if you get something that interests Holy Cross and Clark students then there will be more knowledgeable activities. There are churches and missions that take students to Dominican Republic, for example, which would create awareness. So you can connect the church and maybe have a presentation about what was observed if students are unable to travel. Maybe a panel of homeless people to come in and present something.

- J: Any comments or suggestions for us?

Prof. Hakim: I think that this is a very good idea. Some of the stuff you just have to see if it works with the students. Student awareness can be improved much more.



## Appendix N – Transcript of Interview: Professor Scott Juisto

Interviewer: Divya Mathew (D)

Interviewee: Professor S. Juisto

Date & Time: Monday, March 30, 2009, 11:00 am

Location: Professor S. Juisto's office

Professor Juisto is an assistant professor and the director of the Cape Town Project Center in South Africa. His research interests are in environmental policy and philosophy, particularly energy policy and the pursuit of sustainability at sub-national scales. He has recently begun extending these interests to consider how city agencies, NGOs and academic programs can address issues of sustainable community development in informal settlements, particularly in Cape Town, South Africa (Juisto).

Provided brief introduction (explanation of our IQP; what has been accomplished so far; the goal of the project).

- D: What do you consider Social Entrepreneurship to be? Do you have any experience/have you been involved with Social Entrepreneurship or social causes in any way?

Prof Juisto: I have a vague idea about what it is. I think it is entrepreneurship in a business context or a business such as a nonprofit which is focused on civic outcomes. It could also be a branch of a business that is involved in philanthropy. The business context provides a triple bottom line.

I haven't really worked with the concept myself but it is vaguely familiar.

Provided our definition of social entrepreneurship.

- D: Is Social Entrepreneurship something that you have an interest in?

Prof Juisto: Yes the topic is interesting. There is plenty of scope for people to work on good things. I'm not big on boundaries so I see plenty of scope for the subject.

- D: Where have your previous/current project topics come from? Did you create them? Did they come from a project sponsor/program director/students?

Prof Jiusto: The ideas for the projects have come out of discussions with sponsors and through my own reading of the analysis of challenges to sustainable community development in informal settlements.

- D: Have any of your projects/personal research/events on campus so far fit into this definition?

Prof Jiusto: Around three years ago, in Puerto Rico, I advised a project that was sponsored by McNeil pharmaceuticals. The students had to design a compost system for the company that turned out to also benefit the community.

I have worked less with business than with non-profits but I think it's fine to add on business elements. I think it is important that the business provides enough money for growth but also improves the well being of the community.

- D: Do you see potential to add entrepreneurship to any of these projects/personal research or project centers that you have worked with as a 'next step'?

Prof Jiusto: There are plenty of opportunities to do IQPs in this theme. The idea for the project would come out of a conversation. I would love to have students work on a new project that explores new options for special kinds of roofs used in informal settlements. I think this could be transformed into a business.

- D: What do you think it would take to get Social Entrepreneurship into IQPs – Professors /sponsors/students/others?

Prof Jiusto: It is easy to label the project as social entrepreneurship. I as a center director and project advisor can do that. The trouble in creating new projects or centers is that there are many logistical hurdles. The difficult part is that someone here has to organize the project and communicate with the sponsor who is in Cape Town.

If there is a program on social entrepreneurship than students can learn more about the subject. If the management department wants to encourage IQPs of a social entrepreneurship

nature then they should set up workshops or resources for center directors and project advisors as well as students.

- D: Do you perceive student interest in Social Entrepreneurship?

Prof Jiusto: Sure, if there are enough resources and support available to students.

- D: Do you think we should include some form of Social Entrepreneurship into WPI's curriculum? Why?

Prof Jiusto: Sure. Not something very elaborate. Right now the biggest need is for higher quality on-campus IQPs. This has been an unmet market and I think there are many entrepreneurial opportunities in the area.

Provided list of possibilities for the curriculum/activities on campus

- i. Workshops
- ii. Seminars
- iii. Club/networking
- iv. Minor
- v. Courses
- vi. Formal IQP structure
- vii. Informal IQP categorization
- viii. No IQP categorization

- D: Do you think any of these are a good idea? If so, which one(s) and why?

Prof Jiusto: All of these ideas sound plausible.

## Appendix O – Transcript of Interview: Professor Robert Krueger

Interviewer: Jillian McMillen (J)

Interviewee: Professor R. Krueger

Date & Time: Wednesday, April 1, 2009, 1:30 pm

Location: Professor R. Krueger's office

Professor Krueger is an Assistant Professor of Geography, Director of both the Worcester Community Project Center and the Environmental Studies Program at Worcester Polytechnic Institute. His areas of interest mainly include urban sustainability and economic development and the environment. Professor Krueger seeks to apply his research to the Worcester community in order to revive the area through helping to empower the under-employed portion of the population.

Brief Introduction (explanation of our IQP; what has been accomplished so far; the goal of the project).

- Prof. Krueger: SE is a good fit into the curriculum because of the nature of the IQP (social problems integrated with technology).
- J: Is SE something that you have an interest in?  
Prof. Krueger: Yes. My work is based around social justice in the environment and sustainability – I work to help people promote a broader sense of social good.
- J: Where have your previous/current project topics come from? Did you create them? Did they come from a project sponsor/program director/students?  
Prof. Krueger: Usually the community, it's not completely organic. I choose the organizations I want to work with. I come up with projects based off of what is needed in the Worcester community.

- J: Have any of your projects/personal research/events on campus so far fit into this definition?

Prof. Krueger: Yes, through grant writing opportunities; the Creative Industries incubator in Worcester; through research and teaching. I put together a proposal for over \$1 million to create a business development initiative for under employed people.

- J: Do you see potential to add entrepreneurship to any of these projects/personal research or project centers that you have worked with as a ‘next step’? If so, how do you think that would happen – is it something you or another professor is interested in? What do you think it would take to get SE into IQPs? Professors/sponsors/students/other?

Prof. Krueger: Pretty difficult activity [getting SE into IQPs], changing or adding the division numbers would need a champion. Environmental studies has something similar, the challenge is finding an IQP that has a more SE focus. You would need to convince center directors to develop projects for SE - asking professors to deviate from their primary interest in their IQPs. Great things could be done through the Worcester Project Center.

- J: Do you perceive student interest in SE?

Prof. Krueger: It is a really interesting idea, it would be a great minor or degree that went along with the environmental studies degree. Green collar jobs where you’re learning to do green improvements, also a huge interest in promoting green businesses - so to have someone who understands environmental science and also has business skills would have a great opportunity to develop business ideas. You would need to develop strategic partnerships between existing majors to help create an organic development of a SE minor.

- J: Do you think we should include some form of SE into WPI’s curriculum?

Prof. Krueger: Absolutely, because it supports the WPI plan of creating professionals who are critical thinkers that understand their role as a citizen in society. It’s also cross-disciplinary and crosses boundaries.

- J: Do you like any of the options we are considering as recommendations for WPI?

Prof. Krueger: I like the idea of extracurricular activities, if there's going to be a major, it has to be really set up so that students can take it seriously. You need to cultivate the intellectual environment of those students through extracurriculars and also through rigorous coursework - need to cultivate the mindset.

- J: Any comments or suggestions for us?

Prof. Krueger: I recommend not doing a separate division; it would be a good idea to develop relationships with project advisors for this.

## Appendix P – Transcript of Interview: Professor Fred Looft

Interviewer: Jillian McMillen (J)

Interviewee: Professor F. Looft

Date & Time: Monday, April 6, 2009, 1:00 pm

Location: Professor F. Looft's office

Professor Looft is a Professor and Department Head of Electrical and Computer Engineering at Worcester Polytechnic Institute. He advises IQP projects both on campus and off campus in Namibia. Professor Looft's IQP interests are rooted in finding solutions to social problems using entrepreneurial and technological principles. Examples include environmental impact statements; resource management; effect of technology on social systems; environmental risks; conservation of open space planning; transportation planning (Looft).

Brief Introduction (explanation of our IQP; what has been accomplished so far; the goal of the project).

- J: What do you consider SE to be and do you have any experience/been involved with SE or social causes in any way?

Prof. Looft: Entrepreneurship is a talent or an ability to bring an idea to market, the ability or talent to recognize new products or ways of doing business/opportunities for corporate expansion, doesn't have to be a new business, can be inside a business. So SE is recognizing opportunities for expansion, new business, new markets that interface with social experiences – I'm leaving that fairly broad really.

I've been involved with social causes over the years – served at the mustard seed, two IQPs – social volunteering and Namibia.

- J: Is SE something that you have an interest in?

Prof. Looft: In a way, I must because I'm working on an IQP that's similar. Yes, I did another IQP using Wikis to manage social life.

- J: Where have your previous/current project topics come from? Did you create them? Did they come from a project sponsor/program director/students?

Prof. Loof: Create them myself, finding stuff in literature.

- J: Have any of your projects/personal research/events on campus so far fit into this definition? Do you see potential to add entrepreneurship to any of these projects/personal research or project centers that you have worked with as a 'next step'?

Prof. Loof: Blogging and Wikis should be a part of every project center, it's a great way for teams to stay in touch and build a presence, could use the Wikis to create entire projects.

Social networking and social enterprise could easily be worked into WPI's system.

- J: What do you think it would take to get SE into IQPs? Professors/sponsors/students/others?

Prof. Loof: Food for Thought lunch – Dr. Rick Vaz, professors who are interested.

- J: Do you perceive a student interest in SE?

Prof. Loof: Yes, the two projects I had mentioned (social volunteering and Namibia) - the students really ran with it well, the other never really took off, it's really the 'buy in' of the students - if they aren't thinking creatively then maybe they're really good people but more so followers and for SE you have to take ownership and day dream of 'what if' instead of 'why not'.

- J: Do you think we should include some form of SE into WPI's curriculum? Prof. Loof: I think including ETR in general (ETR about risk and mitigating those risks and moving forward). Great Problems Seminar does involve ETR and some SE.



## Appendix Q – Transcript of Interview: Professor Jerome Schaufeld

Interviewer: Divya Mathew (D)

Interviewee: Professor J. Schaufeld

Date & Time: Wednesday, March 25, 2009, 3.15 pm

Location: Professor J. Schaufeld's office

Professor Schaufeld is a professor of practice in the Department of Management. He teaches the five undergraduate entrepreneurship courses offered at WPI (Schaufeld).

Provide brief introduction (explanation of our IQP; what has been accomplished so far; the goal of the project).

- D: What do you consider Social Entrepreneurship to be? Do you have any experience/have you been involved with Social Entrepreneurship or social causes in any way?

Prof Schaufeld: I was introduced to the idea around ten years ago when I first became aware of Investors Circle. I was interviewing for the CEO position of a company and the interview was conducted by a member of the Investors Circle. I was initially working for a paper recycling company. I realized that social entrepreneurship was a common placeholder for a large number of social issues – environmental, sustainability, quality of life, etc. I realized that investors weren't very supportive of or attracted to the idea – maybe because of the main themes of recycling, sustainability, etc. I became hardened to or cynical of the idea after seeing a number of such proposals being declined by investors. It was not robust enough or exciting enough (not high-tech or high-growth). I faced a conflict because I was interested in the cause but not excited by returns

Recently, while thinking of the topic, I pondered the idea of having a class about non-profits. I think that Social Entrepreneurship should not compete with commercial entrepreneurship. It needs to find its own model by building on the themes of commercial entrepreneurship.

Provided our definition of social entrepreneurship.

- D: Is Social Entrepreneurship something that you have an interest in?

Prof Schaufeld: I would definitely be interested in contributing, maybe not in leading or developing the program itself.

I am making the shift from teaching entrepreneurship to commercialization soon.

I would be interested in how one would improve the possibility of success in the area, like what skills, funding, and organizational models would improve success.
- D: Have any of your projects/personal research/events on campus so far fit into this definition?

Prof Schaufeld: Yes, a lot of them; for example, Prof Diran Apelian's work in sustainability. There are a lot of significant initiatives in the areas of sustainability, energy, healthcare, at the class level and the research level.
- D: Do you see potential to add entrepreneurship to any of these projects/personal research or project centers that you have worked with as a 'next step'?

Prof Schaufeld: Yes, this is definitely feasible
- D: What do you think it would take to get Social Entrepreneurship into IQPs – Professors /sponsors/students/others?

Prof Schaufeld: It would have to be a campus wide initiative. Teacher interest could be generated through a number of workshops explaining the field, its impact and how it may affect them.
- D: Do you perceive student interest in Social Entrepreneurship?

Prof Schaufeld: I'm not too sure about student interest. The thing with this topic is that you can't really say that there's no interest. The question is what is the level and intensity of the interest. Student interest could be generated through a speaker series.
- D: Do you think we should include some form of Social Entrepreneurship into WPI's curriculum? Why?

Prof Schaufeld: We definitely need to do something about it; we cannot escape the movement. I agree that Social Entrepreneurship needs to be taught. It shouldn't be left as is; we need a structural model to bring the efforts together. The question is what kind of program should we create to ensure success of the initiative.

I think that rather than developing a new model we should work with our current resources. We need to think about how we can modify or expand current courses, individual teaching methods, etc in order to involve Social Entrepreneurship.

We should evaluate the possibility of having an interactive center, for teachers across campus to come together and share ideas on the subject and discuss how it may affect their fields, how they may incorporate it into their classes, how they can create joint teaching programs, etc. This center could become a very important thought center. It will have the potential to bring in world class thinkers like Al Gore and we can create a great speaker series in collaboration with the other colleges of the consortium

This would establish WPI as an innovator in the field; a thought center educating a new class of thinkers. It would benefit the students as it provides a great career move. It gives students a platform and the credentials to compete in this space and thereby, attracts incoming students.

Provided list of possibilities for the curriculum/activities on campus

- i. Workshops
- ii. Seminars
- iii. Club/networking
- iv. Minor
- v. Courses
- vi. Formal IQP structure
- vii. Informal IQP categorization
- viii. No IQP categorization

- D: Do you think any of these are a good idea? If so, which one(s) and why?

Prof Schaufeld: All of them are good ideas. The kind of programmatic activities that can be generated is endless. The students should be allowed to decide what they want to see in terms of a program.

- D: Do you have any other comments or suggestions?

Prof Schaufeld: The program should be implemented in phases. Phase One would be the creation of the center. Phase Two would involve expanding into the curriculum through classes and projects and speaker series.

Walk before you run.

## Appendix R – Transcript of Interview: Professor Susan Vernon-Gerstenfeld

Interviewer: Dave Mullen (D)

Interviewee: Professor S. Vernon-Gerstenfeld

Date & Time: Tuesday, April 7, 2009, 2:00 pm

Location: via phone

Professor Vernon-Gerstenfeld is the Director of Academic Programs and Planning for WPI's IGSD. Prof. Vernon-Gerstenfeld is also the director of the Costa Rica and Puerto Rico project centers. Advising interests include sustainability, environmental issues, management of water, and the redevelopment of urban areas.

- D: What is your experience working with social causes?  
Prof. Vernon-Gerstenfeld: We have been strongly involved through the IQP program, working in social responsibility, and have worked with corporations that involve themselves with hiring local people in areas that they work in as well as working with schools.
- D: What do you consider social entrepreneurship to be and what is your experience(s) with it?  
Prof. Vernon-Gerstenfeld: I would say it is when you are using technology to do something out of the box and socially responsible.
- D: Do you have an interest in social entrepreneurship?  
Prof. Vernon-Gerstenfeld: I am more interested in solving environmental and social issues as brought by the project sponsors we work with at the different locations. I wouldn't say that I'm not interested. I would say that our projects are proposed by sponsors so that we do not usually approach sponsors with projects that we want to do. We find out what is the priority of the sponsors. The Cape Town center does approach potential sponsors to propose projects.

- D: Do any projects that you have advised or research that you have performed fit into our definition of SE? If yes, which projects/research?

Prof. Vernon-Gerstenfeld: We mostly works with non-profits, there are very few projects involved with making a profit at the project centers. Sustainability is huge in project centers, it is present in almost every project in almost every center. We do see projects involving business principles, management issues and non-conventional solutions. We always look to organizations to define their own needs, so what they identify as relevant issues are what our projects target. There's a strong sense of cultural interaction at the project centers. I don't feel there's necessarily a need for entrepreneurship, as again, the project sponsors identify relevant issues and that generally won't involve creating a business. Whatever is needed by the sponsor is what the program will embrace. Occasionally, a sponsor does want to consider how to develop a business, as in the case of Ponte Verde, a sponsor in Puerto Rico.

- D: Do you see any potential to add entrepreneurship to any of these projects that you have worked with as a 'next step'? If so, how do you think that would happen – is it something you or another professor is interested in?

Professor Vernon-Gerstenfeld: I'm not interested in developing a business, unless it is sponsor driven. There have been some examples in Namibia and Puerto Rico, where the sponsor approached us for help in this manner. Some locations such as Cape Town are different, with projects such as working with citizen's organizations in squatter camps. They bring their own project ideas, and they happen to fit more into the social entrepreneurship idea. I see on-campus projects as an opportunity for students to choose their own projects of interest.

- D: Where have your previous/current project topics come from? (Project Sponsors/Program Director/Advisors/Students)

Professor Vernon-Gerstenfeld: Projects almost always come from project sponsors. An example is Costa Rica, working with the Red Cross. We looked at the international Red Cross, targeted the organization in general, and then identified key players within Costa Rica. We looked into the general topic of disaster mitigations and learned the real need

within that general subject from the group itself. We will often do multiple projects with a single sponsor.

- D: Do you perceive there to be student interest in social entrepreneurship?

Prof. Vernon-Gerstenfeld: Not sure about social entrepreneurship, definitely the environment and sustainability. I feel there is a huge amount of student interest in those areas.

- D: Do you have any comments or suggestions for us?

Prof. Vernon-Gerstenfeld: There are certainly professors involved in social entrepreneurship like Fabio Carrera, and Scot Jiusto, Director of Cape Town. . Another one is Rob Krueger at the Worcester project center. He generally will go into the city, looks at it like a system, identifies needs, and will approach organizations much more proactively. He is more systematic in his approach to finding topics, and works deeply within the Worcester community. The SE continuum is hard to describe, subtle in the ways it is incorporated in current projects.

## Appendix S – Transcript of Interview: Professor Richard Vaz

Interviewers: Divya Mathew, Jillian McMillen, Dave Mullen

Interviewee: Professor R. Vaz

Date & Time: Wednesday, November 20, 2008, 12:00 pm

Location: Professor R. Vaz's office

Professor Vaz is the Dean of the Interdisciplinary and Global Studies Division (IGSD). The IGSD is responsible for overseeing two of the most successful educational innovations to emerge at any college or university in the past half century: the Interactive Qualifying Project (IQP) and the Global Perspective Program. This interdisciplinary requirement brings together students from across the campus to research and address challenges that affect people and communities at home and around the globe in 25 international project centers. Professor Vaz's IQP interests are in the areas of environmental conservation and preservation, sustainability, technology & organizational behaviors; social cost & social change; impact of technical change on job & business, economics in developing countries, introducing new teaching materials, and education & technological literacy

Brief Introduction (explanation of our IQP; what has been accomplished so far; the goal of the project).

- JDD: What is an IQP?

Prof Vaz: WPI's IQPs utilize science and technology to solve a social or economic problem. They revolve around sustainability and human needs.

- JDD: What is the difference between a division and a project center?

Prof Vaz: The divisions don't really serve any purpose. They only exist on paper. The project centers are associated with the Global Perspective Program. Centers are organized by location and not subject. Currently we have 25 different project centers in different locations across the globe.

- JDD: What is the process one would have to go through to create a project center?



Prof Vaz: All you need is a Professor who would agree to be a center director. This professor would most likely need to be an experienced IQP advisor and would also need to have a lot of experience in his field of work. You would also need to find an organization/s that has/have a large number of projects revolving around this subject. When we look for projects we don't define the problems ourselves but we look for existing ones and solve them.

- JDD: What process needs to be followed to qualify an existing project as a Social Entrepreneurship project?

Prof Vaz: At present there is no formal labeling procedure at WPI to qualify projects under a given subject. All you would need is an experienced faculty member from that field to approve that the project does fall into the given category.

- JDD: Would it be easier to create an on campus or off campus project center?

Prof Vaz: It would most likely be easier to create an on campus project center. This is because both funding and previous preparation are not required in this case. Also as costs are increasing students are finding it harder to afford going off campus for a project and we need to create more compelling projects closer to home. With an off campus center you would need to find more resources such as a critical mass of interested students to justify creating a center and an organization that would be willing to fund this center. You might also look at creating a center that involves projects in many areas instead of just focusing on one location.

- JDD: Do you think that WPI students would be interested in doing projects or completing minors related to social entrepreneurship?

Prof Vaz: There are definitely a lot of WPI students who are interested in solving social and economic problems and this interest is more prevalent here than in other schools. It seems that our campus culture leans towards using technological developments to benefit society

- JDD: Do you personally believe that it would be beneficial to create some sort of formal structure for social entrepreneurship at WPI and is it possible to do so?

Prof Vaz: I believe it would be possible to do. However the question I have is whether we need to organize it into a structure or just let the current system prevail as there are students already working on related projects.