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ACCELERATING SUSTAINABLE DEVELOPMENT: ARE UNIVERSITIES EQUIPPING STUDENTS WITH SKILLS NEEDED IN ACHIEVING SUSTAINABILITY?

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Declaration and Statement

"I declare that the research contained in this thesis, unless otherwise formally indicated within the text, is the original work of the author; as a result of my readings and research, I have completed this research study based on my international development industry exposure and experience."

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ABSTRACT

The reason for undertaking this research study was to explore how universities can potentially help in addressing the knowledge gaps identified concerning the current level of sustainability educational efforts in universities. Many researchers have indicated that these knowledge gaps directly impact on business practices of graduates; who become senior managers in their businesses and organizations. However, by integrating the concept of sustainability into the university curricula; many researchers have concluded that sustainable management and sustainability are amongst the most critical research topics. Most researchers feel that sustainable development is not currently being given adequate attention by many universities, businesses and organizations, which essentially focus on the following components of sustainable development:

a) Social and Human;

b) Economic and Financial;

c) Environmental.

Furthermore, the three components of sustainable development as stated above are not being equally addressed, with the social and human aspects mostly often neglected. Which are the critical components of sustainability education; so that students can become lifelong learners in order to strategically contribute in accelerating sustainable development; by helping students learn how to identify and solve complex problems using sustainable solutions.

A quantitative study method using online data collection surveys was used to investigate the awareness of development and business degree students, as to the importance they place on understanding sustainable management and sustainability, including all the components of sustainable development. Furthermore, this research explored their perception as to whether

university development and business courses have given them relevant skills needed to support sustainable management initiatives in their various businesses and organizations.

The study measured whether students with more business course background have higher understanding of sustainable management and sustainability or if perceptions are higher with increased number of working experiences within in the workplace. It is hoped that this could indicate that sustainability skills are being gained in the workplace rather than in business courses. The population that was used were students currently or recently enrolled in development and business courses at various business schools, and the sample size was students that met these criteria and were currently in university.

The results of this research study has demonstrated that individuals who have completed development and business courses do have a solid acceptance, as to the importance of understanding sustainable management and sustainability in their business degree programs and for their future success. Finally, this study has shed some light on several follow-on research opportunities, such as claims that sustainable management and sustainability are topics not currently being given sufficient attention by many business schools.

Furthermore, businesses and organizations, suggesting that educational and business organizations could benefit from revising the educational curricula to include more emphasis and instruction relating to sustainable management and sustainability.

CHAPTER 1. INTRODUCTION

1.0 Introduction

This chapter sets out the background of this research by discussing, in brief, the concepts of sustainable development and the events that brought about this concept. The chapter also explores goals of sustainable development, what it aims to achieve and the underlying principles that lead to the concepts' intended achievements. Consequently, the chapter evaluates the possible means of achieving sustainable development.

Sustainability has become an increasingly important topic in business, international development and in institutions of higher education. Furthermore, with several related terms including sustainable development, sustainable management, and sustainability education (Christensen, Peirce, Hartman, Hoffman, & Carrier, 2007; Middlebrooks, Miltenberger, Tweedy, Newman, & Follman, 2009; Pfeffer, 2010; Springett, 2005).

The purpose of this study was to address the findings by various researchers and international development experts that sustainability and sustainable management are critical components of education in universities and in businesses. However, are topics not currently being given sufficient attention by many universities and business organizations (Middlebrooks et al., 2009; Wheeler, Zohar, & Hart, 2005). This thesis has attempted to discuss the perception of business degree students as to the importance they place on understanding sustainability, sustainable management and sustainabale development of all the three components. In addition, on their perception as to whether business courses are giving them high level skills needed to support sustainability and sustainable management in business organizations.

Sustainable development has important implications for businesses and the world at large, in the present and in the future. Moreover, university programs and actions have a crucial role in educating individuals on the importance of sustainable development, sustainable management, and supporting the change in social attitudes towards sustainability.

Sustainable education systems are defined as systems in which students' natural energy for learning is renewed and no talent gets wasted. Students' energy for learning is geared towards the acquisition of crucial competences for the 21st Century, which they can deploy and further develop on a long-term, sustainable basis. For this to happen, education systems need to be built upon strong, up-to-date university curricula and to design classroom activity; based on cutting-edge knowledge on what drives human learning. Kris Van den Branden; (2015).

Formal education is the best format for teaching sustainability concepts, and education provided in schools and universities must help shape sustainability and sustainable management in business organizations (Coffman, Hopkins, & Ali, 2009). Furthermore, sustainable development is a very important topic; that is why my research is going to explore sustainability. Furthermore, this research study will attempt to find practical solutions by investigating how the concept of sustainable development can be integrated into the university curricula by strategically helping in accelerating sustainable development in a corporate setting. Implications for a business committed to strategic success and sustainability are identified to address reports by various researchers that sustainability and sustainable management are critical components of education in schools and businesses.

Many leading researchers and development practitioners have continued to argue that the complex nature of sustainable development cannot be handled without adequate and deliberate

education. This is why many countries are looking up to their higher education institutions to play significant roles in providing directions for a sustainable future through the provision of large number of graduates with the knowledge, skills and values that will enable the society as a whole to progress towards more sustainable ways of living. However, a key challenge for higher education institutions is to discover the most effective ways of achieving sustainable development and the means of producing, sustainability literate 3 graduates (Chalkley, 2006) and (Bedaway, 2014). One key factor for achieving sustainability in the 21st century is education; is what will contribute in accelerating sustainable development.

The McKinsey's Sustainability Compass provides a strategic framework for how Sustainable Development Goals (SDGs) can drive business value. In addition, the McKinsey Sustainability Compass clarifies how Sustainable Development Goals can drive business value from four strategic directions. Since February, 2019, over 300 Danish executives have generated +800 new ideas incorporating the SDGs to create business value. Sustainability as a core part of the company strategy is a choice. However, there are four overall areas in which you can generate business value (McKinsey & Company; 2019).

- **Growth**- Use sustainability to grow the business;
- **Return on Capital** -Increase margins through cost cutting;
- **Risk Management** - Ensure stable and continuous performance;
- **Organizational Performance**- Ensure a dynamic and diverse organization.

1.1 Background of the Study

1.1.1 Sustainable Development

As a concept, sustainability responds to a growing concern about the adverse impact of technology and increases in the level of human degradation on the natural environment by societal activities in the past two centuries. Development became the guiding principle of countries across the world after the Second World War (Khataybeha, Subbarinia, and Shurmana, 2010). Countries embraced the modern scientific and technological developments without fully considering the wider implications on the future of the planet. According to (Defra, 2011), a horde of problems such as increased pollution, loss of biodiversity, abuses of human rights, inefficient use of energy, global warming and a widening gap between the rich and the poor, have been rapidly created by humans because of a preoccupation with material comforts.

These impacts on the natural environment compelled world leaders to seek solutions in order to protect the planet's natural resources, promote prosperity through equity of opportunity and reduce poverty. Several summits held from Stockholm 1972 to Rio de Janeiro 2012 demanded a decent standard of living for everyone without compromising the needs of future generations (Drexhage and Murphy, 2010).

1.1.2 Global Sustainable Development

The concept of sustainable development formed the basis of the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992. The summit was the first

international attempt to draw up action plans and strategies for moving towards a more sustainable pattern of development.

Over 100 Heads of State and representatives attended the summit from 178 national governments. Representatives of various Civil Society Organizations also attended the Summit. In the 1987 Brundtland Commission report commonly referred to as “Our Common Future”, sustainable development was seen as the feasible solution to the problems of environmental degradation (Dresner, 2008).

The Brundtland Report investigated the numerous concerns of the environmental degradation of the previous decades, which were the results of the severity of the impact of human activities on the planet. Key works that highlighted this thinking included Rachel Carson's Silent Spring (1962), Garret Hardin's Tragedy of the Commons (1968), the Blueprint for Survival by the Ecologist magazine (1972) and the Club of Rome's Limits to Growth report (1972).

The concept of sustainable development received its first major international recognition in 1972 at the UN Conference on the Human Environment held in Stockholm. The term “sustainable development” was not explicitly referred to, but nevertheless the international community agreed to the notion - now fundamental to sustainable development - that both development and the environment, hitherto addressed as separate issues, could be managed in a mutually beneficial way (Dresner, 2008).

The term was popularised 15 years later in “Our Common Future”, report of the World Commission on Environment and Development, which included what is deemed the 'classic' definition of sustainable development: "development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland

and Khalid, 1987 p.41). However, it was not until the 1992 Rio Summit, that world leaders recognised sustainable development as the major challenge as it is today.

In 2002, 191 state governments, UN agencies, multilateral financial institutions and other major groups met in Johannesburg to assess progress since the 1992 Rio summit. The Johannesburg Summit delivered three key outcomes: a political declaration, the Johannesburg Plan of Implementation, and a range of partnership initiatives. Key commitments included those on sustainable consumption and production, water and sanitation, and energy (Dresner, 2008).

More recently, another conference was held in Rio de Janeiro, Brazil in June 2012. The conference ensued in a focused political outcome document containing clear and practical measures for implementing sustainable development (Huckle and Wals, 2015). The member states in attendance launched a process to develop a set of Sustainable Development Goals (SDGs), which will build upon the Millennium Development Goals (MDGs) and coverage with the post-2015 development agenda (Dresner, 2008).

1.1.3 The Sustainable Development Goals

The Sustainable Development Goals (SDGs), otherwise known as the Global Goals, are a universal call to end poverty, protect the planet and ensure that people enjoy peace and prosperity. The 17 goals are interconnected and built on the successes of the Millennium Development Goals, the new focus includes; climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. Often the key to success of one goal involves tackling issues more commonly associated with another. In view of this, this study believes that with the achievement of Goals 4 (SDG4), which emphasises inclusion,

equity and quality education with observable learning outcomes, the solution to global issues can be achieved.

The SDGs work in the spirit of partnership and pragmatism with the right choices which centres on improving life sustainably for future generations. They provide clear guidelines and targets for all countries to adopt following their priorities and the environmental challenges of the world at large. The SDGs are an inclusive agenda, aiming to tackle the causes of poverty and unite the world together to make a positive change for both people and planet.

1.1.4 The Principles of Sustainability

Equity between and within generations underpins the five core principles of sustainability. Each of the principles has its own derived policy and operational implications and is fundamentally systematic - that is, each principle affects all the others and is affected by each in return.

The material domain that is the first principle ensures that the flow of resources, through and within the economy is as nearly non-declining as is permitted by physical laws. The second principle is the economic domain, which is concerned with adopting an appropriate accounting system, which is fully aligned with the planet's ecological processes and reflecting exact, comprehensive biospheric pricing to guide the economy.

The third principle is the domain of life; this principle is to ensure that the essential diversity of all forms of life in the biosphere is maintained. The social domain is the fourth principle, equity, underpins this principle. The degree of freedom and self- 17 realisation are maximised without any individual or group, adversely affecting others. The fifth is the spiritual domain, which encompasses all the other four principles (Ben Eli, 2004).

1.1.5 Brundtland Report and Agenda 21

The UN in 1983, organised the World Commission on Environment and Development (WCED). This summit addressed the growing concern about the effect of the increasingly deteriorating human environment and the natural resources. The outcome of WCED meeting produced a report tagged ‘our common future’ in 1987, popularly known as the Brundtland Report named after the Chairman of WCED, Gro Harlem Brundtland. The focus of Brundtland Report was on global sustainability. The report addressed issues concerning governments and businesses. Also discussed were issues concerning citizens, as their welfare formed an essential element for environment and development policies.

Hence, the report provided a broad overview of the major global environmental crisis and offered plans on how to resolve these problems. Environmental issues formed the burning issues in the report and formed top priorities on the political agenda as the basis for discussing the environment and development as a single and identical issue. The Brundtland Report and the concept of sustainability are viewed as an attempt to create awareness on the disturbing relations between human society and the natural environment, focusing on institutional, economic, ecological and social aspects.

The work of WCED and the publication of Brundtland Report underpins the Rio Declaration created at the 1992 Earth Summit, the adaptation of Agenda 21 and the formation of the UN Commission on Sustainable Development. Agenda 21 was adopted at the Earth Summit in 1992, twenty years after the Stockholm conference. This was the first UN document to identify the roles and responsibilities for UN and governments, offering a practical approach to applying sustainable development policies at local, national and global levels. The Agenda

comprised of 40 chapters, presented under four sections, which addressed the social and economic dimensions, conservation and management of resources for development, strengthening the role of major groups and means of implementation. Each chapter 18 defines a programme area under four parts: the basis for action, objectives, activities and means of implementation.

The Agenda formed the basis for a global partnership to encourage cooperation among the 178 nation/governments present at the Earth Summit in 1992, as they support a transition to sustaining life on earth. Although the Agenda lacks the force of international law, the central belief is that all countries can protect their environments and experience growth concurrently (UNESCO, 2005). Therefore, the responsibility of implementing Agenda 21 lies with the governments primarily, through national strategies, plans, policies and procedures. The Agenda also recognised education as an indispensable tool for achieving sustainability, and this led to the establishment of the UN Decade of Education for Sustainable Development from 2005 to 2015 (UNESCO, 2005).

Education was emphasised as playing a pivotal role in achieving sustainable development during the 1992 summit, and driving progress on orienting education strategies towards sustainable development as germane. Consequently, many countries like England, Germany, Finland, started incorporating principles of sustainable development into their curricula and establishing national coordinating bodies for the promotion of education for sustainable development (Shallcross, Loubser, Le Roux, O'Donoghue and Lupele, 2006).

1.1.6 Education for Sustainable Development (ESD)

Education is central to sustainability; as noted by UNESCO (2005), education and sustainability are inextricably linked. (Sterling, 2014) noted that the quality of the human and biospheric future depends on the collective capacity to learn and change. In the absence of such learning, the world will get the future it deserves. Sustainable development is not in itself sustainable unless relevant learning among all stakeholders is given adequate and urgent attention.

Sustainable education systems are defined as systems in which students' natural energy for learning is renewed and no talent gets wasted. Students' energy for learning is geared towards the acquisition of crucial competences for the 21st Century, which they can deploy and further develop on a long-term, sustainable basis. For this to happen, education systems need to be built upon strong, up-to-date curricula and to design classroom activity based on cutting-edge knowledge on what drives human learning. (Kris Van den Branden; 2015).

With the decision to run the UN Decade of Education for Sustainable Development (UNDESD 2005-2014), the United Nations acknowledged the need for solving sustainable development challenges through education. The UN, hopes to reorient educational system to emphasise a learning process that leads to an informed and involved citizenry with creative problem-solving skills, scientific and social literacy. Furthermore, the UN is committed to engage in responsible individual and cooperative actions that will help to ensure an environmentally sound and economically prosperous future.

As a result, organizations and business leaders struggle with aligning sustainable development, systems, and services and developing the knowledge, skills, and competencies of their human resources, to meet or to exceed the demands of various stakeholders (Diamond, Gardiner, & Wheeler, 2002; Guskin & Marcy, 2002; Lick, 2002).

Sustainable development, with several related terms including sustainable management, and education for sustainability, has become increasingly important in business and education. Sustainable development has important implications for businesses and the entire world, in the present and in the future. University programmes and actions are crucial in educating individuals on the importance of sustainable management, and supporting the change in social attitudes towards sustainability.

After the 1992 Rio de Janeiro summit, the stakeholders at the summit realised that progress on the path towards attaining sustainable development was too slow; hence they devised means of achieving their goals. At the 1992 Rio summit, the stakeholders recognised the role of education in society, and as a result advocated incorporating the principles, practices and values of sustainable development into all aspects and facets of the society through education (UNESCO, 2014).

In addition, at the 2002 Paris Conference organised by the United Nations Educational, Scientific and Cultural Organisation (UNESCO), a sub-body of the UN, education formed the prevalent theme. Hence, the Summit declared 2005-2014 as a Decade for Education for Sustainable Development (DESD) in the hope of using education as a tool for 19 overcoming poverty, promoting health, achieving gender equality, protecting the environment, developing rural and cultural diversity, political stability and sustainable urbanisation (UNESCO, 2005a).

After the DESD period, stocktaking of the DESD agenda by UNESCO proved that the decade yielded an unprecedented progress in achieving education for all; hence the 2015 United Nations summit held at New York adopted an education post-2015 agenda to complete the unfinished business by going beyond the previous goals in terms of depth and scope.

Education for Sustainable Development (ESD) tends to focus more on ensuring that in times of rising global challenges; the quality of school education becomes the foundation for sustainable development. In view of the growing global challenges, students and Chief Executive Officers need to develop sustainability competencies for their professional and social future perspectives.

Sustainable development is a very important topic; that is the reason why my research is going to explore sustainability. This research will attempt to find practical solutions by incorporating the concept of sustainable development in the university curricula in order to strategically help in accelerating sustainable development in a corporate setting.

This research topic will discuss the perception of business degree students as to the importance they place on understanding sustainable development, sustainable management and sustainability, and all three components, and their perception as to whether business courses are giving them high-level skills needed to support sustainable management in business organizations.

1.1.7 Building a More Sustainable World through Education

As evidenced in section '1.1.6' above, education was given a high priority during the Rio de Janeiro 1992 Summit; whose theme was aimed at achieving sustainable development. In

addition, at the summit, Education for Sustainable Development was believed to be the key driver in resolving most of the issues that affect sustainable development, such as climate change, disaster risk reduction, biodiversity, poverty reduction and sustainable consumption because of their integration into teaching and learning.

Furthermore, Education for Sustainable Development entails using a participatory teaching and learning approach aimed at motivating and empowering learners to change their behaviour and take action for sustainable development. Hence, ESD aims to give learners the opportunity to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. Consequently, knowledge acquired through ESD promotes the learners' competencies like critical thinking, a situation where they can imagine future scenarios and make informed decisions (UNESCO, 2014).

Sustainability has been defined by the Brundtland Commission as "meeting the needs of the present without compromising the ability of future generations to meet their own needs". (Brundtland, 1987). In times of increasing expectations of customers, shareholders, employees, and communities; as well as the general public about corporations' contributions to sustainability (World Business Council for Sustainable Development -WBCSD), the latter are severely and continuously criticized for actions that contradict their glossy sustainability reports (Holliday, 2010).

However, it is often the case that such criticism is often rooted in a lack of awareness of the complexity of relationships and the role that sustainability plays within the context of a firm's operations, particularly Small-Medium Enterprises (SMEs), which cannot dedicate major resources to cope with the issues. Therefore, the question arises of what universities can do to

build awareness and understanding among students in order to prepare them to cope with sustainability aspects in their future careers (Starik *et al.*, 2010).

(Springett, 2003) stated that companies that do not weigh current ideas and practices as to how they will impact the world in future generations are not practicing sustainable development, but are focusing more on making profits. Remedially, Springett's premise is that caring for the three sustainable pillars of social, environmental, economic and financial factors will help the business achieve financial success, and is critical in managing business organizations (Springett, 2003).

Although the term sustainable development was heard at least a decade before 1987 when the Brundtland Report was released, this publication brought attention and claim that capitalist business practices in their quest for financial success have been responsible for creating unsustainability (Springett, 2005).

However, rising concerns have continued to increase since the Brundtland Report, and several global groups have endorsed these efforts. The World Business Council for Sustainable Development was created in 1992 to create business involvement in global sustainability issues (Anderson, 2006). In addition, the Dow Jones Sustainability Index was created in 1999 to measure and report the financial state of companies that are leaders in sustainability efforts. Consequently, the United Nations announced the period from 2005 to 2014 as a decade for educating people on sustainable development (Springett, 2005). Furthermore, an association was established in 2006 to advance the teaching of sustainability concepts in higher education (Pfeffer, 2010).

In 2009 Middlebrooks et al. conducted a study of the University of Delaware which identified a gap between clear rhetoric and tangible implementation of sustainability practices, and that

education for sustainability in universities was not complete. They performed a study, which is the basis of this dissertation that investigated the perception of business school students as to the importance of education for sustainability. The results of the Middlebrooks et al. study (2009) included the recommendation for integration of sustainability into leadership theory in business degree courses.

1.3 Statement of the Problem

Limited knowledge regarding how the concepts of sustainable development, sustainable management and sustainability: definitions and principles have been incorporated into the university curricula in Zambia; is the problem that has compelled this research study. Researchers emphasize that the quality and accessibility of education addressing sustainability must be improved (Coffman et al., 2009).

Universities are important leaders in preparing individuals to address sustainable development not only in business decisions that impact the economy and the environment, but in individual choices as well, by teaching the importance of responsible behavior and choices as consumers and citizens. Considering these needs, sustainable development education must not be education simply to teach about sustainable management, but education that fosters active understanding of and involvement in sustainable development (Čiegis & Gineitien, 2006).

The concept of sustainability education initially concentrated on education about environmental protection (Springett, 2005). However, Springett recommends that sustainability education should meet three specific goals. One is to help students develop an understanding as well as values pertaining to sustainability that will support skills to work with others towards improving the sustainability and quality of environments that include social

environments as well as natural. The second goal was to provide a basis for lifelong learning that will continue to support sustainability. The third goal was to enable students to become and remain knowledgeable, dedicated, and actively involved in fostering changes in personal and professional endeavors that will support sustainability (Springett, 2005).

Other researchers support these concepts stating that education for sustainable development must focus on connecting all three issues as well, social, economic and environmental. In addition, this education will focus in teaching lifelong learning skills for people to discover innovative solutions to these concerns. The three concepts of social, economic and environmental are intertwined; even more when considering that the environment can be optimally maintained by individuals who live in satisfactory social and economic conditions (Čiegis & Gineitien, 2006).

Most organizations tend to invest a lot of resources in continuous professional development trainings in equipping their senior management teams with skills in accelerating sustainable development. Therefore, intended to generate gains connected with improved use of human resources, increased operational efficiencies, and creating new capacities within processes and products (Aznar, 2004).

Universities are important institutions for preparing individuals to address sustainable development not only in business decisions that impact the economy and the environment, but in individual choices as well. Thereby, teaching the importance of responsible behavior and choices as consumers and citizens. Considering these needs, sustainable development education must not be education simply to teach about sustainable management, but education that fosters active understanding of and involvement in sustainable development (Čiegis & Gineitien, 2006).

Many educators and people in leadership positions are not familiar with sustainable development concepts and, therefore, cannot effectively put it into practice (Čiegis & Gineitien, 2006). Educators, students, and society at large, must learn about sustainability and also about socio- environmental factors (Coffman et al., 2009). The gap studied in this research is the one identified by Middlebrooks et al. (2009) between clear rhetoric and tangible implementation of sustainability practices, and that sustainability education in universities is not complete. In order to address the gap, this research will help to shed more light on the extent to which universities are teaching business students all concepts that are involved in sustainability, sustainable development, and sustainable management in organizations in order to help these individuals enter organizational management roles ready to practice effective sustainable management.

Therefore, the problem to which this dissertation is directed is that universities may not be effectively teaching students all aspects of sustainable development. Furthermore, research has indicated that inadequate skills in sustainable development, sustainable management and sustainability has been cited by international development experts as the missing building blocks in contributing to organizational and business failure. While some business schools are embracing courses to support students to receive their initial comprehensive training in sustainable development, there is still an absence at some universities in incorporating comprehensive knowledge on sustainable development into business courses including Master of Business Administration (MBA) curricula; (Shore, 2005).

Sustainable development concepts and principles once incorporated into the university curriculum will contribute in equipping future business and industry leaders. Furthermore, this will contribute in preparing individuals in addressing sustainable development issues not only

in strategic planning processes; but also, in business decision making processes that impact on the economy and the environment. It is hoped that this will also impact on individual choices as well, by teaching the importance of responsible behavior and choices as consumers and citizens.

1.4 Purpose of the Study

The primary purpose of this study was to explore how universities can incorporate the concept of sustainable development. Thereby, making students to become lifelong learners in order to strategically contribute in accelerating sustainable development in their respective organisations and businesses.

The secondary purpose was to find solutions in accelerating sustainable development in a corporate setting. Examining these gaps have also provided valuable contributions to organisations and businesses to make the necessary changes to advance sustainable development throughout the strategic management process. Lastly, this study has provided practical recommendations to enhance an organization's ability to accelerate sustainable development.

1.5 Research Objectives

The research objectives of this topic were:

- To explore how the concept of sustainability can contribute in accelerating sustainable development; by helping students learn how to identify and solve complex problems using sustainable solutions;

- To address knowledge gaps identified in research about the current state of educational efforts in universities, as these have the potential to directly impact on business practices of graduates who become senior managers in the corporate world;
- To provide recommendations that will enhance an organization's ability to accelerate towards sustainable development.

1.6 Research Questions

The research questions sought to document the following:

Question 1. To what extent do University students perceive the importance of the meaning of sustainable development, sustainable management and sustainability?

a) In their business degree courses;

b) In their future roles as senior managers in their organisations and businesses.

Question 2. To what extent do University students perceive the importance of sustainability? As it relates to its three components: (i) Environmental, (ii) Economic and Financial, and (iii) Social and Human?

The research used quantitative methodology using surveys to collect information from the students in order to investigate the questions listed above. Furthermore, the researcher analyzed results to provide a more thorough comprehension of the perception of business students towards the importance of accelerating sustainable development and their level of skills attained.

1.7 Significance of the Study

The topic of sustainability is significant in itself, and the study of progress that has been made towards increasing the ability of organizations and individuals to integrate sustainability efforts into all phases of the study, business and personal life will provide guidance as to efforts that must be enhanced (Middlebrooks et al., 2009). As described above, the three concerns in sustainable development are generally accepted as social/human, economic/financial and environmental.

The results of this study will contribute to the body of knowledge relating to leadership and managerial theory as this study investigates the perception of students as to the importance of understanding sustainability and sustainable management, and their perception as to the extent to which they are gaining high-level skills in these areas through their business course experiences. This will be done by surveying students and using quantitative data to measure their perceptions.

This research used mixed-methods research to investigate the perceived importance of sustainability ethics held by students in business degree programs. Furthermore, this research will build upon the research by Middlebrooks et al. (2009) by asking similar quantitative questions of students in more university courses than the one involved in the Middlebrooks study.

This research has also attempted to integrate recommendations by Christensen et al. (2007) by furthering their research investigating separate concepts of corporate social responsibility by concentrating on the sustainability factor. As emphasis has widened to include social and human sustainability, the results of this research addresses questions raised by Pfeffer (2010), King (2008), Linnenluecke, Russell, and Griffiths (2009), Middlebrooks et al., (2009), and Wu,

Huang, Kuo, and Wu, (2010) as to the importance and inclusion of human factors in teaching sustainability and sustainable management. The indications may serve as incentive for additional research and business course modifications to enhance university teaching in these areas and heighten graduates' abilities and skill levels in promoting sustainable management in business organizations.

1.8 Assumptions and Limitations

This research has attempted to investigate as to whether sustainability, sustainable management, and the human/social factor of sustainable management are concepts that business degree students globally perceive as important. Furthermore, this research will investigate their perception of skill levels that students may have attained through their development and business degree studies. There are assumptions that the importance of sustainable management is not recognized by students as an essential part of organizational management, and that they do not feel they have attained high-level skills as a result of their business courses.

Furthermore, there are assumptions that the social aspect and human sustainability factor of sustainable development receives less attention than the other two sustainability factors of environmental and economic and financial issues. The limitation is that this study may not adequately represent perceptions of business course students in select universities than other parts of the World; as it can be considered as using a small sample of the entire number of business course students. However, the results could be a starting point for additional research.

CHAPTER 2. LITERATURE REVIEW

2.1 Background of the Study

2.1.1 Sustainable Development

Sustainable Development most prominently entered the global political arena in 1987 in a report from the United Nations Commission on Environment and Development, also known as the Brundtland report. The report stated "Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs" World Commission on Environment and Development (1987). In 2015, the world further solidified its commitment to SD with the 2030 Agenda for Sustainable Development (United Nations, 2015).

In almost 30 years in between, the field of Sustainable Development has grown steadily (Hull 2008, Kajikawa et al. 2014). Today, there is a vast array of definitions, terms, approaches, concepts, methods and tools, many designed for specific fields only. For overviews, see the papers by Hopwood et el. (2005), Glavik and Lukman (2007), Lozano (2008), Ben-Eli (2012), Chasin (2014), and Amini and Bienstock (2014).

As a concept, sustainability responds to a growing concern about the adverse impact of technology and increases in the level of human degradation on the natural environment by societal activities in the past two centuries. Development became the guiding principle of countries across the world after the Second World War (Khataybeha, Subbarinia, and Shurmana, 2010). Countries embraced the modern scientific and technological developments without fully considering the wider implications on the future of the planet. According to Defra (2011), a horde of problems such as increased pollution, loss of biodiversity, abuses of human

rights, inefficient use of energy, global warming and a widening gap between the rich and the poor, have been rapidly created by humans because of a preoccupation with material comforts. These impacts on the natural environment compelled world leaders to seek solutions in order to protect the planet's natural resources, promote prosperity through equity of opportunity and reduce poverty. Several summits held from Stockholm 1972 to Rio de Janeiro 2012 demanded a decent standard of living for everyone without compromising the needs of future generations (Drexhage and Murphy, 2010).

2.1.2 Understanding Sustainable Development

The concept of sustainable development has become a major topic, discussed and emphasized, after a long experience of focusing solely on economic growth. The United Nations defined sustainable development as, "The development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

It is the development that seeks to improve the quality of life for all members of a community and, indeed, for all citizens of a nation and the world while ensuring the integrity of the life support systems upon which all life, human and non-human, depends.

The concepts of Sustainable Development and Sustainability have been much criticized, mainly in relation to the vagueness of what sustainability and sustainable development actually mean (e.g., Jacobs 1999, McKenzie 2004, Madsen et al. 2010, Ben-Eli 2012). Ben-Eli (2012) considers sustainability "a term whose meaning has been watered down to the point of trivialization." Jacobs (1999) further argues that, "the vagueness of the definition allows business and 'development' interests (and their government supporters) to claim that they are in favour of sustainable development when actually they are the perpetrators of

unsustainability". In addition, the many different concepts, methods and tools that exist make the field difficult to navigate and can lead to confusion about how to really approach sustainability. Many in the field point to a growing need for a clearer and more operational definition and an understanding of how the existing definitions, terms, approaches, concepts, methods and tools relate to each other and can be combined in the best way to support more effective transitions towards sustainability (Huesemann 2001, Robèrt et al. 2002, Johnston et al. 2007, Marsden et al. 2010).

Sustainable development is perhaps best seen as an aspirational goal, now endorsed by Governments, Private Sector and Civil Society. "Rather than focusing on economic growth in isolation, sustainable development or sustainability requires the integration of the Social, Economic and Environmental dimensions in both Corporate and Public decision-making, within a Governance framework that ensures full participation and accountability" (OECD, 2015).

The World today is facing unprecedented challenges; Social, Economic and Environmental driven by accelerating Globalisation and a faster rate of Technological Developments. At the same time, those forces are providing us with myriad new opportunities for human advancement. The future is uncertain and we cannot predict it; but we need to be open and ready for it. The children entering education in 2018 will be young adults in 2030. Therefore, Universities can prepare them for jobs that have not yet been created, for technologies that have not yet been invented, to solve problems that have not yet been anticipated. It will be a shared responsibility to seize opportunities and find solutions (OECD, 2018).

Sustainability or sustainable development considers the interactions between Social, Economic and Environmental problems and calls for a strategic approach to solve them (Clayton & Bass,

2015). Numerous components and principals of sustainable development were identified such as, ecological limits and equitable standards, population control, resource retention, economic viability, environmental quality and so on (Cox & Cusick, 2016).

2.1.3 Components of Sustainable Development

The study of sustainable development, sustainability and sustainable management have been described, defined, interpreted, and reviewed by many researchers. However, there is wide consensus that sustainable management is crucial in business organizations, and that three important types of components that must be considered include:

- Economic and Financial;
- Environment, and;
- Social and Human factors.

Studies have further reported that these three components must be balanced in order to effectively address sustainability; but have not been. Furthermore, many researchers underscore the importance of social and human factors in supporting the other two components, and claim that this part of the three has not received sufficient attention.

According to Stevenson and Meow (2018); to navigate through such uncertainty, students will need to develop curiosity, imagination, resilience and self-regulation; they will need to respect and appreciate the ideas, perspectives and values of others; and they will need to cope with failure and rejection, and to move forward in the face of adversity. Their motivation will be more than getting a good job and a high income; they will also need to care about the well-being of their friends and families, their communities and the planet.

Education has the potential to equip learners with urgency and a sense of purpose, and the competencies they need, to shape their own lives and contribute to the lives of others. To find out how best to do so, the Organisation for Economic Co-operation and Development (OECD) has launched The Future of Education and Skills 2030 Project. The aim of the project is to help countries find answers to two far-reaching questions:

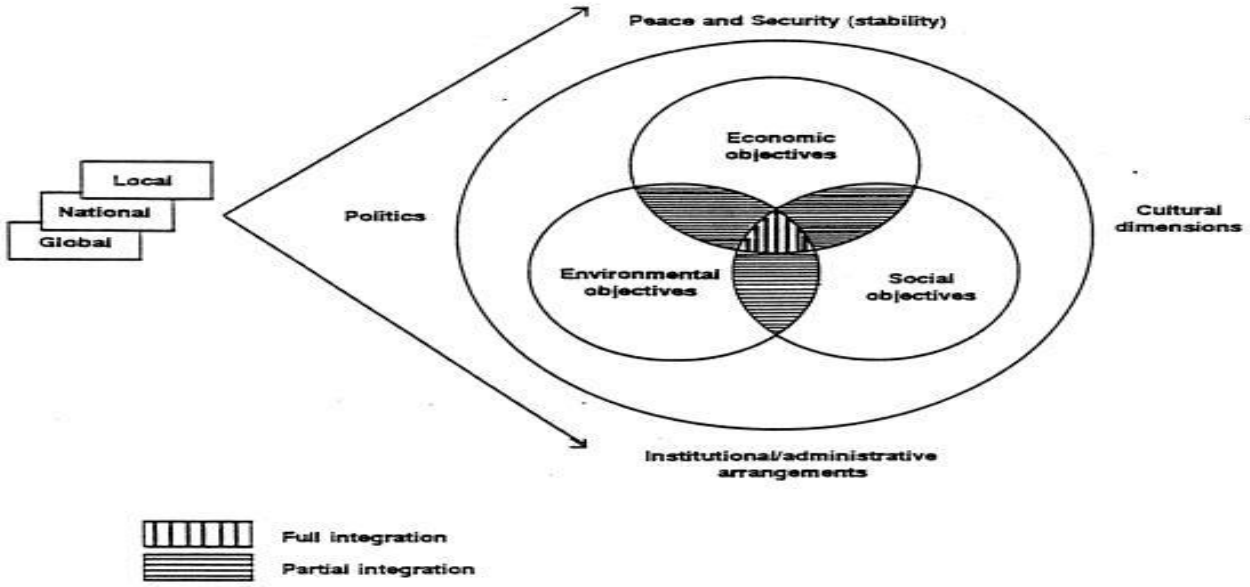
- **What** knowledge, skills, attitudes and values will today's University students need to thrive and shape their world?
- **How** can instructional systems develop these knowledge, skills, attitudes and values effectively?

It is now widely agreed that there are three pillars to sustainable development:

- **Economy**: The creation of wealth and livelihoods;
- **Society**: The elimination of poverty and improvement of quality of life;
- **Environment:** The enhancement of natural resources for future generations.

The relationship between these triple objectives is commonly illustrated by three overlapping rings (see Figure 1).

Figure 1: The Systems of Sustainable Development



Sustainable development will entail integration of objectives where possible; and making trade-offs between objectives where integration is not possible.

Source: Dalal-Clayton *et al.* (1994)

Traditionally, societies have attempted to set social, economic and environmental goals, but often in isolation from one another. Thus, nature conservation targets have been set without regard to the goals for economic growth or poverty reduction. The result has been the creation of short-lived 'green islands' in a sea of unsustainability.

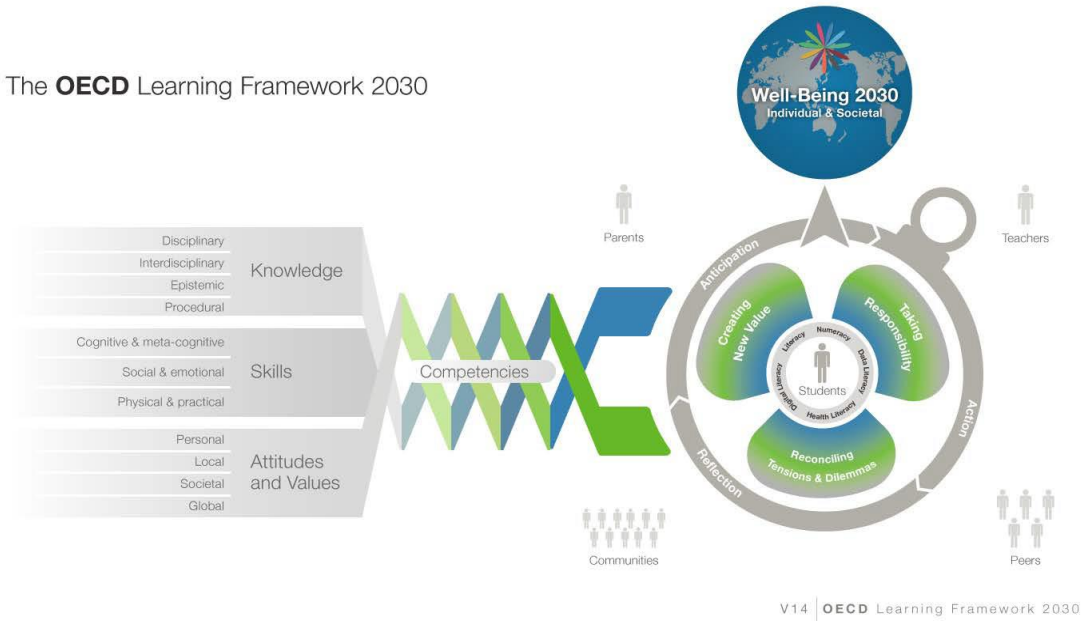
Decision-makers are now becoming aware that environmental goals can only be achieved by integrating them into mainstream social and economic policy-making. Thus, sustainable development will entail integration of these three objectives where possible, and making hard choices and negotiating trade-offs between objectives where integration is not possible. These negotiations will be greatly influenced by factors such as peace and security, prevailing economic interests, political systems, institutional arrangements and cultural norms.

Achieving these objectives is essentially a task of transforming governance in the Public Sector, Private Sector and Civil Society more broadly to achieve a more balanced and integrated approach to development. This ensures that it is defined to meet and respect the particular needs and circumstances of individual countries, societies and cultures.

According to OECD (2018); two factors, in particular, help learners enable agency. The first is a personalised learning environment that supports and motivates each student to nurture his or her passions, make connections between different learning experiences and opportunities, and design their own learning projects and processes in collaboration with others.

The second is building a solid foundation: literacy and numeracy remain crucial. In the era of digital transformation and with the advent of big data, digital literacy and data literacy are becoming increasingly essential, as are physical health and mental well-being. OECD Education 2030 stakeholders have co-developed a "learning compass" that shows how young people can navigate their lives and their world (Figure 2).

Figure 2. The OECD Learning Framework 2030: Work-in-Progress



According to OECD, 2018 students who are best prepared for the future are change agents. They can have a positive impact on their surroundings, influence the future, understand others' intentions, actions and feelings, and anticipate the short and long-term consequences of what they do. The concept of competency implies more than just the acquisition of knowledge and skills; it involves the mobilisation of knowledge, skills, attitudes and values to meet complex demands. Therefore, future-ready students will need both broad and specialised knowledge. Disciplinary knowledge will continue to be important, as the raw material from which new knowledge is developed, together with the capacity to think across the boundaries of disciplines and "connect the dots". Epistemic knowledge, or knowledge about the disciplines, such as knowing how to think like a mathematician, historian or scientist, will also be significant, enabling students to extend their disciplinary knowledge.

Procedural knowledge is acquired by understanding how something is done or made; the series of steps or actions taken to accomplish a goal. Some procedural knowledge is domain-specific,

some transferable across domains. It typically develops through practical problem-solving, such as through design thinking and systems thinking. Students will need to apply their knowledge in unknown and evolving circumstances. For this, they will need a broad range of skills, including cognitive and meta-cognitive skills (e.g., critical thinking, creative thinking, learning to learn and self-regulation); social and emotional skills (e.g., empathy, self-efficacy and collaboration); and practical and physical skills (e.g., using new information and communication technology devices).

The use of this broader range of knowledge and skills will be mediated by attitudes and values (e.g., motivation, trust, respect for diversity and virtue). The attitudes and values can be observed at personal, local, societal and global levels. While human life is enriched by the diversity of values and attitudes arising from different cultural perspectives and personality traits, there are some human values (e.g., respect for life and human dignity, and respect for the environment, to name two) that cannot be compromised OECD, 2018.

Under the concept of Sustainable Development, an **Economic System**; "must be able to produce goods and services on a continuous basis, to maintain manageable levels of government and external debt, and to avoid extreme sectorial imbalances which damage agricultural or industrial production" (Hariss, 2000). Furthermore, the **Environmental System** must be a system that relies on renewable resources, avoids exhaustion of non-renewable resources, and monitors the preservation of biodiversity and the ecosystem (Hariss, 2000).

As for the Social System, "A **Socially Sustainable System** must achieve distributional equity, adequate provision of social services including health and education, gender equity, and political accountability and participation" (Hariss, 2000). Despite the fact that many nations have been experiencing wealth and growth in the last two decades, numerous issues, sufferings

and threats facing the future have not been solved. Thus, the concept of sustainable development has become more important than ever due to the growth and expansion of global challenges that threaten the wellbeing of people, economy and the ecosystem.

The World Economic and Social Survey (2013), released by the UN, identified several challenges including income inequality, hunger, climate change, rapid urbanization, energy needs and so on, that hinder the progression of development and well-being. The UN succeeded in solving a variety of issues through its programs; however, the lack of commitment and supportive systems in many countries obstructed the accomplishment of broader achievements. Through years of experiments, success and failures, international development organizations and scholars have identified key success factors for sustainable development. A fundamental success factor is having Good Governance. The UNDP recently stressed that good governance primarily contributes to development because it "…provides the mechanisms through which collaboration can be generated across sectors. It also addresses some of the fundamental obstacles to sustainable development including exclusion and inequality" ("UNDP Discussion Paper," 2014).

A supportive system for sustainable development can only be created when having the right transparent governance system. In the following sections, several success factors for sustainable development will be discussed. The topics of sustainability and sustainable management have been described, defined, interpreted, and reviewed by many researchers. There is wide consensus that sustainable management is crucial in business organizations, and that three important types of components must be considered, (a) Environment, (b) Economic/Financial, and (c) Social/Human factors. Studies have reported that these three must be balanced in order to effectively address sustainability, but have not been. Many researchers

underscore the importance of Social/Human factors in supporting the other two components, and claim that this part of the three has not received sufficient attention.

2.1.4 Pillars of Sustainable Development

Sustainable development as a concept explicitly conveys three principal aspects or pillars: environmental protection, economic stability and a just society, (Giddings, Hopwood, and O'Brien, 2002). 'Culture' is sometimes added as the fourth aspect of sustainable development (Lele, 1991) and at other times it is mixed with socialisation. This aspect of the discussions examines the different ways in which sustainable development is and has been conceptualised. For a thorough understanding of the real meanings of sustainable development in the context of ESD, it is crucial to conceptualise it.

2.1.4.1 Environmental Protection

Environmental protection refers to the protection of ecological processes and the integrity of the biosphere which provides the resources and the environment on which other human activities subsist. Dailianis (2011), defines environmental protection as protection against the anthropogenic activities that threaten the integrity of the ecosystem, and the environmental processes occurring within it, that the societal and economic activities depend on.

Harris (2003) substantiated the above view by explaining that an environmentally sustainable system needs to maintain a stable resource base. This implies that to avoid over-exploitation of renewable resource systems leading to depletion, investments in sustainable non-renewable resources substitute are the answer.

Contrary to Dailianis's (2011) opinion, Hartwick (1977) is of the view that natural capital, for example, soils and natural resources and environmental services of the planet, need not be preserved as long as these resources are reinvested in the reproductive capital. This rule is in support of weak sustainability where the economic pillar is considered more important than the other pillars.

2.1.4.2 Economic Stability

A stable economy is an economy that does not create other significant economic problems like unemployment, especially for the future. Daly (1990) as opposed to Hartwick and Solow's rule. In his own opinion, "man-made and natural capital are fundamental complements and only marginally substitutes" (p.25). An economically sustainable system must be able to produce goods and services on a continuing basis, to maintain manageable levels of government and external debt, and to avoid extreme sectoral imbalances which damage agricultural or industrial production. Economic sustainability requires that, as much as possible, all the different kinds of capital such as manufactured capital, natural capital, human and social capital, that make economic production must be conserved or augmented. Some replaceability may be possible with these capitals, but in broad terms, they are complementary, so that the maintenance of all four is essential in the long term.

Generally speaking, the Zambian economy is facing significant challenges presently, because of its significant dependence on a single commodity that is copper, weak industrial base and private sector under development. Consequently, Daly (1994), emphasised that these have caused a high rate of unemployment and inflation. Therefore, to lessen the present economic

instability in Zambia, the country should employ diverse economic solutions that will continuously produce goods and services to maintain the country's financial and social needs.

2.1.4.3. A Just Society

According to Balaceanu, Apostol and, Penu, (2012), a just society is a call to break down the barriers of inequality by doing more to empower the developing nations. This idea is as a result of a perceived notion that the gap between the poorest and the wealthiest nations is very vast and growing. A system that is considered socially sustainable should evolve equitable accessibility of opportunities, social services, health, educational facilities, gender equality, political culpability and involvement.

Ngwakwe (2012) said, one of the important principles in sustainable development dialogue is, equity which in policy terms, describes how welfare goods and opportunities are equitably allocated. This principle is, applicable to a country and global levels, where the term refers to the fairness in the provision of opportunities to survive and meet developmental goals to all individuals, irrespective of their gender, age, religious, affiliation and so on.

This comprehensive conception of equity refers to a broad spectrum of policy areas, ranging from the provision of clean water, nutrition, employment, education, shelter, essential medicines, and an unpolluted environment, and access to social networks. Freedom from discrimination based on any condition cannot be excluded as Equity encourages non-discrimination. These Policy goals in the light of equity can be identified in every publication of the UN system.

Though limits on population or restraint on consumption are important, sustainability is more than that. It means that the choice of goods and technologies used must be oriented to meet the

requirements of ecosystem integrity and species diversity as well as social goals. Components of all three perspectives – economic, ecological, and social – are needed to understand the requirements for sustainability.

2.1.4.4 Models of Sustainable Development

The distinction between sustainable development and environmentalism is not always clear or understood. This could be the reason sustainable development goals have been and continue to be hard to achieve (Giddings et al., 2002). The concept of sustainable development has continually been reformed and has produced new interpretations to the concept (evidenced by the different models described below). Key example: Green Economy is the most current way of conceptualising sustainable development. It gives equal treatment to the economy, society and environment.

2.1.5 The Business of Sustainability

According to research by McKinseys 2011 survey on sustainability; sustainability has long been on the agenda at many companies, but for decades their environmental, social and governance activities have been disconnected from their core strategy. Most still take a fragmented, reactive approach- launching adhoc initiatives to enhance their "green" credential's, to comply with regulations, or to deal with emergencies-rather than treating sustainability as an issue with a direct impact on business results.

That's no longer enough. Material risks not only to company's reputation but also to the bottom line come from many, often unpredictable directions in an era of constrained resources and tighter regulatory requirements, as well as growing demand for sustainable products and

services, good corporate governance, and social responsibility. Where such challenges arise, opportunities also lie: McKinsey estimates that the clean tech product market, for example, will reach USD 1.6 Trillion by 2030, up from USD 670 Billion in 2010.

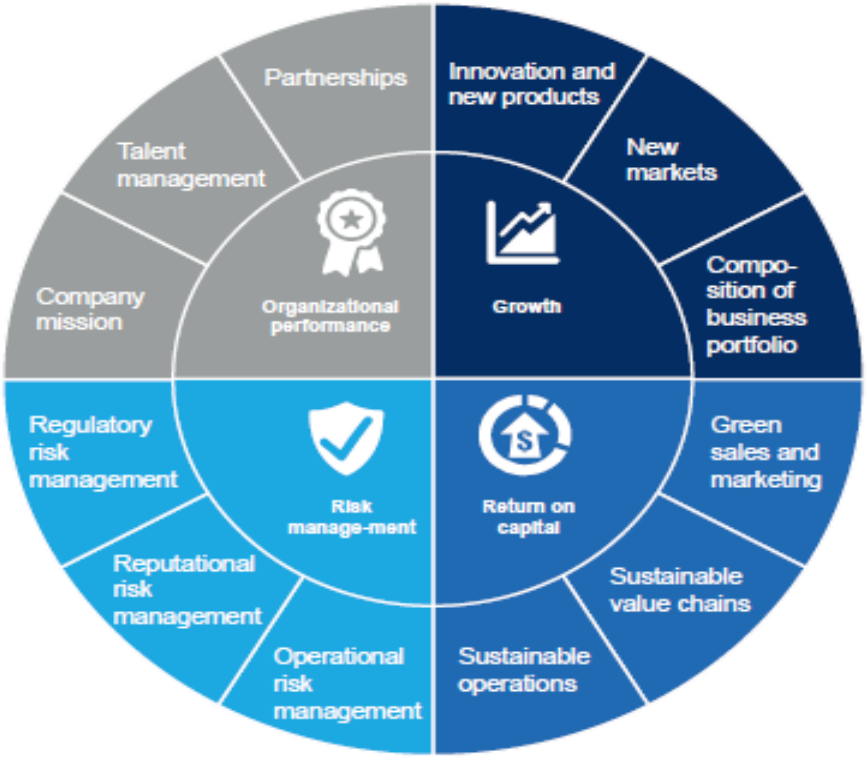
2.1.5.1 The Approach to Sustainability

The McKinsey survey produced insights into the specific practices of a small group of companies that treat sustainability holistically. At all of them, it is a top-tier item on the CEO`s agenda, a formal program is in place to address it, and executives embed it in business practices and manage it actively. Much higher shares of respondents at these leading companies report that they are pursuing each kind of value creating activity related to sustainability and integrating the organizational elements mission and values, systems and processes, internal and external leadership, and organizational design-that support such initiatives. McKinsey & Company (2019). Furthermore, private sector companies should integrate Environmental, Social and Governance issues into their Business Model and act on them. Sheila and Stephan et al (2018).

2.1.5.2 The McKinseys Sustainability Compass

The McKinsey's Sustainability Compass provides a strategic framework for how Sustainable Development Goals (SDGs) can drive Business Value from four strategic directions namely Growth, Return on Capital, Risk Management and Organizational Performance, McKinsey (2019).

Figure 3. McKinsey's Company Sustainability Compass



The McKinsey Sustainability Compass clarifies how Sustainable Development Goals can drive Business Value from four strategic directions. Moreover, the McKinsey Sustainability Compass will inspire executives to think about how the SDGs can drive business value. Since February, 2019, over 300 Danish executives have generated +800 new ideas incorporating the SDGs to create business value. Sustainability as a core part of the company strategy is a choice. However, there are four overall areas in which you can generate business value (McKinsey & Company; 2019).

SOURCE: McKinsey Sustainable Enterprise service line

- **Growth**- Use sustainability to grow the business;
- **Return on Capital** -Increase margins through cost cutting;
- **Risk Management** - Ensure stable and continuous performance;
- **Organizational Performance**- Ensure a dynamic and diverse organization.

2.1.5.3 Education for Sustainable Development

Education, besides being a fundamental right of every individual is critical for promoting sustainable development and improving the capacity of an individual to address environmental and developmental issues as postulated by Sterling (2014). Charter and Tischner (2017), had pointed out that, due to the complexity of sustainable development, it cannot be achieved by technological solutions, political regulations or financial instruments alone. Rather it could only be realised using a holistic approach by changing the way we think and act by and using education to develop new policies and practises, that enhance sustainable development at all levels and social contexts.

The concept of ESD is linked to the 1992 conference, organised by the United Nations Conference on Environment and Development (UNCED), with 178 member states in attendance (UN,1992). The conference produced the first international document called Agenda 21. Chapter 36 of the said document recognised education, training and public awareness, as critical tools for the transition to sustainable development, and calls for education to be re-oriented towards sustainable development, (UN, 1992). United Nations Educational, Scientific and Cultural Organisation (UNESCO), a body of UN was, assigned to manage this mission. The Agenda 21 principles and framework underpins the conceptual thinking and planning for ESD, from global levels through to regional actions and local initiatives.

The UN general assembly then declared 2005 to 2014 as, the Decade of Education for Sustainable Development (DESD). The DESD is aimed at integrating the principles, values and practices of sustainable development into all aspects of education and learning that would encourage changes in behaviour which might lead to a more sustainable future in terms of environmental integrity, economic viability and a just society for present and future generations.

According to Karatzoglou (2013), all educational levels are meant to be involved in contributing to ESD during the period of DESD, because the period was designed for preparing citizens to be responsible both now and in the future, to shape the society sustainably. This initiative according to Leo and Wickenburg (2013), had resulted in the formulation of the goals of education in international policy documents as well as the national and local curricula. "Education for Sustainable Development (ESD) is a vision of education that seeks to empower people to assume responsibility for creating a sustainable future. It aims at improving access to quality basic education, reorienting education curricula, training and raising public awareness

as well as helping people to develop the behaviours, skills and knowledge they need, now and in the future", UNESCO (2015).

UNESCO's vision for ESD is to enable people to address present and future global challenges constructively and creatively, to build more sustainable and resilient societies. It advocates education that can empower learners to make informed decisions and responsible actions for environmental integrity, economic viability and a just society for both intragenerational and intergenerational equity while respecting cultural diversity.

This method of education should have a comprehensive approach to educational reforms; because it would extend outside of school subjects and call for the attention of teachers, educational administrators and curriculum planners and developers. ESD is not a new programme, rather a clarion call for educational policies, programmes and practices to be re-oriented so that education can play its part in building the capacities of all members of the society to work together to build a sustainable future, (Nevin, 2008). UNESCO was tasked to be the lead Agency, through the adoption of a resolution 57/254, in 2002 (Karatzoglou, 2013). The purpose of the DESD was to ensure that all member states, included measures to implement the objectives within the given time frame, in their respective educational strategies and action plans. An International Implementation Scheme (IIS), was put in place by UNESCO, to promote ESD. The IIS was built on four thrusts of ESD, and seven strategies. These thrusts and strategies are explained below (Education Funding Agency (EFA), 2015).

2.1.5.4 Improving Access and Retention in Quality Basic Education

The priority of ESD is to increase basic literacy merely. Basic literacy though means different things to different countries. In some countries, primary school is termed as basic education,

while, it is obligatory to finish nine years before one can be considered as completed basic education. In other countries also, reading and writing are considered as basic education, so long as a child can read, write letters and develop skills necessary to fulfil their expected roles in their household and community. FAWEZA (2015) observed for instance that a girl child might learn health and nutrition and it is considered basic education; in Zambia, basic literacy means the first nine years of formal education.

2.2 Re-Orienting Existing Educational Programmes to Address Sustainability

It is important to state that the international community has recognised the need to address the issues of sustainability through the re-orientation of basic education as ESD integrates the three pillars of sustainable development (Economy, Society and Environment). The reason for this re-orientation is because education encourages teaching and learning knowledge, skills, perspectives, and values which in turn guide and motivate students to pursue sustainable livelihoods. Education also enables people to participate in a democratic society, as well as live sustainably.

2.2.1. Increasing Public Understanding and Awareness of Sustainability

The argument for increasing public understanding and awareness of sustainability initiative stems from the belief that all facets of the society must be involved for environmental change to occur. This involvement includes providing training aimed at advancing sustainability across all sectors.

UNESCO employed two complementary approaches to promotion in advancing the DESD. First, it supported the education community in the transition to sustainable development and

second, it supports stakeholders who work on sustainable development to incorporate education into their work. These were achieved through:

- Advocating with the UNESCO Member States and across the UN system on education as a critical implementation tool for sustainable development, reaching out to both education and sustainable development communities;
- They also provided policy support and advice to the Member States, using the lens of ESD to re-orient their education systems and to progress towards and attain the MDGs and EFA commitments;
- Championing a global debate on ESD through networking and interaction among stakeholders in ESD, thereby promoting exchange between practitioners and experts around the world;
- Developing approaches for the assessment of progress in ESD.

During the first three years of DESD (2005-2008), UNESCO invested in defining and promoting ESD, by identifying actors and activities already underway. UNESCO also developed networks and partnerships by putting up monitoring and evaluation mechanisms in place. The second phase of the DESD marked by the 2009 World Conference on Education for Sustainable Development led to a turning point where the emphasis shifted towards a renewed focus on advancing ESD in the context of quality education.

This emphasis was on the need to focus on teaching, learning and content and the relevance of education to work and life. In fact, ESD was seen as primarily related to the re-orientation of formal curriculum and sustainable development content in the early days of the DESD. Inherently, at the end of the DESD, a better understanding of the process of ESD led to

exploration and the implementation of new forms of teaching and learning, across all sectors and interests (UNESCO, 2012).

2.2.2 Educating University Students for Sustainable Development

According to the recent United Nations Sustainable Development Goals report (2020); Antonio Gutterres, the Secretary General of the United Nations, has emphasized that the "17 Agenda 2030 Sustainable Development Goals (SDGs) demand nothing short of a transformation of the financial, economic and political systems that govern our societies". And, further, he says that "global efforts to date have been insufficient to deliver the change we need, jeopardizing the Agenda`s promise to current and future generations".

In its recent Sustainable Development goals report, (2020) the United Nations Department of Economic and Social Affairs, in collaboration with more than 200 experts from more than 40 international agencies, similarly concluded that "the world is not on track to achieve the global Goals by 2030".

The report further points out that "the world is now facing its worst recession in generations "and that "there is no doubt that the COVID-19 Pandemic has shaken the 2030 Agenda for Sustainable development to its very core". However, we can, and, indeed, we must cope with the situation and trends described above by promoting `sustainable development`. Universities and other higher education institutions have a critical role to play in helping society to achieve this. Sustainable development has been defined as "a development that satisfies todays needs without jeopardizing the ability of future generations to satisfy their needs", according to the 1987 World Commission on Environment and Development.

According to a United Nations report by 2015, 214 million students were enrolled in university education worldwide a significant number and an opportunity for universities to influence a whole generation of future professionals and leaders. Accordingly, the Agenda`s Target 4.7 calls for us to "ensure that [by 2030] all learners acquire the knowledge and skills needed to promote sustainable development.

2.2.3 Objectives of ESD

The 1992 United Nations Conference on Environment and Development, held in Rio de Janeiro, acknowledged the crucial role of education in, achieving sustainable development, through Chapter 36 of its outcome document Agenda 21. ESD is seen as the key facilitator, for sustainable development and an integral element of quality education. The objectives of ESD are to link learning to real life experiences; therefore, it aims at promoting competencies like critical thinking, imagining future scenarios and making decisions in an individual to allow informed decision to be made. ESD aims to build attitudes and values of individuals in the society to care for their community; show respect for the beliefs and opinion of others in the community; develop individual skills that allow for expression of views; collect information clearly and concisely; identify causes and consequences of problems, and form reasoned opinions.

The objectives behind ESD are to ensure that values inherent in sustainable development are integrated into all aspects and levels of learning. This would enable learners to develop general skills in connecting and linking subjects which can be transferred to any practical situation.

2.2.4. The Role of Education in Promoting Sustainable Development

Figure 2.3: SDGS

Adopted from European Environmental Bureau, EEB (2016).

Section 1.1.3 of Chapter one, introduced the Sustainable Development Goals (SDGs). The goals which were built on the three dimensions of sustainable development are universal and transformative, and as discussed earlier, the goals are interconnected. This implies that success in one may affect the success of the other adversely and vice versa. This section discusses the role Goals 4 (SDG4), "quality education" can play in achieving the other SDGs.

The SDGs are a new set of goals adopted by the UN member states as a framework to be explored by the various governments for their agenda and political policies over the next 13 years. It is also an extension of the Millennium Development Goals (MDGs). The UN conducted series of consultations to gauge opinions on what the SDGs should include. These goals were the outcome of Rio+20 Summit 2012, where the goals were drafted. Also, in

September 2015, at the 70th session of the UN General Assembly, the 17 SDGs as shown in Fig. 2.3, were adopted. These goals differ from MDGs because the goals are universal, unlike the MDGs that was centred only on developing countries. In addition, the goals address the causes of poverty which is the most significant global challenges. A core feature of the SDGs is the intense focus on the means of implementation, and this is where education comes into play.

It is believed that millions of people could be lifted out of poverty if they acquired necessary reading skills because they could then make a living on their own and not necessarily depend on government for every support (UNESCO, 2015). The report from United Nations Development Programme (UNDP) and World Bank indicated that increased access to education benefited worse off groups by raising their income (Ganimian and Murnane, 2016). Research conducted by the United Nations, UNDP, and World Bank, has proven that educating a girl-child can avert an intergenerational transmission of poverty. By breaking the cycle of early marriage, child bearing, health and other risks associated with these events (Ganimian and Murnane, 2016). Education plays a vital role in achieving the second SDGs goal, which is to 'End Hunger'. The first aspect of education is the basic agricultural education which develops the producers' skills and competencies thereby increasing productivity. The second aspect is that basic literacy improves the nutritional food intake of an individual as indicated by UNESCO (2014). Furthermore, a child whose mother is literate is 50% more likely to live longer than age five, thereby reducing child mortality especially in Luapula Province of Zambia, which has high infant mortality rate. The report also indicated that educated people are better informed about diseases, take preventive measures, recognise signs of illness early and tend to use health care services UNESCO (2014). Accordingly, World Health Organisation

(WHO) reported that the impact of education was notably stronger for women, because it resulted in better health outcomes for them and their children WHO (2009).

It also accelerates their countries' transition to stable population growth, UNESCO (2014). In achieving the fourth SDG, UNESCO has advocated for curriculum re-orientation, for greater capacity to educate others and nurture a culture that values learning. They have encouraged gender equality, especially in developing countries, because a World Bank report revealed that, a woman's earning can be increased by one additional school year. Therefore, empowering women and girls through education would also help in alleviating poverty (Ganimian and Murnane, 2016).

As discussed earlier, ESD is not just about formal education, it also involves informal (through training) and non-formal (through media) education. As a community becomes well-informed on the connection between sanitation and health through education, they can now begin to appreciate the need to continuously improve on sanitation viz-a-viz improvement on their health, and the further management of the natural resources like water, around them. Furthermore, the community needs to ensure efficient use of energy, knowing the consequences of using fossil energy that pollute the environment with noxious gases. World Bank report indicated that, with education, people are more likely to apply creative solutions that ensured sustainable cities and communities are in place (Ganimian and Murnane, 2016). Education also ensures that people use energy and water more efficiently and recycle household waste. This will help to protect the planet further, and with higher levels of education, people or societies across the globe will show greater concern about the well-being of the environment. Moreover, UNESCO reported that each additional year of schooling increases average annual gross domestic product (GDP) by 0.37%, which consequently leads to provision of good jobs

and economic growth. According to the same report, another benefit is an increase in enrolment rate in secondary education by 10% with the consequent reduction in the risk of war by 3%. The global partnership for education is a prominent example of how collaborative partnership can enhance progress in education and the development of other sectors.

In summary, the role of education in the achievement of sustainable development cannot be over-emphasised. This section has presented how education contributes to the achievement of SDGs however, the realisation of this depends on the prioritisation of education. This is the reason UNESCO is making an effort to ensure that developing countries most particularly, provide quality education to their citizenry by re-orienting the curriculum content of both teacher education and schools.

2.2.5 ESD Teaching Approach

The DESD decade revealed that specific key teaching and learning processes underpin the ESD framework and practices. These processes include active and participatory learning, processes that engage whole system teaching and learning (UNESCO, 2011), although Hoffmann (2014) stated that teaching methods were vehicles to achieving an intended learning process. In this regard, this section discussed two teaching techniques: Student and Teacher Centred Approaches. The Student-Centred Approach is advocated as the best approach for ESD; teaching techniques refers to the general principles, pedagogy and management strategies used for classroom instruction. A useful teaching approach engages students in the learning process and helps them develop critical skills. (Hoffmann and Bharucha, 2013).

The student-centred approach puts the student, rather than the teacher, at the centre and engages students with their learning, for example, through discovery-led, project-based, student-led

discussions, experimental and field trip methods (Hamilton-Ekeke, 2007). Kopnina, (2012), argued that emphasis on ESD has shifted from teacher-centred to learner-centred approach and this advocates active and inductive approaches to teaching and learning to enhance student engagement. Research carried out by Thanh, Gillies and Renshaw, (2008) demonstrated that student-centred teaching had improved the performance of students in Vietnam. Similarly, another research carried out by Mulenga Mutale (2007), in the Lusaka Province of Zambia also showed that student-centred approach to teaching and learning was more productive than the teacher-centred method. Some educationalists, equally argued that student-centred approach be essential in achieving the goals of education for sustainability (Lotz-Sisitka, 2010), (Moore, 2005), (Robinson and Shallcross, 1998). Hoffmann and Bharucha, (2013), was of the view that learning through discoveries as well as by putting lessons into practice in the real world assisted students to work out how to think about complex problems and to feel competent in what they were doing. Students require knowledge about facts, but then they need the ability to act on that knowledge in the real-world; so that they can feel inspired and confident to face the challenges of sustainability, rather than becoming despondent by it.

On the other hand, a teacher-centred approach is when teachers are seen as experts who disseminate knowledge into the minds of the students. Here the teacher explains what they want the students to know strictly, in the classroom. This method does not encourage active participation by the students, but instead, it may hinder them from developing the necessary competence needed to living a sustainable lifestyle. At this Anthropocene era, Bharucha and Siege (2013), maintained that the education sector plays a critical role in teaching relevant skills to avert it. Teaching and learning should integrate sustainable lifestyles. Students need a basic understanding of the history and causes of actions that lead to recent crisis, knowledge

and ability to distinguish between certainties, uncertainties, risks and consequences of environmental degradation, disasters and climate change, knowledge of mitigation and adaptation practices, that can contribute to building resilience and sustainability (Anderson, 2013).

Although some scholars argue that education is the problem in working towards sustainable future because it spreads a culture of denial that rejects the link between modernity and the problems that threaten the ecosystem. In this regard, Shallcross and Robinson (2007) were of the view that, if education is to help address sustainability it has to be transformed. In summary, therefore, student-centred learning engages students in challenging existing worldviews, beliefs, feelings and values through their active participation which leads them to self-reflection, self- directed inquiry, learning-by-doing and learning collaboratively within communities. These perceptions enable the objectives of ESD to be achieved, as well as helping the students to make decisions and carry out their actions to improve their quality of life.

2.2.5 Barriers and Solutions to Embedding ESD

Despite advocating the values of ESD, some scholars have observed that significant challenges still face systematic implementation of ESD, in the formal education sector, (Hargreaves, 2008), (Dawe, Jucker and Martin, 2005), (Henderson and Tilbury, 2004). One challenge is the reluctance of teachers to accept the ideals of ESD for inclusion in the already crowded curriculum. According to Henderson and Tibury (2004), most teachers perceived ESD as an "add-on" subject rather than a holistic change, in learning practices and pedagogy and due to time and resource constraints, do not want ESD to be incorporated into the existing curriculum. Studies have also shown that perceived irrelevance by the teachers affects incorporation of

ESD into school teaching. In addition, Christie, Miller, Cooke, and White, (2013), had equally shown in her research in Australia, teachers do not see the link between ESD and pedagogical innovation. Another study by Borg, Gericke, Hoglund and Bergman, (2012) shows that limited awareness and expertise by teachers hinders the implementation of ESD. The teachers tend to feel that teaching sustainability is being imposed on them and cannot connect sustainability to their disciplines. The study revealed lack of knowledge and competencies were the two formidable challenges militating against integrating sustainability issues in their subjects. There are also issues of misconception about the term, knowledge, background, personal values and beliefs. The study of Leal Filho (2000) and Borg et al., (2012), had confirmed lack of understanding and knowledge of sustainability as one of the main barriers faced by teachers in implementing ESD. There is also the issue of leadership within schools and the larger administrative communities. According to Hargreaves (2008), most school administrators developed sustainability within their schools due to a personal passion for it. In his work, Ferreira and Tilbury (2012), revealed that school culture is another factor that is affecting implementation of ESD because people find 'change' difficult. Studies have also shown that inappropriate curriculum and pedagogy improvement in teacher training, the lack of an optimistic vision, conviction and individual teacher's efforts, constitute significant challenges to the adoption of ESD in a number of schools (Kopnina and Meijers, 2014), (Hargreaves, 2008), (Henderson and Tilbury, 2004).

According to Sterling (2010) and Moore (2005), mitigating the challenges that have been identified, school administrators and the government should synergise and find a way of integrating ESD into the existing curriculum, rather than designing a new subject for it. The government should also try to leverage on the energy, commitment and goodwill of the

administrators who support sustainability and establish a governance structure to encourage systematic implementation of ESD to ensure the longevity and sustainability of ESD. Finally, in order to effectively facilitate the ESD implementation, the facilitators in ESD process and the educators should be encouraged to undertake professional development and training programmes in ESD as the necessary strategies to enable them have the time, opportunities needed to gain understanding and knowledge of sustainability and to gain the appropriate skills to teach sustainability. (Kopnina and Meijers, 2014), (Hargreaves, 2008), (Henderson and Tilbury, 2004). These suggested ways of mitigating ESD challenges as highlighted by Kopnina and Meijers (2014), Sterling (2010), Hargreaves (2008), and Moore (2005) could be achieved through Whole School Approach to sustainability.

2.3 Skills & Knowledge Needed to Promote Sustainable Development

Sustainable education systems are defined as systems in which students' natural energy for learning is renewed and no talent gets wasted. Students' energy for learning is geared towards the acquisition of crucial competences for the 21st Century, which they can deploy and further develop on a long-term, sustainable basis. For this to happen, education systems need to be built upon strong, up-to-date curricula and to design classroom activity based on cutting-edge knowledge on what drives human learning. (Kris Van den Branden; 2015).

According to David Norman et al 2018 Education is at the heart of human progress and central to the UN Sustainable Development Goals (SDGs). It enables people to build better lives for themselves and their families. It is also fundamental in equipping businesses and society to tackle social and environmental challenges. He further argues that if sustainable development is important, so are the skills and knowledge needed to achieve it. How can business contribute

more to education and training for sustainable development? How can companies play a fuller part, through education, in helping people navigate the changing world of work?

How can they do so in a way that helps to create more prosperous societies, while protecting the natural systems on which our future depends? These questions are closely connected. Many of the rapid changes across industries are responses to social and environmental pressures, from new patterns of growth and demographics, to carbon, water and other resource constraints. The skills of the future are skills for sustainable development (David Norman et al 2018).

The skills and knowledge required for sustainable development provide wide benefits for business. They include skills that may not be overtly linked with sustainability or social impact. Norman et al 2018; further gives an example, that business leaders need a global mind-set, a systems approach, critical thinking, problem-solving and collaboration skills.

These skills are as fundamental to business growth as they are to the delivery of the Sustainable Development Goals. However, companies and higher education institutions should embed sustainable development skills and knowledge within leadership development and other programs, rather than seeing sustainable development as a separate, specialized subject area (David Norman et al 2018).

Skills for sustainable development are also central to innovation and vital for a productive, adaptable workforce. Companies need employees at all levels, across functions and markets, who understand how social and environmental issues affect organizational and individual goals, and who are prepared to take action to address them. Businesses can gain a competitive advantage by equipping their employees with the skills and knowledge needed to make the most of the opportunities ahead. Companies and higher education institutions can work together on this, as shown in the collaboration between Arizona State University (ASU) and

Starbucks on the Greener Apron Program, providing online sustainability training to Starbucks employees, who they refer to as 'partners.'

The Greener Apron Program aims to grow a global network of champions with the knowledge and motivation to increase the company's - and their own -sustainability efforts. In addition to giving their partners basic knowledge of the underlying issues, the course enables partners to understand and potentially speak about Starbucks' efforts to address them. It also aims to equip participants with the tools to make a difference in their workplace and in their own communities. More than 6,000 Starbucks partners have participated in the program since its launch in 2016. For ASU, this was a prime opportunity to bring sustainability education to a global audience of employees who could put their learning into practice in the workplace and in their home environment.

ASU's role illustrates the opportunity for schools to respond to the growing business need for people across their teams who have these kinds of skills. Specific academic programs on business sustainability can now be found in 46 percent of the top 100 US MBA programs. But although some specialized degrees now focus on sustainability, the vast majority of business leaders and workers do not have this background. They have a wide variety of educational experiences, from science to humanities and vocational programs. Courses that integrate sustainable development across other disciplines will help to equip many more students with the skills and knowledge needed by business.

Extractive industries increasingly need graduates in engineering and geology to have a deeper understanding of risk assessment and management related to sustainable development issues. Companies employing chemistry graduates may need them to understand toxicity or chemicals' persistence in the natural environment. Students aspiring to work in the food sector may need

a systems view of resource dependence to apply their knowledge in a company setting. Degree programs and vocational courses have important roles in responding to these needs.

For example, Santa Fe Community College (SFCC) in New Mexico has a strong focus on sustainable education, providing learning opportunities for its students, professionals and the wider community. To support the local workforce and business community, SFCC provides continuing education, training and certification in green construction, energy efficiency, health and safety, and sustainability. The school's offerings include many specialty, night and weekend courses that are relevant to architects, builders, facility personnel, energy auditors and building managers.

These examples come from a new report setting out some promising ways in which businesses and educational institutions are working together on this agenda. The report was produced jointly by Business Fights Poverty, Pearson, ASU and PRME, the Principles for Responsible Management Education, an initiative of the United Nations Global Compact. Other examples include partnerships for in-house company leadership training, or on the delivery of degree programs. The report shows how vocational education can play a central role in accelerating the SDG agenda (David Norman et al 2018).

Previous research by David Norman et al 2018 revealed the following:

There's need to collaborate with partners to advance education for sustainable development and connect it to job skills and career paths. However, companies can build partnerships beyond business schools across other departments and programs. They can also help integrate practical sustainable development insights from business into course design, instruction and experiential learning opportunities.

Companies should invest in employee training and education for sustainable development. Furthermore, companies should make sustainable development training central to leadership development programs. They can motivate employees through using active learning approaches and exploring real sustainable development examples that connect employees with the company's purpose and values.

Subsequently, companies should share business learnings on what works and what doesn't for sustainable development. Educators, businesses and international development

organizations all need more widely-shared examples of practical business experience, and the lessons that emerge from them. Companies could be more open about providing insights from tracking successes and failures in the company's sustainable development-related initiatives.

Companies should highlight the business demand for sustainable development skills and knowledge. Ultimately, business leaders will be able to show Human Resource teams, recruiters, policymakers and academics that sustainable development skills and knowledge are priorities for business. Clear signals from business will help education providers prioritize learning for sustainable development.

Companies should Educate and engage other stakeholders on sustainable development, from suppliers and investors to policy makers and customers. Companies can help to demystify sustainable development through portraying it as a normal part of business life. Businesses can benefit from showing how action on sustainable development is central to their everyday work, and essential for a flourishing society, inclusive economic growth and human progress.

Companies, educators and learners all have a stake in the future of work and job skills.

The ability to adapt to the changing needs of the economy and workforce is closely connected to progress on the 2030 Sustainable Development Agenda. Business has an important role to

play in partnerships to strengthen education and training for sustainable development, in turn helping to deliver on the ambitious agenda set out in the SDGs (David Norman et al 2018).

Due to the substantial integration of sustainable development's goals: social, economic and environmental, the process of executing and achieving progress in set targets is quite complicated. Hence, approaching sustainable development strategically and holistically has been strongly emphasized. The OECD (2002) defined strategies for sustainable development as, "Coordinated set of participatory and continuously improving processes of analysis, debate, capacity strengthening, planning and investment, which integrates the economic, social and environmental objectives of society, seeking trade-offs where this is not possible" (as cited in "Strategic Communication for Sustainable Development," 2006).

According to Clayton & Bass (2002): being strategic is about developing an underlying vision through a consensual, effective and iterative process; and going on to set objectives, identify the means of achieving them, and then monitor that achievement as a guide to the next round of this learning process. Being strategic requires a comprehensive understanding of the concept of sustainable development and its implications.

Approaching sustainable development strategically and holistically requires structural transformations and coherence among major parties. Strategic sustainable development calls for having adaptive systems that are constantly able to improve, having a vision of Sustainable Development as a responsibility of the society as a whole, sharing information and experiences transparently and focusing on quality and impacts of projects (Clayton & Bass, 2002). Moreover, countries need to "As much as possible ensure inclusion and cooperation of all parties and stakeholders, including; recipient government, business leaders, other aid organizations, NGOs, representatives of Civil Society, Religious Leaders…and maintain a

progressive and practical approach to Science and Innovation" (Balaskas et al., 2009). Two major success factors for holistically adopting Sustainable Development, which this research will focus on, are the involvement of the Civil Society and the Private Sector with Governmental initiatives.

Researchers including Gülsah et al have observed that in recent years, major universities, governments, and non-governmental organizations around the world have been in continuing discussions on the practice of lifelong learning. Technological developments that have occurred in the 21st century have also affected higher education institutions, and this has led to changes, developments, and an obligation to respond to the effects and needs of globalization. However, in response to these developments, with the emphasis placed on lifelong learning in higher education institutions and on the individual who "learns how to learn", it has become more and more important to educate individuals to meet the needs of the century. Given that learning is a lifelong process, in other words, a process of continuous self-improvement of the individual, it is very important from the individual's perspective to respond to the pace of science and technology. The institutions that are intermediary to this development are higher education institutions. Especially in recent years, with the Bologna Declaration, awareness has been created within the scope of lifelong learning and important contributions have been made to realize the concept.

The statement "The illiterate of the 21st Century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn" as shown in Alvin Toffler's work "Rethinking the Future" and which has become one of the slogans of the century, is an important determination in terms of both the individual and the social satisfaction of individuals as individuals who are able to keep up with the times. Furthermore, the concept of lifelong

learning has emerged in order to adapt to rapidly evolving and changing social and cultural life and has become an important indicator of the level of education and employment conditions in developed and developing countries.

The transition of universities to mass education today, in other words, giving the necessary importance to lifelong education, is among the agenda topics of higher education. Thus, the university has emerged as a major player among potential providers of lifelong learning.

Researchers including Middlebrooks et al. (2009), Christensen et al. (2007), Wu et al. (2010), Epstein et al. (2010), Pfeffer (2010), King (2008), Springett (2005) and others included in this literature review report that education of business students and all employees is critical in helping individuals understand and develop personal support of sustainability in order to promote sustainable management in business organizations.

The significance of having business students recognize the importance of sustainable management concepts in businesses and attain sustainable management skills through their business courses was clear throughout the articles that were reviewed for this research. It was also evident that the social and human factor is critical, emphasizing the need for business organizations to integrate into business strategies concern for all people including employees in order to effectively support sustainable management. The literature reviewed in this study underlined the need for business courses to support these sustainability and sustainable management strategies to prepare students for organizational and sustainable management roles. The results of this research will support the pressing need for further investigation into the importance of sustainable development, sustainability and sustainable management education and whether universities are fulfilling the need to adequately prepare students for active sustainable management roles in business.

A notable mixed-methods study, and one upon which this dissertation is based, was conducted by Middlebrooks et al. (2009). The purpose of their study was to analyse sustainability ethics in students who plan to become business leaders. The intent of Middlebrooks et al. was to investigate the perception of business students towards the importance of sustainability and leadership aspects of sustainability.

The Middlebrooks et al. (2009) study is an important basis for this dissertation research which was planned to gain insight into students' recognition of the importance of sustainable management concepts in businesses, and their perception as to the extent to which their business courses have provided them with high-level sustainable management skills. The quantitative portion of the Middlebrooks et al. (2009) study was a guide for the research of this dissertation.

Middlebrooks et al. (2009) surveyed students of one college-level course that had been designed to bring about change in business students who planned to become business leaders. These researchers asserted that the triple bottom line of social, environmental, and social factors changes the way that organizations measure their success of operating towards sustainability. They also alleged that managers' comprehension of these concepts is fundamental in leading organizations towards achievement in sustainability areas. Their hypothesis was that development of a sustainability ethic is embedded in real-world experiences and activities, which were parts of the course experience that they were analysing. The course at the center of the Middlebrooks et al. (2009) study focused on students' understanding and interpretation of leadership and sustainability, and the intersection of these two concepts. The course objective was to build core knowledge of sustainability and leadership, with three specific questions to be answered during the course, (a) what students

believed they needed to know to explore sustainability leadership, (b) how organizations and their leaders nurtured sustainability ethics, and (c) how sustainability ethics can be nurtured in others (Middlebrooks et al., 2009).

For the Middlebrooks et al. study, thirty-four students who had registered for a course in leadership and sustainability, most of whom were in undergraduate upper-level courses, were chosen through convenience sampling. This course was a requirement for these students and, therefore, could impact the validity of the study since the students were taking the course out of necessity rather than due to specific interest in the topic. An assumption of the course was that changes in individuals must be effected before cultural and organizational change can begin.

Middlebrooks et al. (2009) chose to use a mixed-method strategy to provide a more complete result than they felt could be obtained with quantitative or qualitative analysis alone. The quantitative method was used to analyse primary data obtained from the survey questions. Since causality can be implied by research that is limited by a non-random sample such as convenience sample, Middlebrooks et al. (2009) used qualitative data to verify results. Their quantitative results of the study indicated a change of attitudes of the students, and the qualitative portion implied behavioural changes. Middlebrooks et al. (2009) suggested that mixed-method approaches provide more complete inferences, while they provide basis for more rigorous quantitative research. This suggestion by Middlebrooks et al. (2009) adds to the reasoning for the research that was conducted in this dissertation.

As described, Middlebrooks et al. (2009) used convenience sampling to select thirty-four students who had enrolled in an undergraduate upper-level required course in leadership and sustainability. Pre and post Likert-scale surveys were used with this group to gather

quantitative data with the intent to analyse course effects on students, with qualitative data collected at the end of the course as verification of the quantitative analysis.

The quantitative surveys included four questions that asked the student to rank the importance of sustainability a) to the student, (b) to the community, (c) to private businesses, and (d) to national and international policy makers.

The fifth question asked the student to rank his or her level of commitment to sustainability in his or her personal life, and the sixth question asked the student the level to which he or she would be committed to taking on a sustainability leadership role. An open-ended question asked the student to describe the meaning of sustainable leadership.

The post-course survey included five additional qualitative questions related directly to:

- The student's definition of sustainability,
- The vision of a sustainable leader,
- How a leader should influence sustainability practices,
- How the student could personally be a sustainability leader, and
- The trade-offs that might need to be made in organizations that practice sustainability.

Data collection was conducted throughout one semester. Twenty-four students completed the pre-test and thirty-two completed the post-test. Results indicated that over the course, students did experience a significant change in interest and attitudes towards sustainability, with these results indicating leaders with solid sustainability ethics as a result of business course education.

The quantitative portion of the survey showed that the students had a significant increase in the importance they placed on sustainability at the four levels of themselves, community, business, and global. Results also showed a significant increase in their commitment to sustainability in

their personal lives. The results indicated an increase in interest in assuming leadership roles, but this increase was not significant. These quantitative survey results support the concept that integrating sustainability and sustainable management into courses will assist students in understanding the significance of sustainable management, and can effectively prepare students to manage organizations with solid sustainable management efforts.

Another important study that has influenced this dissertation research was conducted by Christensen et al. (2007) who examined how ethics education has developed in recent years, specifically pertaining to the teaching of ethics and sustainability topics in MBA courses. Christensen et al. (2007) reported that previous research did not distinguish between ethics and corporate social responsibility, but rather treated them as one. Their grounded research was to investigate a gap in literature pertaining to the teaching of sustainability, corporate social responsibility, and ethics, and the extent to which each topic was differentiated in top MBA degree programs.

Christensen et al. (2007) stated that ethics education had evolved and MBA courses had expanded to include focus on a company's corporate social responsibility and sustainable management. The intent of Christensen et al. (2007) was to reveal the extent of this evolution to confirm that business schools were implementing these concepts into MBA programs. The contribution of the Christensen study was to stem from its analysis of the three topics of ethics, sustainability, and corporate social responsibility as distinctly separate subjects in MBA education. An additional contribution was the focus of the study on the incorporation of these three subjects into core courses in MBA curriculum.

The assumption of Christensen et al. (2007) was that ethics education had gradually changed from separate ethics courses to an integrated emphasis on corporate and individual ethics that

included sustainability and corporate social responsibility. This assumption was the basis of their initial hypothesis that ethics education was expanding to include topics that relate to sustainability.

In their research, Christensen et al. (2007) focused on determining the progression of ethics integration at the top worldwide MBA programs. Business school ratings made and published by reputable organizations were reviewed to identify the top fifty MBA programs worldwide. Purposive judgment sampling was used to review the ratings, and to subsequently identify and choose the top fifty schools. After selection of the schools, interviews were planned with the schools' top officials who were decision-makers involved in curriculum development, staffing, and strategic planning. To add legitimacy to the research and obtain access to questions contained in an earlier survey of ethics education, institutional support was obtained from a Washington, D.C. college focused on ethics in business.

After the institutional support was received, standard semi-structured interviews were conducted by phone with top officials of the selected schools in order to conduct quantitative research. For the few officials that were not available by phone, written surveys were used. Fifty schools were contacted, with forty-four responding. The Christensen research investigated three topics:

- How business schools had changed ethics education to include new subjects;
- The extent to which European and global schools had expanded these subjects, and;
- Which significant processes would interest practitioners, researchers, and educators who will develop the curriculum?

The research identified eight areas to investigate:

- The emphasis on each of the three topics by measuring the absence or presence of required courses in the topics;
- Extent of institutional support in one or more of the topics evidenced by the absence or presence of centre's supporting the topics;
- The level of integration of two or more of the topics into courses;
- Teaching methods used by schools with experiential learning courses;
- Absence or presence of Net Impact Clubs to gauge student participation;
- How schools ranked as in the top by the notable Financial Times were shown in other important rankings that measure coverage of the three topics;
- How institutions addressed sustainable business and sustainability, and;
- Important practices in the other two topics of sustainability and corporate social responsibility.

The six questions on the survey asked if the courses addressed:

- Ethics, sustainability, and/or corporate social responsibility,
- If so, were these topics covered in core or elective courses,
- If the three topics were integrated, how that was done,
- If these universities had dedicated centres to support ethics, corporate social responsibility, and/or sustainability,
- How these top schools were ranked on other reputable surveys, and;
- Which of the schools surveyed had evidence of student interest in these topics.

Four questions were addressed to investigate the integration of the three topics of Ethics, Social Responsibility, and Sustainability:

- If courses including the three topics were required,
- If elective courses pertaining to these topics were available,
- If the schools had set up centres to focus on these subjects, and
- Enrolment percentages in the courses.

After the survey, a secondary part of the investigation by Christensen et al. (2007) gathered and analysed syllabi of the schools to determine tools used by faculty in teaching the concepts, and to what extent the schools offered the topics in core or elective courses. Information was also gathered from websites of the schools to collect data for this secondary part of the research. Quantitative results of the study were that 84.1% of the institutions had required courses in one or all of the three topics, with 25% of these required stand-alone ethics courses. Some schools required students to take ethics and leadership, others mandated ethics and corporate social responsibility together, and the most frequent combination was all three topics of ethics, sustainability and corporate social responsibility at 27.27% of the schools. The percentage of schools with specialty institutes or centers was 65.9%, which indicated a strong emphasis on these topics.

Christensen et al. (2007) emphasized that the absence of a center did not necessarily mean a lack of concern by the institution, but could be due to resources committed in other areas. Schools that had integrated the topics measured 54.55%; however, Christensen et al. (2007) noted that the definition and level of integration had wide variation among the schools.

In answer to the question of teaching methods used by schools with experiential learning courses, the Christensen study described efforts used by schools that employed experiential learning. It was detailed that while this type of program was beneficial and used effectively at several schools, offering experiential learning required increased involvement from instructors,

as well as financial commitments from the schools and students. In evaluating the absence or presence of Net Impact Clubs to indicate the involvement of students, the study revealed that clubs existed at 72% of the top fifty schools, and at 100% of the top ten, which reflected a strong student interest especially at the top ten schools. In comparing schools ranked as in the top by the Financial Times with other important rankings that measure coverage of ethics, social responsibility, and sustainability, the Christensen study confirmed that the trend did exist for schools to increasingly offer sustainable business and sustainability courses, and to offer courses that mixed the three topics. From their review of how institutions addressed sustainable business and sustainability and to identify important practices in the other two topics of sustainability and corporate social responsibility, Christensen et al. (2007) detailed efforts by four specific schools that promoted sustainability by offering it as an MBA concentration or integrated in a dual degree program.

As to bias in the study, no bias on the basis of geographical location, program size, or private versus public classification of the schools was revealed when comparing the schools that took part in the study with those that did not. The sustainability-related terms addressed in the survey were defined at the beginning to eliminate different cultural interpretations of the concepts.

In identifying limitations of this study, Christensen et al. (2007) recognized that the sample size was somewhat small in representing all U.S. and global MBA programs, but emphasized that many practitioners use top rankings as benchmarks, and since the questions in this study were to identify general trends, the small sample was felt to be appropriate. They also recognized the possible cognitive bias involved with subjective research that could result from different background and values of participants and researchers. They attempted, however, to minimize this problem by performing independent website analysis after the interviews. The

last limitation recognized by Christensen et al. (2007) was that the study was not longitudinal, although they saw this study as establishing a baseline for future research, analysis, and more in-depth comparison among institutions.

The conclusions of Christensen et al. (2007) were that almost one-third of the institutions studied have required MBA courses that cover all three topics; there is significant existence of institutional backing for these subjects; innovation towards integration of the topics was more prevalent in Europe; teaching methods were changing, and student participation was a driver in these changes. Another important conclusion was that the trend was identified showing increased interest on the three topics with a more prominent emphasis on sustainability. As the Christensen study was exploratory with one objective being to discover future research tasks, Christensen et al. (2007) recommended that their study could be the basis for additional research into the teaching of each individual topic of ethics, sustainability, and corporate social responsibility. They also recommended that the study could provide value to practitioners and administrators who are interested in enhancing the focus of sustainability in strategic decision-making and MBA courses as well.

The recommendation by Christensen et al. adds to the purpose of this dissertation in that this research centers on sustainability. The importance of the study by Christensen et al. (2007) was that it recognized an important trend towards emphasis on sustainability, sustainable development and sustainable management. It is important to this research as it laid important groundwork, identified and affirmed the trend to be further analysed. This trend is recognized by individual students as well as practitioners and school administrators, and will be important in preparing students for sustainable management in business organizations.

Wu et al. (2010) followed the 2007 Christensen et al. study and conducted an analysis of web-based business school curricula that were sustainability related and part of management education courses in order to provide quantitative results reflecting the attention given to sustainability-related courses in business degree programs. The 2010 Wu et al. study also provided direction for this dissertation. The conclusions of Wu et al. (2010) were somewhat different from those arrived at by Christensen et al. (2007). Wu et al. asserted that social and economic factors should be integrated with environmental concerns in sustainability efforts.

Wu's objective in the study was to develop a holistic overview of current management education for sustainability. Research was divided into two steps, first to identify major global business schools with curricula that included sustainability at different degree stages and in various geographical regions, and second to collect and analyse those courses that had been identified. Reputable published school rankings were used as a starting point for selecting the schools. Purposive sampling was used to select schools that represented worldwide business schools with recognized accreditation status.

The analysis conducted by Wu et al. (2010) was based on business courses that were sustainability related in core and elective courses, at both graduate and undergraduate levels. The method used was exploratory empirical content analysis. Criteria-based sampling was used to select the schools, and then to collect and analyse the schools' business course offerings that were sustainability related. Thirty-nine sustainability-related terms were identified to use in the analysis. Coders were trained to ensure consistency among coders, and eliminate any biases. Questions that were addressed in reviewing the research detail centred on the status of sustainable management education, whether there were regional disparities, or disparities based on accreditation status, development of the specific country, the university's global ranking,

topics that were taught more or less often, and if there was a common method identified for teaching the courses.

Analysis results indicated that 6% of the accredited universities taught sustainability related courses, and the courses were mandatory at 57% of those schools. Differences according to geographical area were analysed and identified as significant by using ANOVA test, with American schools shown as offering fewer sustainability courses than those in other geographical areas. These geographical differences were not the same conclusion as determined by Christensen et al. (2007). Of the thirty-nine sustainability-related terms, those ranking in the top ten that appeared in course content included ethics ranked as number one by far, surpassing the other terms with a frequency of 294. Sustainability at number two showed a frequency of 71. Other terms in the top ten that are important in this dissertation were sustainable development at number four with a frequency of 42, and peace and human security at number 9 with 20 as the frequency. Although human rights and various corporate responsibility terms were included in the thirty-nine, none of these were ranked in the top ten topics.

Notable results of the study by Wu et al. (2010) were consistent with previous studies identifying a distinct trend towards sustainability-related curricula, and that this trend is stronger in European schools than American ones. However, the results also confirm that while the topic of ethics receives emphasis, concepts relating to sustainability, corporate sustainability responsibilities, and the social/human aspect of sustainability fall far behind ethics in receiving attention in business courses. Wu et al. (2010) stated that implications from the study are important to business practitioners and educators, as well as other stakeholders.

Linnenluecke et al. (2009) discussed a holistic approach to corporate sustainability, with the three components of economic, ecological, and social factors. Linnenluecke et al. (2009) investigated the relationship between various organizational attributes, cultural and subcultural practices, and employee understanding of corporate sustainability. Linnenluecke et al. (2009) inferred that organizational culture is often divided into various subcultures rather than being characterized by a normative unit.

These researchers believed that information learned from their study would help business managers and leaders design effective programs that would support corporate sustainability considering the characteristics of the subcultures that exist. Linnenluecke et al. (2009) started their study by investigating the different understandings that employees have towards corporate sustainability, and whether these differences were attributable to the existence of subcultures. They used the Competing Values Framework (CVF) developed in 1984 by Quinn and Kimberly (Linnenluecke et al., 2009), and the organizational demands that often conflict. Six hypotheses were addressed. Hypothesis 1a was that employees from subcultures with high internal processes put more weight on understanding the economic aspect of corporate Sustainability, and hypothesis 1b was that employees with low awareness of sustainability practices also set more significance on economic comprehension of sustainability. Hypothesis 2a was that employees from subcultures of high rational goal put more weight on understanding environmental aspects of corporate sustainability, and hypothesis 2b declared that employees who had high consciousness of the sustainability practices in corporations also place higher weight on understanding environmental sustainability. The third set of hypotheses, 3a and 3b, were that employees from high open system subcultures put more emphasis on holistic

interpretation of sustainability, as do individuals who have high recognition of practices pertaining to sustainability.

Linnenluecke et al. (2009) used a quantitative survey to analyse culture profiles of participants at a large Australian corporation, using convenience sampling. Participants were from a variety of groups and ranks within the business. The survey was scenario based, paper format, with 685 surveys distributed and 260 responses received, a rate of thirty-eight percent, although five responses were excluded due to incomplete information. SPSS was used to analyse the data using a two-step cluster analysis to determine subculture existence, and the hypotheses were tested with regression analysis.

Conclusions of Linnenluecke et al. (2009) were that there are disparities in employees' understanding of corporate sustainability, and these disparities are caused partly by subcultures within the organization and differences in employees' knowledge of the company's sustainability strategies. These findings support the purpose of this dissertation in that realizing the differences in identifying corporate sustainability, investigation into including sustainability related concepts in business degree programs can benefit organizations as well as entities that train individuals for organizational management roles that support sustainability.

Čiegis and Gineitien (2006) and Čiegis, Ramanauskiene, and Martins (2009) in a comparison of educational concepts for sustainable management and those pertaining only to the environment, Čiegis and Gineitien (2006) asserted that universities are important leaders in teaching graduates in all disciplines about sustainability, and providing this knowledge should be an important mission for universities. The research object was the analysis of educational topics pertaining to economical sustainable development. The objective was to investigate educational efforts towards supporting sustainable development. Research methods used logic

abstraction to generalize the theoretical systems analysis of educational problems in supporting sustainable development as reported by previous studies and conclusions of researchers in other countries. Major scientific works on the topic were reviewed and analysed, and several conclusions were identified, with one being the concept that education for sustainable development and management involves not only environmental education, but the three components of society, economy, and environment, with emphasis that culture was an important dimension in supporting sustainable development.

In a subsequent article by Čiegis with Ramanauskiene and Martinkus (2009), the authors analysed problems relating to sustainable development concepts, descriptions, and evaluations. The object of this research was the sustainable development concept, with the intent being to systematize related dimensions and descriptions. The research tasks were planned to define sustainable development, analyse the concept, and develop a systematic picture of its dimensions. The research method again was logic abstraction with theoretical systems analysis. These authors supported the three components included in sustainable development, social, environmental, and economic, as being complementary and interconnected. Conclusions of the authors were that to date, definitions of sustainable development had not included all three components, had not effectively defined the concept of sustainable development, that it was a complex, multi-domain topic covering economic, ecological, and social systems that should be treated as an integrated whole.

In a 2008 study, Junyent and de Ciurana reported that university education and training are deciding factors in developing a culture of sustainability, and that higher education has a crucial part in promoting changes that encourage a society to support future sustainability as well as sustainability in the present. Junyent and de Ciurana (2008) presented a model for integrating

sustainability into higher education, and tested it at eleven universities in Europe and Latin America. Each individual university chose pilot studies across various educational fields, with researchers and staff of different educational background to provide interdisciplinary interaction. The goal was to create a framework model focused on integrating sustainability into curriculum.

The methodology that used was collaborative, participatory action research, to combine research, learning, reflection, and ultimately action. The project work took place in four meetings held over a two-year period, with the meetings being used to design the curriculum model which was subsequently tested and customized for each university setting. The resulting model was recommended as a starting point for providing graduates with skills needed to manage sustainability and sustainable development in business organizations.

To determine recommendations for improving the relationship between education for sustainable development and education relating to environmental protection, Coffman et al. (2009) reviewed proceedings of the 2009 UNESCO World Conference on Education for Sustainable Development, and described the historical context as well as the difficult relationship that exists between the two types of education. Coffman et al. (2009) reported that education for sustainable development should promote actions to provide sustainability for the future, and should include not only ecological viability, but social and economic as well. Their analysis of the 2009 conference identified four important factors of optimal education for sustainable development:

- That of developing public knowledge;
- Improving the quality and accessibility of basic education on these topics;
- Redesigning existing education to include sustainable development, and;

- The provision of training.

The recommendations of Coffman et al. were that education for sustainable development should improve, and that educational curricula, practices, and those who are teaching it must be revised accordingly.

2.4 Summary

After reviewing the detailed research and articles that have been published recently and continuously since the 1989 Brundtland report, it is clear that sustainability and sustainable management are important in organizational strategies, and that education must prepare business students for these responsibilities.

The literature review reinforced the assertion of many authors that sustainable development, sustainability and sustainable management involves all three components of:

- Economic and Financial;
- Environment, and;
- Social and Human factors.

According to Dernbach (2015) sustainable development or sustainability is a decision-making framework for maintaining and achieving human well-being, both in the present and into the future. The framework requires both consideration and the achievement of environmental protection, social justice and economic development. In that framework environmental protection must be integrated into decisions about social justice and economic viability must be integrated into decisions about environmental quality.

Different researchers have maintained the use of sustainable development as a conceptual framework to be used in guiding national governance and response to the worsening global situation as was detailed by Dernbach (1998), who asserted that the increase of global poverty

is part of the social aspect of sustainable development that should be addressed by national governance to ensure sustainability for future generations.

The literature review also revealed the need for further investigation into the perception of university students as to importance of sustainable management, and their recognition of university efforts to prepare them to effectively support the acceleration of sustainable development, sustainability and management efforts as they enter senior management roles in the Corporate World, Civil Society and Public Sector organizations.

Conclusion statements were that sustainability and sustainable development efforts must be integrated and contained in organizational learning at all employee levels. An epidemiological literature study conducted by Pfeffer (2010) linked organizational policies and decisions to inequalities in social systems, which in turn cause disparities in the health and mortality rates of individuals. Pfeffer proposed several questions recommended for additional research with the goal of linking social sustainability with organizational effectiveness. Pfeiffer's intent was to explore why the social aspect of sustainability has not been given equal focus in management writing when comparing it with environmental components of sustainability, and to make recommendations for further research to support the concept that companies striving to support sustainability should focus not only on environmental sustainability, but human sustainability as well.

CHAPTER 3- RESEARCH METHODOLOGY

This study aims to investigate the perceptions of business degree students on the importance of sustainable development, sustainable management, sustainability, and related social and human aspects in their business careers and to their future success. Furthermore, find out to what extent these students recognize the relevance of the knowledge and skills that they are being taught in order for them to successfully graduate under a business degree programme.

This research study will aim at addressing reports by various researchers that sustainable development, sustainable management and sustainability are critical components of education in universities and businesses. Yet, topics on sustainability are not being given sufficient attention by many universities and private sector led businesses (Middlebrooks et al, 2009; Pfeffer, 2010).

Sustainable development, sustainable management and sustainability are critical in the management of organizations, and preparation of business students to manage towards sustainability is critical as well (Middlebrooke et al., 2009). Specifically, the social factor of human sustainability is crucial in sustainable management as it is the individuals that carry out duties to support sustainable development, sustainability and sustainable management (Pfeffer, 2010).

The problem to be addressed is that sustainable development, sustainability and sustainable management are critical components of education in schools and businesses, but are not being given sufficient attention by many schools and business organizations, and that sustainable management efforts are unbalanced in business organizations and in management education Pfeffer, (2010).

As described in the literature review section, researchers such as Pfeffer (2010), King (2008), and Springett (2005) have identified this research gap in the past, with questions becoming more pressing. The findings from this research study will contribute to the body of knowledge relating to strategic leadership and sustainability managerial theory, as well as employee relations, by investigating the extent to which business degree students perceive that their business degree courses are preparing them effectively for various senior management roles that will include sustainable management and sustainability.

This research study will be designed to supplement or complement the research by Middlebrooks et al. (2009) that used quantitative data to investigate the perceived importance of sustainable development, sustainability and sustainable management ethics held by students in business degree programs. The students involved in the Middlebrooks et al. (2009) study were enrolled in undergraduate business courses at one specific institution, and had plans of becoming future business leaders. Middlebrooks et al. (2009) used Likert-scale surveys to obtain quantitative data and analyse effects of business courses on students, comparing before and after-course perceptions of the students towards sustainable development, sustainability and sustainable management concepts.

Middlebrooks et al. (2009) study was planned with the goal being that the results would describe the educational efforts in teaching students to become sustainability leaders in their

various organizations, which would include the ability to recognize the three components of sustainability in organizational culture that Middlebrooks et al. (2009) named as Economic, Social, and Environmental.

Furthermore, the study will also attempt to create awareness held by business students in integrating the components of Economic, Social and Environmental, and the desire and ability of the students to make a difference, influence, and manage towards sustainability. The conclusion of Middlebrooks et al. (2009) included the recommendation that integrating the teaching of sustainable development and leadership concepts is a necessary and logical next step.

3.1 Research Methodology

The topic of this research study is "Accelerating Sustainable Development: Are Universities Equipping Students with Skills Needed in Achieving Sustainability". The rationale behind choosing this research method is based on this study which has an axiological setting, quantitative, theory-driven, hypothesis-testing using surveys to be completed by business course students.

The research questions are as follows:

Question 1. To what extent have university students perceived the importance of the meaning of sustainable development, sustainable management and sustainability?

a) In their business degree courses;

b) In their future roles as senior managers in their organisations and businesses.

Question 2. To what extent have university students perceived the importance of sustainability? As it relates to its three components:

- Social and Human;

- Economic and Financial, and;
- Environmental?

3.2 Hypotheses

The goal of the survey will be to obtain perceptions from students who are currently or recently enrolled in business courses at Bachelors and Master's degree level. The survey will include 25 multiple-choice intensity questions using a five-point Likert scale, and two demographic questions to classify previous work experience and courses completed at universities. The demographic information enabled comparison of responses from those who have little work experience and who have completed few courses with those who have extensive work and college background. This information will be able to identify differences in perceptions that exist between students with little work experience and college background with those possessing more years of experience and more courses completed.

The research process will perform an analysis of the survey question responses to give insight into the students' perceptions towards the importance of sustainability and sustainable management skills, and their perceptions of whether the business courses completed have prepared them to be employees and managers who can support organizational sustainability and sustainable management efforts.

The value of the information gained will be to provide insight into the state of sustainability education and whether it meets the needs of students who will be taking part in organizational management, as well as the companies that will be hiring those individuals. This insight will be used to develop further research or to make recommendations for changes that will better prepare students for organizational management that integrates sustainability and sustainable development.

3.3 Population and Sampling Strategy

This research study will target a population comprised mainly of individuals currently or recently enrolled in business courses. The sample frame will target students currently or recently enrolled in business courses at four-year universities globally. The justification for choosing this target population will follow the pattern of Middlebrooks et al. (2009) in sampling students currently enrolled in business degree programs investigating their perceived importance of sustainability ethics.

Furthermore, justification for the sample population in this specific geographic area will result in an increase in population by including more universities than only one, as recommended by Middlebrooks et al. (2009). In addition, the age of the students is expected to range from recent high school graduates in their late teens to mature age students in their forties and fifties returning to school after years in employment. However, years of work experience in employment is expected to vary from zero to more than ten years, which is the range of the demographic question on the survey.

Gender and culture will be something that will need to be identified in the survey, but it is expected that the sample population will provide a mix of males and females and a wide variety of cultural diversity, which will characterize this geographical area. Furthermore, a stratified sampling will be used to select groups of university students who are currently or who could have been recently enrolled in various business courses.

According to Cooper and Schindler (2008) a stratified sampling method uses a random selection of units from various groups based on specific similarities. The target population in this study will be current or recently enrolled university students, with the specific similarities

being that the students will be currently or recently enrolled in business degree programs. It will be expected that this process will provide a valid sample group of students who would have similar characteristics to, and will be representative of, students in business classes (U.S. Department of the Air Force, 1996). The researcher will use primary data, which will be collected using a survey. In addition, primary data sources often use records with no filtering or interpretation by others Swanson & Holton, (2005). The researcher intends to collect primary data from a minimum of 100 students.

The researcher intends to plan in collecting data for analysis, which will be larger than the 100; an amount recommended by Cooper and Schindler (2008) for quantitative research, and slightly larger than a range between 200-300 number; which is recommended by Capella University for random quantitative research in the School of Business and Technology. The minimum number of 100 surveys is in line with the 100 surveys collected by Hopkins and Duke (2004) using the CUBLO survey, which will be instrumental in using for the survey in this research.

3.4 Survey Instrument

The researcher will use a survey instrument which is based on the CUBLO, Measure for Core Universal Business Learning Outcomes, developed by Hopkins and Duke of Clemson University (2004). The CUBLO instrument is a tool that was designed to measure whether educational courses were meeting learning outcomes that are required by accreditation agencies and businesses. According to Hopkins & Duke (2004); this instrument measures students' feelings about the importance of specific skills, and the extent to which they feel the technical skills have been achieved. The relationship of these perceptions will be instrumental in identifying and closing gaps in business course curricula.

Out of twenty-six questions, ten questions will focus on the skill of comprehension of business practices, two relate to the skill of leadership, ten relate to communication skills, two to analytical skills, and two to decision-making skills. The additional two questions in the survey will be independent variables and will focus on asking the number of business courses completed and the years of work experience. This demographical detail will be supported by all the hypotheses to identify differences that may exist in perceptions of students with little work or college background and those who have completed several business courses or who have more years of work experience. The survey questionnaire to be used has been attached as Appendix A.

3.5 Field Test

The researcher will conduct a field test to ensure face and content validity of the survey Instrument. Face validity ensures that what the survey is intended to measure is clear to those completing the survey. Construct validity verifies the legitimacy of the theoretical concepts being used Gelo, Braakmann, & Benetka (2008).

Field test results will be obtained from five experts with doctoral degrees in the fields of business, education, leadership, and entrepreneurship. Changes will be made to the survey as a result of recommendations from one expert. Additional verbiage will be added to the "Survey Instructions" and "How to Complete the Survey" sections. A statement about the possible benefit of participating in the survey will be added, stating that although there was no personal benefit to the individual, participation could contribute to the effectiveness of including sustainability topics in business degree programs.

3.6 Data Collection and Research Process

The researcher will collect data by using an internet-based survey tool. The survey will be publicized to potential participants using the services of Google.com to voluntarily take online surveys from companies or individuals that need to collect data for research. Individuals interested in completing online surveys will submit their profile details to Google forms, which will become the database which will be used by Google forms to send survey invitations to members that fit the criteria for the survey.

Google forms were used to collect survey information from an Audience focus group that met the criteria for this research, which were participants who were a minimum of 18 years of age, and are currently or recently students in Master's degree business programs. Using the profile detail of Audience members, Google forms were distributed through the survey link to a random group of anonymous Audience focus group participants that met the criteria for the survey. Participation in the survey were anonymous and voluntary. Potential participants who wished to take part in the survey, clicked on the link which read "start survey now" contained in the WhatsApp invitation to enter the survey. Upon clicking the link in the WhatsApp group start survey now, the potential participants were requested to fill out the questionnaire by the researcher.

The internet survey that was used to collect data remained open until a minimum of 100 completed surveys were obtained. Middlebrooks et al. (2009) used a small group of 23 students in one class. Hopkins and Duke (2004) surveyed 400 students from all areas of study, with 150 being business students. It would be difficult to learn the exact number of students who will be enrolled in business courses and to therefore, use a percentage method in determining a sample size. The 100 completed surveys will provide a sample size comparable to the number of business students in the Hopkins and Duke study. This sample size will be large enough to be

representative of business students; as they will share educational experience and goals, but will be small enough to manage Cooper & Schindler (2008). The 300 number is larger than the 150-amount recommended for quantitative research by Cooper and Schindler (2008), as well as the 250 to 300 recommended by Capella University.

Completed survey forms were linked to an Excel sheet. This researcher thereafter exported the completed survey details from Google forms into Excel software on the researcher's personal computer, and exported it to SPSS software which was used for analysis and to measure reliability and validity. Survey results were put in one sample group and independent sample t-tests was used to identify the mean and standard deviation of the dependent variables which was then ranked by participants on the 1-5 Likert scale and compared the means of the students' perceptions of skill importance with skill level obtained. One-between, one within ANOVAs was used to measure answers about the equality of the three components of sustainability, (a) Social/human, (b) Economic/financial, and (c) Environmental.

3.7 Justification for Research Methodology

This study was designed to reveal the perception of business students as to the importance of sustainable management skills and their perception of skill level being attained through their business course studies, and if the importance increases with number of business degree courses completed and years of work experience. Quantitative research was used for sampling in selecting individuals that represented the intended population to ensure generalizability and external validity. The sampling method followed the pattern of Middlebrooks et al. (2009) and Hopkins and Duke (2004), and provided this researcher with available access to students who represented the population. As information for this study was gathered through surveys, the

results were primary sources of data, which have provided the most valuable sources available Cooper & Schindler (2008).

Quantitative research was used as the most appropriate for this study, as quantitative research is theory-driven, designed to test hypotheses, and to explain and verify observed facts and their relationship with construct and statistical conclusion validity Gelo et al. (2008). Quantitative research methodology is a positivist approach. Quantitative research is objective, deduction is used to obtain knowledge, results are not dependent upon an individual's interpretation, and it is controlled, reducing the possibility of researcher bias (Creswell, 2003).

Distribution of the survey using Google forms services and the Audience focus group ensured anonymity and protection of the participants, while facilitating the expedient distribution of the survey to participants who fit the criteria and were likely to complete the survey within the two-week requirement. Using the methodology chosen, the researcher ensured that a sample that was representative of the population, and a survey method that provided valid and reliable results that were selected.

3.8 Assumptions and Limitations

Assumptions are that Google forms has sufficient Audience focus group members that will meet the criteria for this research. Assumptions will be that survey participants will be willing to complete the surveys within the required time, and would give honest responses. It is also assumed that survey participants will understand the instructions, definitions, and questions on the survey. Additionally, it will be assumed that the sample will be an adequate representation of the target population.

The limitations of this research with regards with the chosen methodology is that although the sample represented the population, it will be seen as a small sample considering the large

number of students enrolled in business degree programs. Another limitation will be that since quantitative research is being conducted, the survey will not gather any type of qualitative detail that will be used for variations of the students' perceptions or interests. Time limitations will another aspect; as the researcher as other work-related responsibilities, which at times may take precedence and contribute to delayed completion of this research project.

3.9 Ethical Considerations

Conducting research in ways that ensure ethical adherence is critical in research, and strict adherence to research ethics is a major concern in performing this study. Respondents will be assured that completion of the survey is voluntary, and that privacy and confidentiality will be ensured, and that there will be no harmful consequences of completing or not completing the surveys Cooper & Schindler (2008). Informed Consent Forms will explain all aspects of the survey and that participation will be voluntary.

Confidentiality and privacy of survey participants will be assured. No information pertaining to gender, age, culture, or other types of personal detail will be gathered. Since invitations to potential survey participants will be distributed by Google forms, this researcher won't have access to any email address or other identifying information for the participants in the survey. All surveys will be completed anonymously, and there is no way that the researcher or other persons will associate responses with specific students.

CHAPTER 4. RESULTS

4.1 Introduction

This section will describe the study's summary of results from the survey that was undertaken. This study was planned to address the following research questions as outlined below.

Research Question 1. To what extent have university students perceived the importance of the meaning of sustainability and sustainable management in their business degree program and for their future success, and;

Research Question 2. To what extent have university students perceived the importance of sustainability as it relates to its three components (a) Environmental, (b) Economic/Financial, and (c) Social/Human, and whether number of courses completed or years of work experience have an impact on the students' perceptions about these issues.

The population and sample will be described, followed by a summary of the results reached through SPSS analysis, and whether each hypothesis supporting the research questions was accepted or rejected. The subsequent section will detail the analysis and SPSS processes that led to the acceptance or rejection of each hypothesis.

4.2 Online Mail Questionnaire

The questionnaire consists of two main parts, namely the demographic questions and assessment questions with regards to student's appreciation on the subject of sustainable development. In order to assess business students understanding the concept of sustainability; a questionnaire was developed which includes 25 questions (see Appendix A).

Demographics

The respondent's pool for this study was drawn from students pursuing business degree related courses with different backgrounds to ensure that perspectives and opinions enrich the study. There was a mix of female and male respondent's males- 80 and, females -20; giving us a total of 100 respondent's participating in the research study. I purposefully targeted those pursuing degrees related to business. The respondent's ranged within the age group of 18-54. As discussed in Chapter three; the breakdown is detailed as analysed below:

Demographic Characteristics of Respondents

Details	Demographic Characteristics of Respondents			
Educational Level	Associate Degree	Bachelor's Degree	Master's Degree	Doctorate
Age	18-24	25-34	35-44	45-54
Business Degree	Yes	Yes	Yes	Yes
Employment Status	Yes	Yes	Yes	Yes

The population used was students currently or recently enrolled in business courses at four-year universities, and the sample frame was students that met this criteria and attended universities. The population was initially planned to be students currently enrolled in business courses, however, this was widened to current students and college graduates from 18 to 54 years of age as Google forms, the survey service being used, did not feel they had a sufficient database of current students in business courses, and recommended widening the group to current students and graduates from 18 to 54 years of age.

Data was collected through an internet survey publicized to qualified potential participants using the services of Google forms.com. The survey remained open until the required minimum of 100 completed surveys was received, which spanned nine days, and exceeds the minimum number of responses required to meet the 95% confidence level.

4.3 Summary of Results

The research questions in this study were:

1. To what extent have university students perceived the importance of the meaning of sustainability and sustainable management?

a) In their business degree program

b) For their future success

2. To what extent have university students perceived the importance of sustainability as it relates to its three components: (a) environmental, (b) economic/financial, and (c) social/human?

Below are the null hypotheses and whether they are accepted or rejected as a result of the research. Ho3 was the only null hypothesis rejected. Analyses detail of the hypotheses will be provided in the Results section.

4.4 Details of Analysis and Results

Data Cleaning

Data were collected for 100 individuals, downloaded to Microsoft Excel 2010, transferred to SPSS 21.0 for analysis. Data were checked for accuracy, outliers, and missing cases. Means and standard deviations were reviewed to verify that responses were within possible range of values. The existence of outliers was checked with the creation of standardized residuals (*z* scores). The triangulation strategy of quantitative data collected and analyzed, and as presented in this chapter, ensured validity and reliability of this research study.

Descriptives

Total scores were created by averaging the responses for four topics on the survey:

1) Sustainability;
2) Understanding sustainable management is important;
3) Business courses have helped me and;
4) Business courses have given me the skills.

In addition, the researcher used other three subscales in calculating by averaging the corresponding items. Those subscales included environmental, economic/financial, and social/human which are parts of sustainability and sustainable management and included in each of the four topics.

Cronbach's alpha values were conducted for each of the scales. Reliability for the scales ranged from acceptable (.73) to excellent (.95) (George & Mallery, 2010). Cronbach's Alpha Values are presented in Table 1.

Table 1. Cronbach's Alpha Values for the Variables of Interest

Variable	No. of items	α
Sustainability	5	.89
Understanding sustainable management is important	8	.91
Business courses have helped me	5	.93
Business courses have given me the skills	8	.95
Financial/Economic	5	.82
Environment	4	.73
Social	4	.73

Means and standard deviations were conducted for each of the variables of interest by total number of college courses completed (0 - 10 vs. 11 or more) and years of work experience (0 - 10 vs. 11 or more). Table 2 provides the means and standard deviation for the variables of interest by total quantity of courses.

Table 2. Means and Standard Deviations for the Variables of Interest by Number of College Courses Completed

	10 or fewer classes		11 or more classes	
Variable	M	SD	M	SD
Sustainability	3.16	0.68	3.20	0.65
Understanding sustainable management is Important	3.16	0.61	3.19	0.65
Business courses have helped me	2.68	0.82	2.52	0.96
Business courses have given me the skills	2.73	0.78	2.52	0.93
Financial/economic	2.93	0.66	2.89	0.77
Environment	2.88	0.63	2.78	0.75
Social	2.88	0.67	2.82	0.71

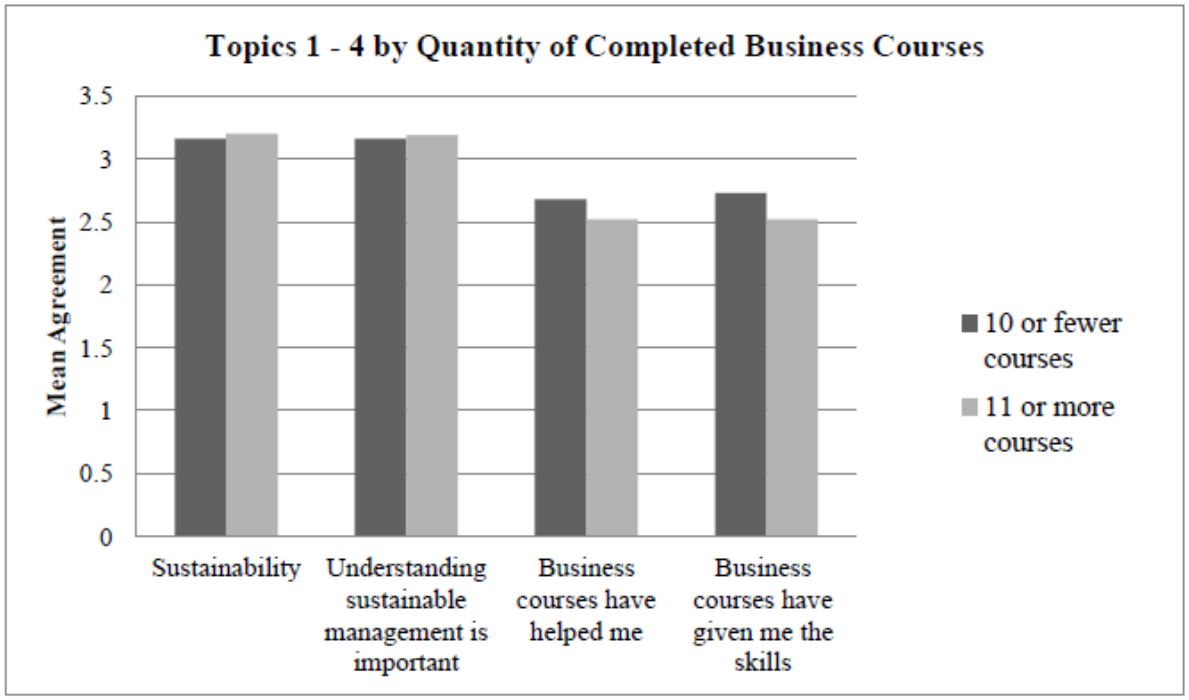


Figure 1. Bar chart displaying topics 1-4 quantity of completed business courses

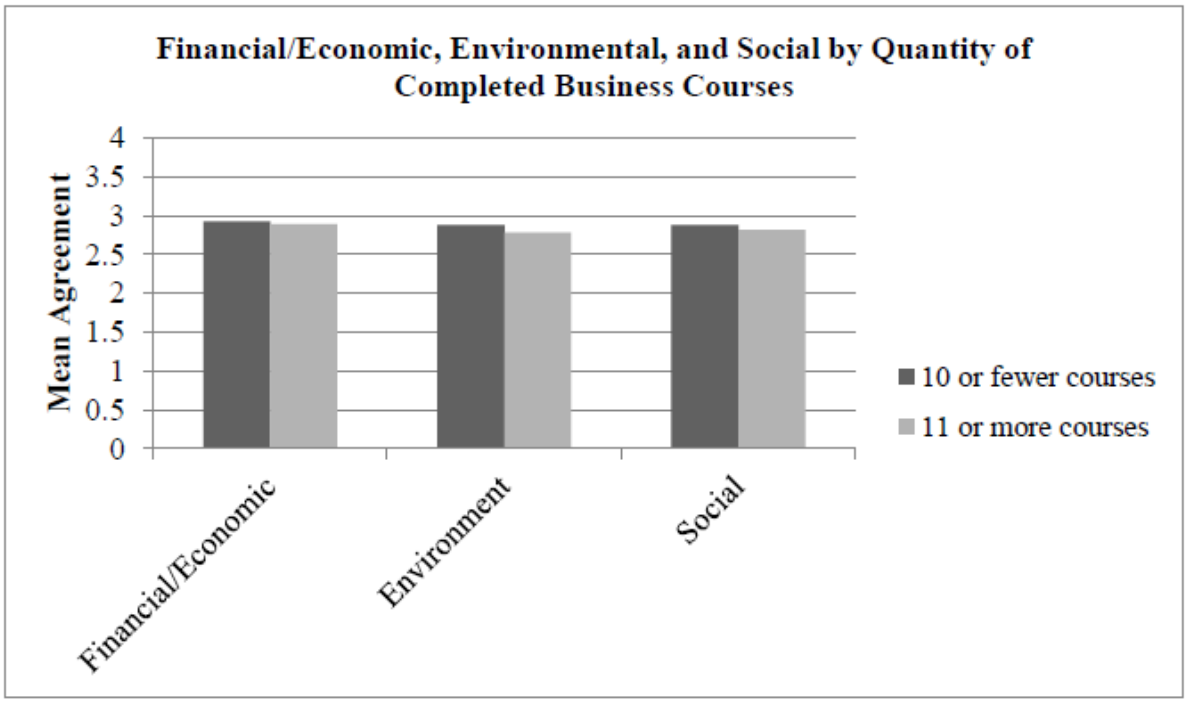


Figure 2. Bar chart displaying financial/economic, environmental and social quantity of completed business courses

Table 3 represents the mean and standard deviations for the variables of interest by work experience (0-10 years vs. 11 years or more)

Table 3. Means and Standard Deviations for the Variables of Interest by Years of Work Experience

	10 or fewer years		11 or more years	
Variable	*M*	*SD*	*M*	*SD*
Sustainability	3.22	0.61	3.14	0.72
Understanding sustainable management is important	3.15	0.60	3.22	0.67
Business courses have helped me	2.61	0.89	2.54	0.95
Business courses have given me the skills	2.63	0.86	2.55	0.91
Financial/economic	2.91	0.73	2.89	0.74
Environment	2.83	0.69	2.80	0.73
Social	2.85	0.66	2.82	0.74

4.5 Analysis

Prior to conducting the analyses, all dependent variables were assessed for normality by assessing kurtosis and skew values. The skew values must be within $-2 < x < 2$ in order to meet the assumption of normality and values for kurtosis must be within $-7 < x < 7$. Values of skew and kurtosis were within the recommended parameters for all of the dependent variables indicating the assumption of normality was met.

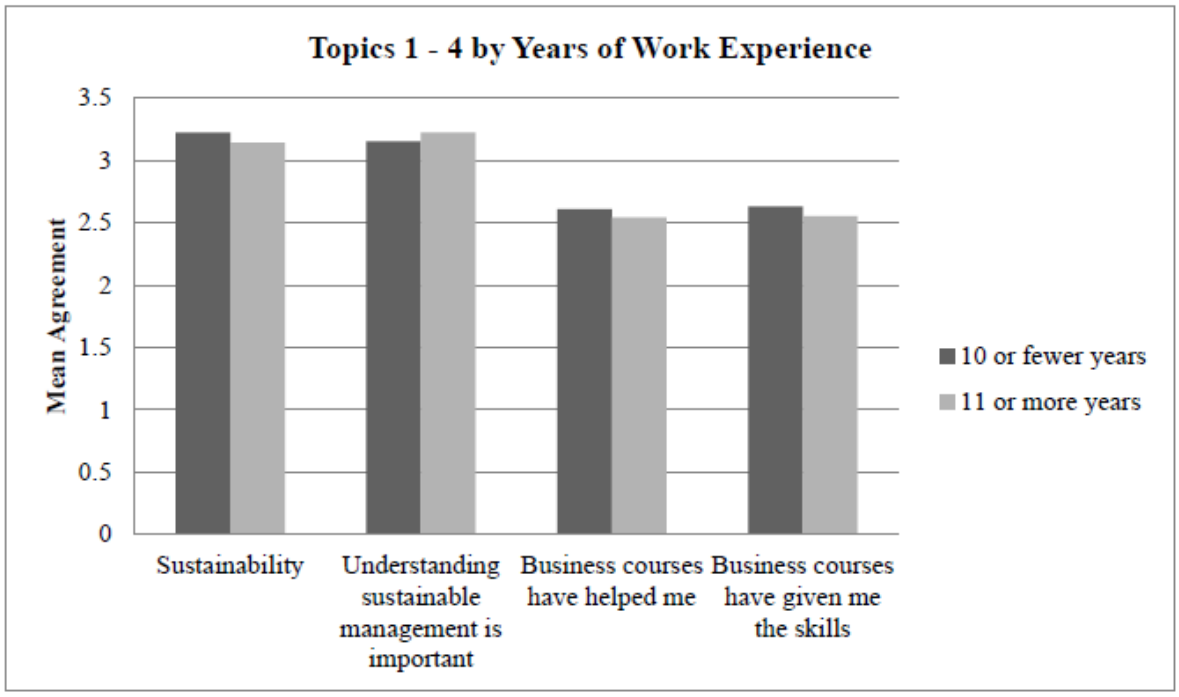


Figure 3. Bar chart displaying topics 1-4 by years of work experience

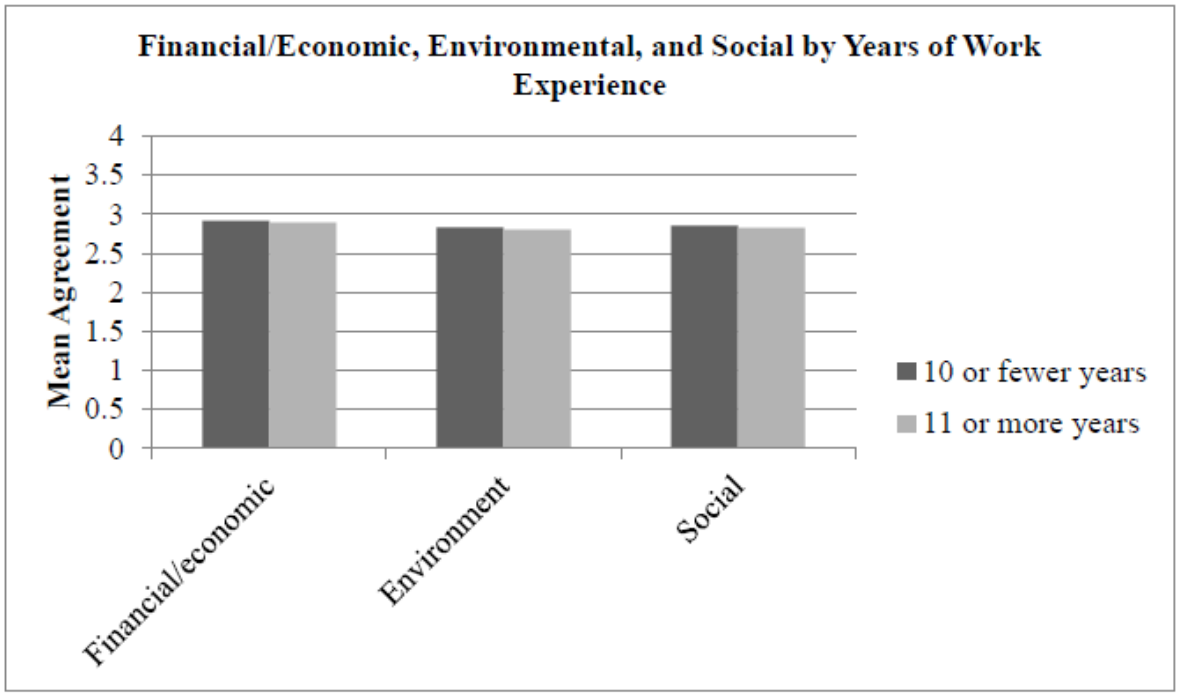


Figure 4. Bar chart displaying financial/economic, environmental, and social by years of work experience

Analysis

Prior to conducting the analyses, all dependent variables were assessed for normality by assessing kurtosis and skew values. The skew values must be within -2 < x < 2 in order to meet the assumption of normality and values for kurtosis must be within - 7 < x < 7. Values of skew and kurtosis were within the recommended parameters for all of the dependent variables indicating the assumption of normality was met.

Table 4. Independent Sample t Test Assessing Differences on Sustainability by Number of University Business Degree Courses Completed

	10 or fewer courses		11 or more courses				Cohen's *d*
Variable	*M*	*SD*	*M*	*SD*	*t*	*p*	
Sustainability	3.16	0.68	3.20	0.65	-0.63	.529	.07

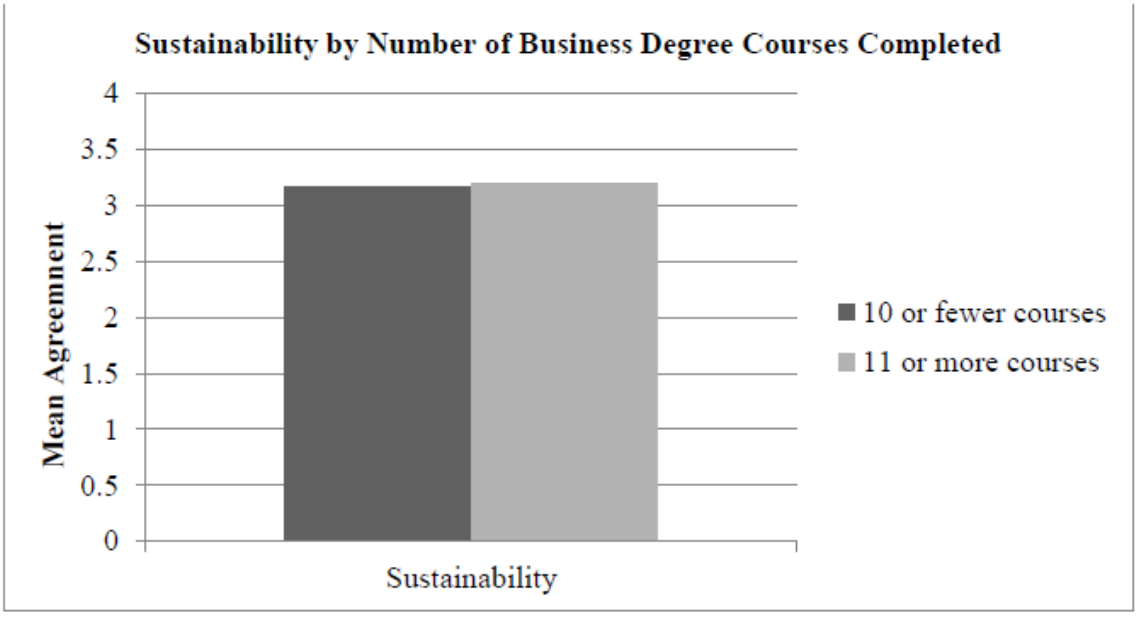


Figure 5. Bar chart displaying sustainability by the number of courses completed

Table 5. Independent Sample t Test Assessing Differences on Understanding the Meaning of Sustainability is Important to Me by Number of University Business Degree Courses Completed

Variable	10 or fewer courses		11 or more courses				Cohen's
	M	*SD*	*M*	*SD*	*t*	*p*	*d*
Understanding the meaning of sustainability is important to	3.16	0.61	3.19	0.65	-0.41	.681	.05

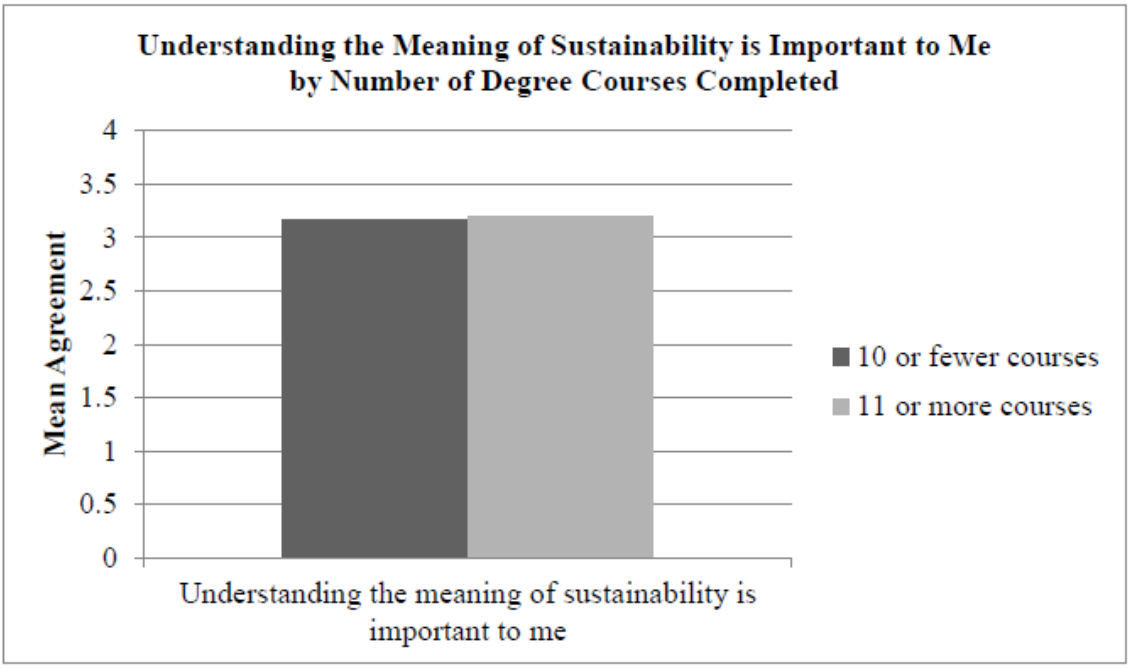


Figure 6. Bar chart displaying the importance of understanding the meaning of sustainability by number of business courses completed

Table 6. Independent Sample t Test Assessing Differences in the Perception that Business Courses Have Given Them Skills for Sustainable Management by Number of University Business Degree Courses Completed

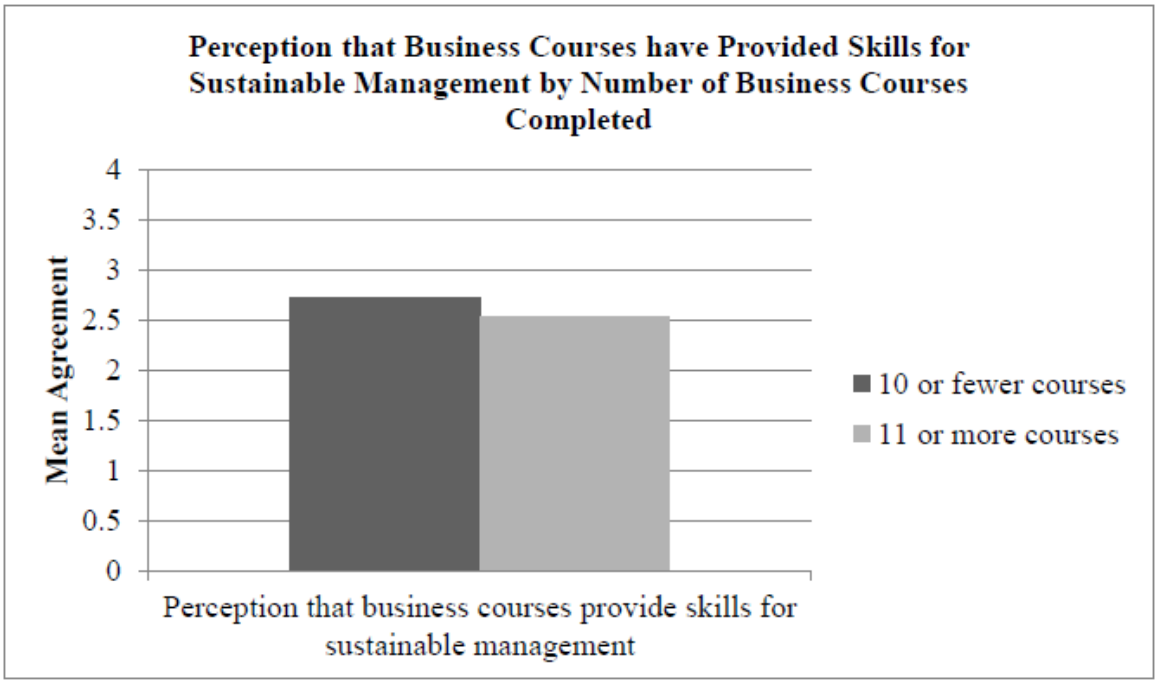


Figure 7. Bar chart displaying perception which business courses provide skills for sustainable management by number of business courses completed

Table 7. One-Between, One-Within ANOVA to assess Differences on Economic/Financial, Environmental, and Social Scales by Total Number of College Courses Completed

Variables	*SS*	*df*	*MS*	*F*	*p*	Partial η^2
Factor*Total courses completed	0.10	2	0.05	0.44	.647	.01
Error	79.84	706	0.11			

Table 8. Means and Standard Deviation for Economic/Financial, Environmental, and Social Scales by Quantity of Completed College Courses

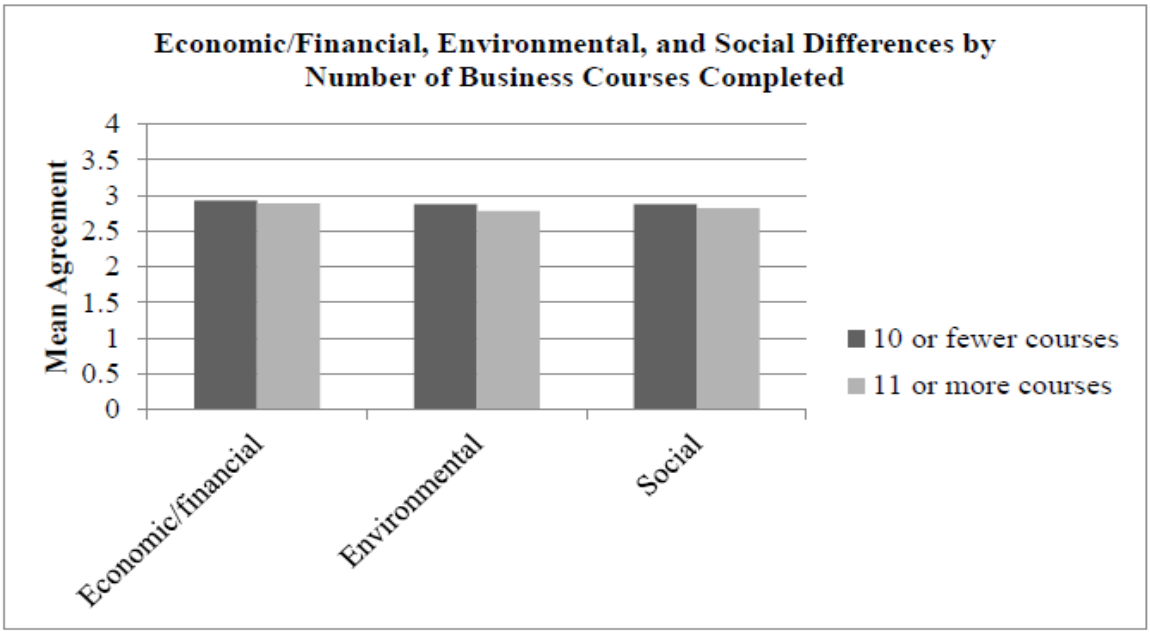


Figure 8. Bar chart displaying financial/economic, environmental and social by number of Business courses completed.

Table 9. One-Between, One-Within ANOVA to assess Differences on Economic/Financial, Environmental, and Social Scales by Years of Work Experience

Variables	*SS*	*df*	*MS*	*F*	*p*	Partial η^2
Factor*Years work experience	0.01	2	0.01	0.04	.965	.01
Error	79.93	706	0.11			

The result of the ANOVA is displayed in **Table 10.** Means and Standard Deviations are displayed in Table 10.

Scale	Years of work experience.	*M*	*SD*
Economic/Financial	10 or Fewer	2.91	0.73
	More than 10	2.89	0.74
	Total	2.90	0.73
Environmental	10 or Fewer	2.83	0.69
	More than 10	2.80	0.73
	Total	2.82	0.71
Social	10 or Fewer	2.85	0.66
	More than 10	2.82	0.74
	Total	2.84	0.69

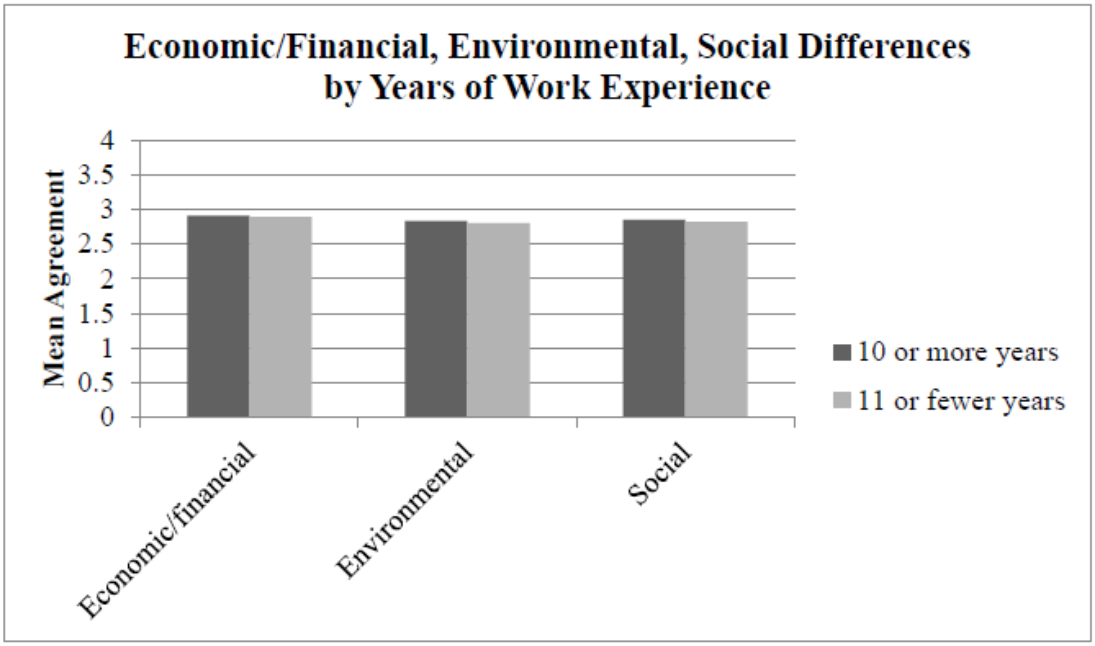


Figure 9. Bar chart displaying financial/economic, environmental and social by years of experience

Table 11. Independent Sample t Test Assessing Differences on Understanding the Meaning of Sustainability is Important to Me by Years of Work Experience

	10 or fewer years		11 or more years				
Variable	*M*	*SD*	*M*	*SD*	*t*	*p*	Cohen's *d*
Business courses have helped	2.61	0.87	2.54	0.95	0.69	.488	.08

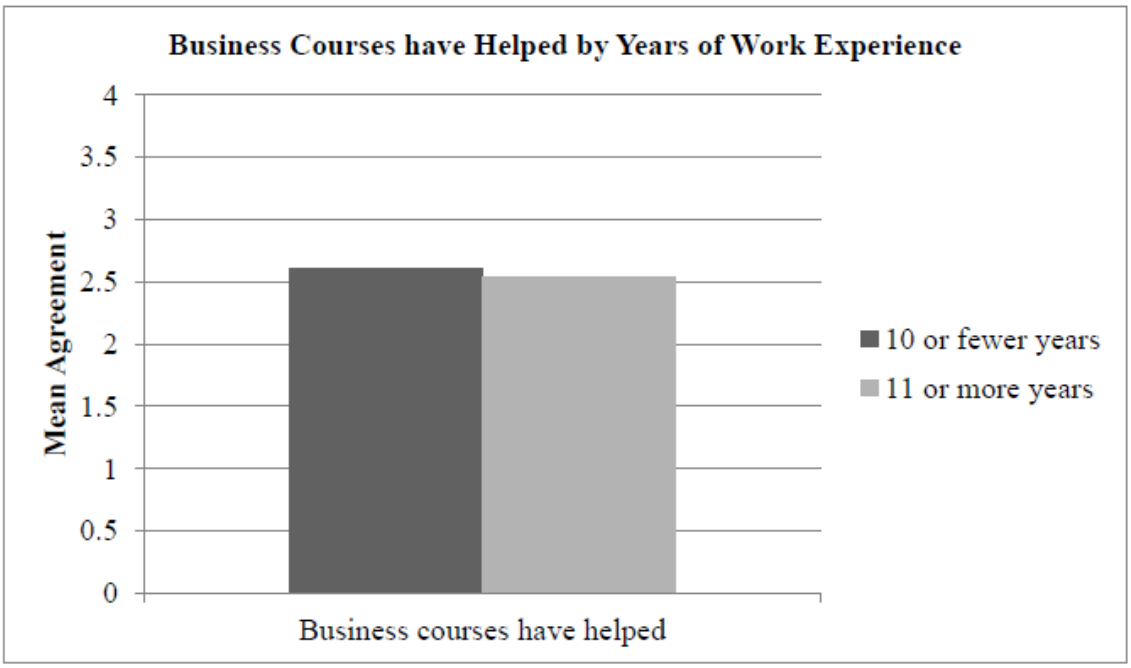


Figure 10. Bar chart displaying perception that business courses have helped by years of work experience

Conclusion

From the analyses, null hypotheses 1, 2, 4, and 5 could not be rejected. The analyses indicates that business degree students have perceived an importance of the meaning of sustainability and sustainable management as it relates to the three components (a) social/human, (b) economic/financial, and (c) environmental.

One null hypothesis, hypothesis 3, is rejected, indicating that there is a significant difference between students who have completed ten or fewer university business courses in their perception that business courses have given them skills for sustainable management and students who have completed more than ten courses in university business degree program courses.

CHAPTER 5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The aim of this dissertation is to explore how universities can potentially help in accelerating the concept of sustainable development into the university curricula, so that students can become lifelong learners; by strategically contributing in implementing sustainable development initiatives in their various organisations and businesses. Furthermore, this research study has advanced the assumptions on the importance of sustainable management and sustainability not being recognized by students as an essential part; as most students do not feel that they have attained high-level skills as a result of having pursued various university degree business courses.

The research findings of this study has validated the first part of the assumptions of previous research studies as accurate; as students felt that they didn't attain the high-level skills; as a result of having enrolled in a business course. However, the last part of the study is not accurate as most students did recognize the importance of sustainable management and sustainability. In addition, these results potentially support the numerous reports that business courses are not adequately preparing students for sustainable management roles in senior level management. The researcher strongly feels that this study has revealed comparable gaps that were earlier acknowledged in a research study by Middlebrooks et al. (2009).

Another significant assumption that was advanced was the social and human sustainability factor of sustainable development having received less attention than the other two sustainability factors of environmental and economic/financial issues, and moreover this assumption was incorrect as students do place an equal importance on all the three components of sustainable management.

The results of this study have indicated that the respondents had placed an equal emphasis on the three components of sustainable management; (a) Social/Human (b) Economic/Financial, and (c) Environmental. These assumptions refutes the claims that were made by McKinsey (2019) that the human factor is often one of the most neglected components in sustainable management education.

The research findings have revealed that there is a notable difference between students who have completed ten or fewer university business degree program courses in their perception that business courses have given them adequate skills for sustainable management as compared to students who have completed more than ten courses in university business degree program courses.

The researcher would rather subscribe to the thinking that more business courses completed by a student would indicate a higher perception that business courses could potentially give them adequate skills for sustainable management. As students who have completed ten or fewer business courses have a higher understanding that business courses have given them skills for sustainable management than students with more than ten business courses. This could possibly indicate that the more business courses a student completes, the more knowledge and understanding of the topic, the more students feel prepared for roles in senior management positions to be equipped; in order to articulate sustainable development. This could also indicate that less experienced students feel that they understand sustainable management, while students with more courses understand the breadth of sustainable management, and their adequate preparedness.

The slightly higher percentage of respondents that indicated more knowledge and understanding of sustainability and sustainable management was made up mainly of students who had completed more than ten business courses; this can possibly indicate effectiveness to a large extent of the business courses had on the students. However, students with ten or fewer business courses indicated a slightly higher emphasis on equal importance of the three components of sustainability which could indicate awareness of the three components, but not complete understanding of the concept; since the components are part of sustainability and sustainable management.

Moreover, the slightly higher percentage of respondents that indicated that business courses have helped them understand the meaning of sustainable management was made up of students with ten or fewer years of work experience. However, those with a higher perception that the topic of understanding sustainable management is important were students with more than ten years of work experience. The researcher feels that this could have indicated the realization that sustainable management and sustainability urgency coming from the workplace

experience, and a perception that the businesses and organizations are not helping employees with knowledge and skills to support sustainable management efforts within the workplace.

These study results have supported the literature that was reviewed for this dissertation which included numerous reports that covered more than ten years of research, beginning with the 1987 Brundtland report that defined sustainable development and subsequent and more recent studies by McKinsey (2019); as well as other similar studies listed in the literature review, and previous research by David Norman et al (2018) stressed on the need for businesses to collaborate with key strategic partners to advance education for sustainable development and connect it to job skills and career paths. Arising from such initiatives, companies can build partnerships beyond business schools across other departments and programs. Such initiatives will also potentially help integrate practical sustainable development insights from business into course design, instruction and experiential learning opportunities.

5.2 Recommendations

The study has revealed that universities should consider integrating sustainable management and sustainability in the various business courses that they will consider offering to their potential business students. Subsequently, the results of this study have shown that students do not feel that they have adequately attained high-level skills in articulating sustainable. Furthermore, universities should adopt an adaptability mindset that will help in integrating sustainable management and sustainability concepts into their business courses in order to enhance the quality of Education.

This research study has advanced some notable recommendations to be considered by various universities.

1. The researcher strongly recommends enhancing the quality of education for business courses with an emphasis in equipping students with knowledge and skills in improving sustainability education and introducing innovative forms of teaching and learning. This could ultimately encourage students to pursue business courses which have sustainable development integrated within the core courses; as a way of applying best practices in social balance, economic and protection of future environment as a way of preparing students in leadership roles in their businesses.

2. The researcher strongly recommends that the concepts which were developed by Roome; which are key in creating education for sustainability module that can be used in education designed to prepare MBA students for business related careers. As a way of further exploring the sustainability knowledge and skills in potential students; Roome conducted a concentrated seven-day residency for selected participants. The training used both theoretical and conceptual information, case studies, role playing, and a specific management project, as Roome placed a strong emphasis on reflective and experiential learning.

3. The researcher strongly recommends that universities should introduce Executive MBA programs, which programs once introduced will enhance the knowledge and skills of CEOs to be better placed to make informed decisions; once they acquire the necessary skills and knowledge on the importance of sustainability management and sustainability in supply chains.

4. The researcher strongly recommends, enhancing the teaching of university business students with relevant knowledge and skills by linking skills on demand in the work place. The researcher underscores the need for educational efforts that focus in advancing education for sustainable development goals to better prepare students in understanding and managing sustainable development in businesses and organizations.

5. The researcher strongly recommends that companies should make sustainable development training central to leadership development programs. This will contribute in strengthening the skill levels of students; and will in turn support in implementing sustainable businesses; as opposed to focusing only in generating profits; while supporting sustainability and not causing harm to the environment, to the economy and society at large.

6. The researcher strongly recommends that educators, businesses and international development organizations should be encouraged to share the best practices that emerge. Furthermore, companies could be more open about providing insights from tracking successes and failures in the company's sustainable development-related initiatives.

7. The researcher strongly recommends that a strong emphasis on skills development in sustainability should be made by business schools in order for students to have a solid understanding of the concepts of education for sustainability at the start of each semester, rather than at the end of a semester.

8. The researcher strongly recommends that businesses should begin encouraging their senior management teams in investing in staff training and education for sustainable development. Furthermore, companies should make sustainable development training central to leadership development programs which training should integrate the six sustainability competencies: responsibility, emotional intelligence, systems orientation, future orientation; personal involvement, and the ability to take action.

9. The researcher strongly recommends that countries should come up with national strategies; which should be designed to address social, economic and environmental aspects of sustainable development in order to accelerate sustainable development across all sectors of the economy.

10. The researcher strongly recommends that businesses across the globe should begin to share business best practices on what works and what doesn't for sustainable development. Furthermore, educators, businesses and international development organizations all need to share widely the examples of practical business experiences, and the lessons that continue to emerge from them.

5.3 Limitations of the Study

The limitations of these research findings with regards to the chosen methodology is that although the sample represented the population, it will be seen as a small sample considering the large number of business students enrolled in business degree programs. Another limitation was that since the quantitative research was being conducted, the survey did not gather any type of qualitative detail that could have been potentially used in order to validate on the variations of the students' perceptions or interests.

The choice of technology limitation was also sighted though the researcher's knowledge of SPSS which is basic level, and so the researcher had to invest additional time during data analysis. Time constraint was another significant limitation of this study; as the researcher had other work commitments, which at times conflicted in completing this research project on time. The researcher attempted to capture as much recent literature as possible in order to reflect the currency and increasing relevance of the topic.

5.4 Recommendations for Future Research

The process of accelerating sustainable development involves a lot of complexities, due to its integrated goals, responsibilities and diversity of key stakeholders who have different needs and demands. This research is only an introduction that briefly highlighted certain holistic and collaborative mechanisms that could help accelerate sustainable development initiatives. Thus, further detailed studies and activities regarding seeking sustainable development holistically in universities need to be conducted, as the researcher has made key commendations for further research, based on the findings of this research study.

1. The researcher strongly recommends that follow-on research should focus on case studies of businesses; to evaluate how knowledge and skills in sustainable management has helped graduates from business schools to implement sustainable businesses.
2. The researcher recommends to broaden the scope and type of survey respondents and include students enrolled in social sciences such as; development studies, economics and public administration, as well as other geographical areas, could indicate whether results of this study are unique to students who have completed business courses in other continents of the world.
3. The researcher recommends that future research should also investigate why students' perceptions that business courses are giving them relevant knowledge and skills for sustainable management decreases rather than increase with a higher number of business courses that are being completed yearly; as well as decrease with a higher number of years in the workplace.
4. The researcher strongly recommends that the future research survey processes should give more insight into the questions about the adequate or inadequate knowledge of sustainable management and sustainability in business courses being offered by various universities.
5. The researcher recommends that future research should use both quantitative/qualitative methods, as qualitative information will give more insights into factors that might have influenced students' perceptions or rather reveal variations in terms of students' perceptions.

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