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Study of the Incorporation of Sustainability Topics into the Accounting Curriculum at Missouri Four-Year Colleges and Universities

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By:

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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

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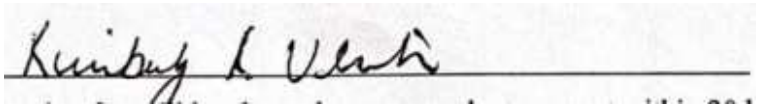
:  10/1/2020

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Abstract

Businesses around the world voluntarily utilize corporate sustainability reporting to display non-financial information along with their financial results to satisfy the curiosity of their stakeholders. The United Nations played a key role in the evolution of sustainability over time and development of reporting standards. Eventually governments may require thorough coverage of financial and non-financial information in one comprehensive integrated report. To meet this demand, the accounting curriculum must include sustainability reporting topics for accounting students. Leading research and this dissertation demonstrated a holistic approach was best. The most successful higher education institutions incorporated sustainability practices throughout their institutions in addition to covering the appropriate topics in the curriculum. Faculty in the study felt sustainability topics were of importance to students but did not feel they possessed the skills necessary to cover the topics thoroughly in their classes. Students expressed an interest and desire for their institutions of higher education to focus more attention and resources on sustainability related topics. Several institutions in the study already demonstrated a commitment to sustainability development in the form of campus activities, majors or minors devoted to the topic, or completion of a sustainability report. However, none of the institutions found it a priority for the accounting curriculum. For many of the colleges and universities, a culture shift would precede the institution providing resources and training necessary to increase student competencies. The researcher recommended a five-step process to make the change. First, sign a declaration, charter, or initiative showing support for sustainability development. Second, incorporate sustainability language into the mission, vision, and/or strategic plan of the institution.

Third, allocate resources in accordance with the plan. Fourth, train faculty as well as others throughout the organization. Fifth, incorporate sustainability topics into the curriculum. Once in place the institutions would be able to assess their progress in certain areas and be in a position to make future improvements. Ultimately, students may act as agents of changes in the growth of sustainability initiatives and reporting in the future.

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Chapter One: Introduction

Sustainability can take many forms. From waste and energy reduction to improved air quality to managing climate change (Lydenberg, Rogers, & Wood, 2010), sustainability development is the descriptive term. Throughout the last few decades, many organizations have begun incorporating sustainability measures throughout their businesses. Some companies, like Patagonia, made it part of the core mission and suggest, "life cycle analysis teaches a company how to reduce the environmental impact of its products from their origins as raw materials…through their manufacture, useful life, and eventual disposal" (Chouinard, 2012, p. 33). Whether by following their lead or simply lowering costs by turning off lights, the long-term viability of a business depends on the incorporation of sustainable practices. These businesses are stakeholders in the operations of higher education since they employ the students after completion of their degrees.

Based on that notion, institutions of higher education have options. They can follow the businesses at the organizational level and instill sustainable practices throughout the institution. Alternatively, they may choose to embed sustainability topics within the curriculum. Barriers are present for each of these options; however, numerous tools allow management assistance with implementation measures. The researcher believes a holistic approach incorporating both actions have the highest impact on student learning and involvement. Although different academic disciplines may view the importance of sustainability topics at varying levels, the focus of this dissertation consists of viewpoints specific to the accounting curriculum. Using one of the reporting frameworks, accountants prepare financial reports that include non-financial information

demonstrating sustainability measures. As a result, accountants have a call to action to work with board members in achieving the challenges associated with sustainability reporting (Adams, 2017).

Statement of the Problem

Sustainable development (SD) and financial reporting considering people and the planet in addition to profits, (the triple bottom line) have been growing in importance throughout the last several years. The Global Reporting Initiative, (GRI) founded in 1997, assisted corporations with implementing sustainability measures and over time provided a framework for standardized reporting (GRI, 2019). At the time of its inception not many organizations utilized the framework, but "[t]oday, 93% of the world's largest companies . . . report information on their [environmental, social, and governance] ESG, of which three quarters use the GRI framework" (Whittles, 2019, para. 2). Two other sets of guidelines, the Sustainability Accounting Standards Board, founded in 2011 (SASB, 2017), and the Integrated Reporting Framework, established in 2013 (IIRC, 2017), also helped many organizations implement sustainability metrics in their annual reports. Regardless of the reporting method utilized, the three-pronged approach to reporting using environmental, social, and governance issues, referred to as the triple bottom line (Kahn, Serafeim & Yoon, 2016), allowed for a more comprehensive reporting system. The reporting continues to evolve as the United Nations, with input from the various other frameworks, strives to develop a comprehensive reporting system following 33 measures that all organizations must tabulate and record in the future (CPAJ Staff, 2020). In the opinion of the researcher, as sustainability reporting becomes a bigger part of the

corporate world, employers will expect graduates to have increased knowledge and mastery of the topic.

In higher education, sustainability development started gaining importance to colleges and universities in 1987, when the Brundtland Commission defined the term as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Report, 1987, p. 54). Throughout the 1990's and early 2000's, many sustainability declarations signed by institutions allowed administrators to support and implement sustainability initiatives on campus. In addition, various tools developed over the years have helped higher education institutions overcome the barriers to implementation and properly manage sustainability measures. In the United States for example, government grants can financially assist organizations with implementing sustainability measures, while the Department of Education has a program in place to reward institutions for developing a holistic method to sustainability. This complete approach included not only implementation at the organizational level, but incorporation of sustainability development topics into the curriculum was required. Since accountants are responsible for the preparation of integrated reports, this study focused on accounting programs at four-year colleges and universities in Missouri to determine if students could meet the expectations of the corporate world upon graduation based on coverage of the topic in the curriculum.

Purpose of the Study

A study performed in 2016 showed only a very small percentage of accounting programs in the United States offering sustainability accounting courses (Pippen, Webber, Wong, & Bergner, 2016). For accounting majors, an understanding of

sustainability reporting is necessary to prepare them for their future positions in the workforce. The purpose of this study was to determine if Missouri four-year colleges and universities incorporated sustainability topics into the accounting curriculum at the same rate as the national study. Gathering information regarding size of the institution helped determine if larger institutions incorporated sustainability measures at different rates than smaller institutions. In addition, this research study answered other questions related to faculty opinions and attitudes towards sustainability topics.

Hypotheses

Chapter Three addressed the methodology used for gathering data to test the three different hypotheses listed below.

H1. Accounting programs at four-year colleges and universities include sustainability accounting courses in the curriculum at the same rate as U.S. institutions overall.

H2. Larger institutions include a sustainability accounting course in the curriculum at a higher rate than smaller institutions.

H3. Students with a sustainability accounting course offered at their institution perceive themselves to understand sustainability development at a higher rate than students without the option of a sustainability accounting course.

Research Questions

In addition to testing hypotheses, the researcher answered many research questions.

R1. In what ways do accounting programs without a specific sustainability accounting course incorporate sustainability topics into the curriculum?

R2. What impact does incorporation of sustainability measures at the university level have on the inclusion of sustainability topics in the curriculum?

R3. What level of understanding do faculty have with regard to sustainability development?

R4. What impact does faculty understanding have in determining how accounting programs include sustainability topics in the curriculum?

R5. What impact does faculty understanding have in determining why accounting programs do not include sustainability topics in the curriculum?

R6. What level of understanding do students have with regard to sustainability development?

R7. What level of involvement do students have in developing and implementing sustainability measures?

Significance/Importance of the Study

The benefit of this study was the information provided to both instructors and students in the accounting programs at Missouri institutions. Information gathered allowed educators to evaluate their practices compared to the population. Furthermore, this study could also help instructors to overcome some of the barriers and find ways to incorporate sustainability development topics into their courses. Usage of one of the tools described in the literature review may provide access to the necessary training. Finally, students attending institutions not covering sustainability development and reporting will be aware of the importance of these topics and know to search out the information from another source.

Definitions of Key Terms

- Economic Profit-Profit or earnings of the organization, calculated by subtracting revenues from expenses are different from economic profit. Economic profit is calculated by "subtracting a charge…of invested capital times the opportunity cost" (Barton, Manyika, & Williamson, 2017, para. 14) from the profit.
- Financial Reports-Information prepared by for-profit and not-for-profit companies for distribution to investors, creditors and other interested parties. These reports include the four basic financial statements: The Income Statement, Statement of Changes in Owner's Equity, Balance Sheet, and Statement of Cash Flows. Annual reports include these statements as well as other summaries, reports, and non-financial data (Spiceland, Nelson, & Thomas, 2020).
- Global Reporting Initiative (GRI)-A framework established in 1997 to provide guidance for organizations wanting to highlight environmental, social, and governance (ESG) data in their annual reports (GRI, 2019).
- IPEDS stands for Integrated Postsecondary Education Data System and is a repository for data related to colleges and universities (IPEDS, 2019).
- SASB stands for Sustainability Accounting Standards Board and is a reporting framework focusing on "financially material" and "industry specific" standards that can be used for sustainability reporting (SASB, 2017).
- Short-termism-Term used to label businesses that focus on meeting short-term earnings expectations (typically on a quarterly or annual basis) rather than making decisions that are for the long-term benefit of the organization (Frigo, 2018).

- Sustainability reporting-A subset of financial reporting that may be included in the annual reports of for-profit companies and not-for-profit organizations. Currently reporting is voluntary in the United States and there are competing guidelines established by the GRI and the SASB (D'Aquila, 2018).
- Triple Bottom Line looks at performance of an organization from more than just an economic viewpoint and considers environmental, social, and governance issues (Kahn, Serafeim & Yoon, 2016).

Limitations of the Study

As with any study, limitations were present. Most limitations linked to the population of the study; however, other limitations based on response rates, researcher assumptions, and the study instruments occurred. Discussion of each aspect followed in the next paragraphs.

First, the target population for the study may not reflect the results present in other demographic areas. Not all schools follow the same protocol as schools in the state of Missouri. In addition, the respondents could live in other states or countries with different viewpoints about sustainability development. Other limitations existed due to the population not included in the study. The viewpoint of corporations, as stakeholders of the product of higher education was not included. Finally, other degree programs may incorporate sustainability topics at different rates than the accounting profession.

Response rates were also a limitation in the study. Some of the faculty and students included in the population work or take classes at the same institution as the researcher, which could potentially lead to a higher response rate than the general population. In addition, individuals with a greater interest in or knowledge of

sustainability development may celebrate the opportunity to provide input in the surveys more so than others possessing less background knowledge of the topic would.

Assumptions made by the researcher throughout the study could also result in limitations. For example, one assumption believed faculty and students have enough familiarity and/or interest in the topic to respond to the survey in a timely manner. Another assumption expected students and faculty to respond to the survey with honest answers that truly represent their understanding and opinions about SD.

Finally, the instruments themselves could pose limitations to the study. Surveys provide valuable study data, but use of a survey does not allow the researcher to request additional clarification from respondents. In addition, the focus group had a time limit, potentially reducing the level of detail provided by participants.

Summary

Each aspect of sustainability has evolved over time. Reporting criteria expanded to include comprehensive aspects of sustainability. Business and higher education involvement evolved as more organizations adopted sustainable principles in their management practices. Even implementation support and assessment techniques evolved to assist more institutions trying to change to more sustainable operations. The next chapter reviewed the important literature for each of these areas.

Chapter Two: Literature Review

Introduction

Sustainability means various things depending on the context used or the portrayal of the term. Some organizations use the word sustainability to address the longevity of their organization. Others use it to describe measures to improve an organization's impact on the environment or society. Regardless of the meaning of the term, sustainability is important globally for businesses as well as institutions of higher education. Colleges and universities have dual responsibility of striving to implement their own sustainability measures as well as introducing sustainability education throughout the curriculum. Creel and Paz (2018) stated "[I]t is important that we add aspects of sustainability into accounting classrooms to help prepare students for what they will see in the workplace" (p. 79). Exposure to the standards throughout the curriculum assisted students with understanding the reporting requirements. All higher education stakeholders including students, the employers hiring the students upon graduation, and even society as a whole benefit from these practices.

The definition of sustainable development (SD) had not changed since its inception, although several frameworks and guidelines developed over time demonstrate the evolution of the various measures classified as sustainability reporting. The United Nations (UN) played a significant role in this progression, from the definition cited above to the Sustainable Development Goals (SDG). The author examined their major initiatives, along with the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the International Integrated Reporting Council (IIRC). This paper differentiated each of these frameworks since regardless of the

reporting framework or standards utilized, “accountants should play a role in sustainability reporting” (Botes, Low, & Chapman, 2014, p. 118).

Certain aspects of sustainability make the topic a global issue. For example, waste management, supply of natural resources, climate change, water quality, and loss of species are just a few items making “concerns embodied by sustainability . . . broad and numerous” (Rosen, 2017, para. 2). Managers need to understand that their actions affect many in the world around us. Although too numerous to include all the variances here, a few global differences incorporated throughout each section demonstrated how sustainability initiatives vary around the world.

Along with the reporting frameworks, the literature cited numerous examples of businesses increasing their efforts to instill sustainability development by limiting their impact on the environment or by improving practices for the betterment of society. Several sustainable practices, cited as examples of organizations implementing those practices, supported the notion of businesses viewed as stakeholders for the educated students who graduate from institutions of higher education. The first section discussed sustainable practices in business.

The review of the literature also incorporated higher education practices. At the university level, topics covered included a few Sustainability in Higher Education (SHE) declarations, barriers organizations face when implementing sustainability measures, and the need for training. In addition, the author discussed tools to assist institutions when implementing sustainability measures. Higher education reporting would not be complete without addressing the assessment of university reporting frameworks. Each of these topics were the focus of the following sections and paragraphs.

The Evolution of Reporting Frameworks

Accounting regulations evolved over time as new problems arose in business or new technologies were developed. Although granted the power to instill regulations with the development of the Securities and Exchange Commission (SEC) and the passage of the Securities and Exchange Act of 1934, Congress turned over development of the specific rules to the industry. The SEC took on the enforcement when businesses or accounting firms violated the regulations. Currently the rules, established and adopted by the Financial Accounting Standards Board (FASB), have the same force and effect of law once enacted (Spiceland et al., 2020). Sustainability reporting initiatives evolved over time in the same way as accounting regulations. A significant difference in the United States, however, is that to-date sustainability reporting measures remain voluntary (D'Aquila, 2018).

Very little literature discussed sustainable development prior to the current definition established in 1987 by the Bruntland Commission in the report Our Common Future. It got the name from the sponsor, the chair of the UN at the time, Prime Minister Gro Harlem Bruntland of Norway (Busco, Giovanni, Frigo, & Riccaboni, 2017). The definition "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Report, 1987, p. 54) was realistic and practical since it does not specify "in perpetuity" or "forever" (Rosen, 2018). Although the definition has not changed, over time various dimensions emerged in the SD conversation, leading to the basis for the two main reporting platforms used today.

One framework, the Global Reporting Initiative (GRI), first established in 1997, gave companies a framework to report on their environmentally responsible programs

and initiatives. Two non-profit organizations, the Tellus Institute and the Coalition for Environmentally Responsible Economies (CERES) were responsible for the development of the framework (GRI, 2019). The United Nations also encouraged the reporting structure (Busco, Frigo, Hickey, Pavlovic, & Riccaboni, 2018). It "provides criteria to measure a company's behavior in each leg of the Triple Bottom Line" (Stenzel, 2010, para. 7). The program, modeled after generally accepted accounting principles (GAAP), included various topics under each area; economic, social equity, and environment (Busco et al., 2017; Rosen, 2018). A three-column chart listed below included the reporting principles that fall under each leg.

Economic Indicators	**Social Equity**	**Environment**
Sales, Profits, Return on Investment	Labor Practices	Air Quality
Taxes Paid	Community Impacts	Water Quality
Monetary Flows	Human Rights	Energy Used
Jobs Created	Product Responsibility	Waste Produced

Figure 1. Reporting Principles by Economic, Social Equity, and Environment Criteria (Source: Stenzel, 2010, para. 9).

According to Bob Massie, former director of CERES, the GRI was directly responsible for increasing the corporate use of sustainability reporting by incorporating the ideas into the strategic objectives of the business (Ceres, 2014). The initiative, which began as guidelines have undergone several revisions since inception. In 2016, the guidelines changed into a set of high-quality reporting standards allowing organizations to consistently report on their sustainability practices, enhance the comparability between companies, and afford a greater understanding for investors (GRI, 2019), The updated

standards were referred to as G4 (English & Schooley, 2014). “Today, 93% of the world’s largest companies by revenue report information on their ESG, of which three quarters use the GRI framework” (Whittles, 2019, para. 2) making them the most used standards worldwide (English & Schooley, 2014).

This leaves another 25% of reporting companies incorporating a different reporting framework. As noted above, the GRI focused on economic, social, and environment factors; however, another three-pronged approach looked at reporting from environmental, social, and governance (ESG) perspectives (Lydenberg, Rogers, & Wood, 2010). The Sustainability Accounting Standards Board (SASB) of the United States, developed in 2011, included reporting guidelines for these three dimensions (Kahn, Serafeim & Yoon, 2016, p. 1697). Lydenberg, Rogers, & Wood, (2010) identified key topics important to sustainability across the various industries like waste, energy, community impact, air quality, water, and compliance measures, among other things. “Focusing on key sustainability issues for each sector can facilitate the emergence of a reporting framework in which sustainability and financial reporting converge” (p. vii). Although still considered voluntary and not mandatory, the SASB, established in response to this study offered guidance to companies when reporting sustainability performance metrics. The framework offered direction specific to numerous industries (SASB, 2017). After development of this reporting standard, the UN Sustainable Development Solutions Network added good governance as a fourth pillar of sustainability (Busco et al, 2017).

To continue the timeline, 2013 brought about the development of the IIRC-International Integrated Reporting Council (Busco, et al., 2017; D’Aquila, 2018). Rather

than reporting economic and sustainability related information separately, this framework focused on reporting both financial and non-financial data in the same report. The framework consisted of six elements referred to as *capitals,* including financial, manufactured, intellectual, human, social/relationship, and natural capital (IIRC, 2013). Financial capital, the primary element historically used in financial reports shared the spotlight in this comprehensive, multi-capital approach. The goal of providing information related to how all of the capitals provide benefit to an organization "is for providers of capital to redeploy their investment into businesses that are operated in a more sustainable fashion" (Soyka, 2013, p. 2) by giving them the information needed to make informed decisions (Hoang, 2018). One study examined this approach to streamlined reporting, to determine if it increased the usefulness to investors. Baboukardos & Rimmel (2016) found that the "the relevance its earnings . . . significantly increased" (p. 447).

From the development of the definition to supporing the formation of the GRI the UN has been a leader in promoting sustainability development reporting. It should come as no surprise that they were the first to develop a reporting system focusing on the long term approach businesses are expected to take on when reporting on sustainabilty efforts. This model, referred to as the United Nations'Agenda 2030 came about when 193 national leaders met and agreed upon the Sustainable Development Goals (SDG) (Busco et al., 2018). The list, considered fully comprehensive, was developed so any country throughout the world and any organization within each country can adopt the operating and reporting framework (Busco et al., 2017). According to the UN website sustainable development page, the goals were a "call to action…to promote prosperity while

protecting the planet" (UN, 2019). Much work needs to be done as, a study conducted between September of 2018 and June of 2019 found that less than 50% of respondents even knew what the SDG were. Cort and Frank (2019) admitted that interested parties might respond at a higher rate, so the true awareness rate is likely to be lower than the results indicated by the survey. As seen in the graphic below the goals contain 17 objectives. "All countries of the world are encouraged to achieve [these objectives] by 2030" (Busco et al., 2017, para. 6).

Figure 2. Sustainable Development Goals. (Source: Busco et al., 2018, p .29).

Any organization can differentiate itself by following the SDGs. Past research inconsistently related sustainability reporting and development to the size of the organization implementing the measure. One study found that firm size seems to play a role in determining if institutions implement sustainability development (Dienes, Sassen, & Fischer, 2016). However, Eilert, Walker, & Dogan, (2015) found just the opposite; size

is not as important as external factors influencing the organization. Regardless of size, merging sustainability reporting with financial reporting demonstrates the integrative nature sustainable initiatives could and should have on an organization (English & Schooley, 2014). Having one comprehensive set of standards in place could assist with increasing the number of organizations reporting on their ESG matters.

Lydenberg, Rogers, & Wood (2010), questioned whether voluntary sustainability reporting was enough or if mandatory reporting would enhance the comparability of data. National policies on education for sustainable development would encourage ESG achievement (Agbedahin, 2019) and decrease bias in reporting (Adams & Frost, 2008). Even without a government mandate requiring sustainability reporting, investors expect disclosure of sustainability information in corporate reports (English & Schooley, 2014) as their interest in ESG matters continued to increase over time (Adams, 2017). In addition, the International Federation of Accountants identified ESG reporting to create value by enhancement of corporate reporting that "capture[s] all relevant information about organizations" (IFAC, 2020, para. 1). A benefit if investors can rely on the information reported.

In a dissertation study, Gurturk (2017) determined that without third party assurance investors could not adequately rely on the information in the reports. Financial reports submitted to the SEC using FASB guidelines require a third-party audit to verify material accuracy prior to submission (Spiceland et al., 2020). The study findings suggest that integrated reports may benefit from the same type of review (Gurturk, 2017). The idea may lead to support for mandatory reporting standards rather than the current

voluntary model in place today. The next section addressed businesses submitting their reports, regardless of the framework utilized.

Sustainability Development for Business

Sustainability initiatives evolved in the business sector over time, similarly to the way guidelines and frameworks for reporting changed. Traditionally, for-profit companies focused on short-term earnings in order to meet expected performance goals and keep both investors and board members satisfied (Frigo, 2018; Hoang, 2018). Consideration of the economic impact of decisions primarily influenced the direction of the organization. Topics largely ignored included environmental, human, and social issues. Over time, investors began to require businesses to have more of a focus on sustainability, subsequently seeking out related information in corporate reports (Nastu, 2020). In addition, the stock index systems evolved and ranking systems developed to evaluate the quality of these reports (Barron, 2020; Guidry & Patten, 2010). Many barriers existed preventing management from instilling sustainability practices (Adams & Frost, 2008; Frigo, 2018; Holbrook, 2020). Businesses not measuring sustainability efforts have several resources available to assist management when changing the focus of the organization (Busco et al., 2018; Haanaes, 2016; Stoughton, 2011). The following paragraphs described how each of these topics appeared in the research.

Research demonstrated expenses for many businesses declined when implementing measures supporting the environment. Make UK, a manufacturing organization in the United Kingdom dedicated to “the evolution of UK manufacturing” (Make UK, 2019) released a study which specified 71% of manufactures found that instilling environmental measures saved the company money and half were actively

working to increase their energy efficiency. (Hermes, 2019a). Simple things like turning off lights, adding insulation, (Rogers, 2016) or turning up the set point on the air conditioning (Chouinard, 2012) decreased energy usage, cut expenses, and improved the economic profit of the organization. A winning scenario, however, some sustainability initiatives do not show immediate results, requiring another change in corporate practices.

Corporations must submit financial reports to the SEC on a quarterly and an annual basis. Managers expected to meet earnings expectations made decisions impacted by this short-term focus. According to an article in Strategic Finance, the behavior, labeled as *short-termism,* was detrimental not only to the organization, but also to the investors (Frigo, 2018). Adequate reporting on ESG aspects should consider not only the short-term, but also the medium and long-terms as well (GRI, 2020; Hoang, 2018). A study done by McKinsey Global Institute and FCLT Global (Focusing Capital on the Long Term) proved this idea. The researchers identified six hundred fifteen companies across several industries and labeled each as focusing on the long-term or short-term when making decisions about the operations of the business. Most were short-term, but 164 of the companies had a long-term focus. A comparison of revenues, earnings, economic profit, and market capitalization from 2001-2015 was performed. The results in every area examined showed that "companies with a long-term orientation tend to perform better than similar but short-term-focused firms" (Barton, Manyika, & Williamson, 2017, para. 9). Moving from a short-term to a long-term focus required a shift in culture from profit creation to value creation (IFAC, 2019) for most for-profit organizations.

Social and environmental reporting consider the long-term focus (Weber & Pippin, 2016). Some organizations instill sustainability measures with hopes to continue to make a profit whereas some just want to do the right thing for the environment, their employees, and society. Others may change to correct a previous wrongdoing (Adams & Frost, 2008). Regardless of the reason, all businesses should strive to incorporate sustainability measures (Haanaes, 2016). One way to accomplish this is through the voluntary reporting. Companies that regularly monitor and measure sustainability initiatives can increase their ability to meet the SDG (GRI, 2020). In addition, companies issuing high quality reports had better reactions in the market after management shared the information with the public (Guidry & Patten, 2010). According to Haanaes (2016), companies should instill sustainability practices into the strategy of the organization and take a proactive approach instead of reacting to market concerns. With the increased interest in sustainable investing (Nastu, 2020) companies must focus on compliance and quantifying the return on investment. Only then can management consider how it will earn a competitive advantage for the organization (Haanaes, 2016). Research also found an added benefit of voluntary reporting. In the event sustainability-reporting regulations become mandatory, the business would be ahead of the competition (Adams & Frost, 2008).

Another way for companies to demonstrate their commitment to ESG reporting and a long-term focus for the organization was by choosing to take the extra step of becoming a certified B Corporation. B Lab, created in 2006 allowed a “global movement of people using business as a force for good” (B Lab, 2020. Para 1). Companies become a certified B Corporation upon meeting the four required guidelines. First, the organization

must consider all stakeholders, not merely shareholders. Second, the company must publish a report including social and environmental performance published using a third-party framework (like the GRI standards). Third, a B Impact Assessment must earn a passing score. This tool measures the company on their treatment of their employees in addition to society and the environment. Finally, certification requires payment of the necessary fees based on a graduated scale according to organization size (Weber & Pippen, 2016, para. 4). At the time of this writing, over 3,200 companies in 71 countries maintained the designation as a certified B Corporation (B Corp, 2020). Organizations using any form of governance structure may apply to become a certified B Corporation (Weber & Pippen, 2016). This means that not-for profit organizations as well as profit seeking businesses may show the B Corp. label upon certification. Another designation of Benefit Corporation existed for for-profit businesses with a desire to focus on ESG issues.

Creation of another form of for-profit governance structure "broadens the for-profit motive to hold the business accountable for people, planet, and profits" (Benson, Thomas, & Burton, 2018, p. 40). Referred to as a Benefit Corporation, this structure required the organization to consider social responsibility in addition to profit in the value creation process (Wilburn & Wilburn, 2019). Accountants play an important role in establishing benefit corporations as well as in the reporting requirements expected of them (Benson, Thomas, & Burton, 2018; Weber & Pippen, 2016). With similar emphasis on expanding the business value past merely making a profit, organizations may choose to become a B Corp, a Benefit Corp, or both (Wilburn & Wilburn, 2019).

One company that meets the designations of both a certified B Corporation and a Benefit Corporation was Patagonia. Ivon Chouinard, founder of Patagonia has been a leader in the sustainability movement. His book, *The Responsible Company*, outlined various things his company learned during their 40 years in business. Minimizing the company's impact on the environment was one of the most significant priorities of the organization. Even large organizations, like Walmart followed Patagonia's lead after learning they could save millions of dollars and became "committed to use 100 percent renewable energy [and] create zero waste" (Chouinard, 2012, p. 8). Hermes (2019b) demonstrated this commitment in an article noting that Walmart contracted with Unifi to produce employee vests made from recycled bottles. In addition to using 14 billion recycled water bottles, the company made the fiber using less water and petroleum, which saved energy and reduced greenhouse gas emissions.

Another company that changed to a more purposeful business model quite effectively was Unilever. The company implemented a "Sustainable Living Plan" throughout the organization in 2001, including policies related to their employees, or "human capital" (Busco et al., 2018, p. 30). According to Rogers (2016), a sustainable business can benefit by attracting the best employees. Good people can result in lower costs by being more productive. In addition, happy employees stay at the organization longer, minimizing the costs of hiring and training new employees, a wonderful benefit of a low turnover rate. (Chouinard, 2012). Unilever successfully incorporated sustainable development goals throughout the organization and used these as the basis for decision making within the value chain. Their decisions resulted in increased operating profit and earnings per share figures from 2009-2018 (Unilever, 2018). The conversation about

businesses that have changed or updated their business practices to be more sustainable could continue indefinitely, as daily news articles show evidence of more sustainable practices.

Research also demonstrated that companies with a strong focus on sustainability initiatives outperform the traditional stock measurement systems when compared to organizations without a sustainability emphasis (Nastu, 2020; Romero & Jeffers, 2018). "You can go green and succeed in business" (Holbrook, 2020, para.1). The major rating indices on the United States New York Stock Exchange are the Dow Jones Industrial Average (Dow) and the Standard and Poor (S&P) 500 (Barron, 2020). A subset of the Dow referred to as the Dow Jones Sustainability Index (DJSI) provided information for investors who consider sustainability measures in their investment decisions. Hawn, Chatterji, and Mitchel (2018) found in their study that simply being added to the index did not result in significant investor attention; however, longevity on the index lead to "moderate benefit" (p. 971). The S&P 500 index included a range of stocks from major corporations in industries like energy and precious metals, and measures market changes from day to day (NYSE, 2020). In 2019, 41% of funds meeting environmental, social, and governance (ESG) ratings of high or above average "outperformed the S&P 500 index for the year" (Nastu, 2020, para. 1). Worldwide, the stock exchanges expected businesses to report on sustainability topics. For example, South Africa was the first country to require integrated reporting when the Johannesburg Stock Exchange made it mandatory (Baboukardos & Rimmel, 2016).

In addition to the stock exchanges, research indicated the quality of the corporate sustainability report generated influenced market reaction by investors (Guidry & Patten,

2010). To give investors' confidence in information provided in the sustainability reports, three rating agencies evolved to provide scoring and rank report value. The Bloomberg ESG Disclosure Score, the RobescoSAM Rating/Ranking, and the Sustainalytics Rating/Ranking. One study demonstrated consistency between ranking scores of each of the reporting agencies. Since the various reporting agencies select the companies examined and not all companies receive scores from all agencies, investors can feel confident in scores received by any of the measures and treat them as equal in their analysis (Romero & Jeffers, 2019).

Unfortunately, even with effective rating systems and interest from shareholders, several barriers existed preventing managers from instilling sustainable practices within their businesses. Adams and Frost (2008) found a misconception about cost was often a deciding factor. Many managers felt sustainable practices would cost the organization more money and although potentially true in the short-term, management must consider the long-term when making decisions (Frigo, 2018). The knowledge necessary to make sustainable decisions was also a factor reducing the integration of sustainability initiatives and reports (Adams & Frost, 2008; Holbrook, 2020). Business managers must seek out the education needed to change their thinking to a more integrated approach before embedding it into the culture of the organization (Busco, et al., 2018; Dancey & Tilley, 2019; Holbrook, 2020).

Another area found to challenge corporate sustainability reporting was comparability. Stoughton (2011) found sustainability reporting was a driver in the efforts implemented at the various organizations. However, according to Zvezdov (2012), organizations vary with the stage of implementation and effort towards sustainability

initiatives. Some just starting with sustainability reporting were figuring out reporting measures whereas other organizations refined practices and increased sustainability management staff. Different levels of incorporation lead to varying levels of quality in reports and limited the comparability of the data between organizations. The lack of regulation in reporting approaches also inhibited comparability (Hawley, 2017: Lydenberg, Rogers, & Wood, 2010).

Another difficulty in reporting resulted from the lack of standardization. Without mandatory regulations in place for sustainability development reporting, managers may downplay results if the "data did not reflect positively on the organization" (Adams & Frost, 2008, p. 300). A process referred to as *green washing*, these biases demonstrated the information distributed to stakeholders lacked transparency and credibility (D'Aquila, 2018: Hawley, 2017). The International Federation of Accountants encouraged organizations to retitle the position of chief financial officer to chief value officer to better incorporate value in the management reporting and decision-making processes. Value dimensions included definition, creation, delivery, and long-term focus (IFAC, 2019). Romero and Jeffers (2018) found effective ESG practices were one way to create value in an organization. Senior management must fully support sustainability reporting and initiatives or the efforts will not achieve maximum value for the organization (Zvezdov, 2012).

For businesses not yet utilizing sustainable practices, many recommendations existed to aid with implementation. A study performed in a dissertation compared three different for-profit companies and showed that there is not one *right* approach to incorporating sustainability measures throughout an organization. Stoughton (2011)

indicated that the approach used should encompass the entire organization. Each company must find an integrated solution that works within the strategy and mission of the organization (Busco et al., 2018; Haanaes, 2016). Education related to the areas of the business considered the least sustainable and available technology to mitigate environmental impact are good first steps for many businesses (Holbrook, 2020). Many technological advances allow for data collection focused on environmental or social factors (Adams & Frost, 2008). Chouinard (2012) provided several checklists to help businesses trying to adopt more responsible business practices. Topics like the business, employees, customers, and suppliers were included, but nature, considered one of the largest stakeholders, had the longest checklist. Worksheets to reduce waste, water usage, lighting, and energy offered tips to improve the natural environment, in addition to numerous other areas (pp. 95-123). An important takeaway from the discussion was decisions must be "company-specific" for sustainability reporting and accounting (Zvezdov, 2012, p. 26).

As businesses developed and changed to a more sustainable model, the expectation on colleges and universities to cover more topics about sustainability measures increased. The next section included topics related to the evolution of the processes at colleges and universities. The author addressed aspects at both the organizational level and curriculum level.

Sustainability Development at the University Level

After the World Commission on Environmental Development defined sustainability development, many declarations passed in higher education with the intention of expanding sustainability efforts. Various declarations, referred to as

sustainability in higher education (SHE) declarations, encompassed numerous sustainability topics. Although too many declarations exist to list them all, a few warrant additional discussion. The Talloires Declaration was the first of its kind and focused on education, research, operations, and outreach (Grindsted, 2011; Lozano, Lukman, Lozano, Huisingh, & Lambrechts, 2013; Tilbury, 2012). The declaration, established in Germany, included a ten-point action plan for each campus that incorporated sustainability throughout the organization. At the time of the signing in 1990, "twenty university rectors, presidents, and vice chancellors" signed the agreement (Lozano, et. al, 2013). Since inception, over 500 university administrators from around the world have signed the declaration (ULSF, 2019).

After the passage of the Talloires Declaration, several other counties approved similar pronouncements. They included three or even all four of the sections outlined by the original but had the same goal of improving the overall impact on the environment. In 2001, the Luneburg Declaration, another declaration established in Germany, was the first to include measures to educate instructors about sustainability development and outline monitoring systems (Grindsted, 2011; Lozano, et.al, 2013). Evolution of the declarations continued and by 2009, the Turin Declaration signed in Italy and the Abuja signed in Nigeria added a multidisciplinary approach to sustainability education. Both declarations required cooperation among institutions (Lozano, et.al, 2013). Also in 2009, The Bonn Declaration, signed "by 150 countries and 700 participants" (Agbedahin, 2019, p. 8), added a political dimension (Grindsted, 2011), and the World Conference on Higher Education met and established an interdisciplinary focus. Eventually, the overall wellbeing of society, human rights, and ethical citizenship, made the list of sustainability

development expectations (Tilbury, 2012). To summarize, education, research, operations, outreach, instructor education, a collaborative approach, and a political dimension were all factors incorporated into one or more of the declarations supporting sustainability in higher education.

All the declarations listed above allowed global participation; however, one document focused on United States institutions. The American College and University Presidents' Climate Commitment established in 2006. This initiative allowed student fees to fund sustainability efforts, but only after student approval (Lavey & Lavey, 2015). This initiative also required institutions signing the document to complete an emissions inventory and develop a formal plan to become carbon neutral (Dyer & Dyer, 2017; Tilbury, 2012;). Over time, the expectations evolved, and a new initiative called the Presidents' Climate Leadership Commitment was born. Institutions dedicated to the agreement incorporated initiatives throughout their organizations. The framework consisted of five levels of commitment, including the system, success, strategy, action, and tools. A not-for profit organization called Second Nature offered support and prepared the reports regarding the initiative (Dyer & Dyer, 2017). According to the 2017-18 Impact Report, there were 486 active signatories across 48 states, 33 of which have committed to be carbon neutral by 2020, and 372 institutions have set a deadline of 2050. Only four institutions hold the distinction at the time of this writing (Second Nature, 2018, pp.6-9). These organizations represent "leadership-by-example for the rest of society" (Dyer & Dyer, 2017, p. 115).

To help higher education institutions incorporate sustainability measures as they developed over time, the UN declared 2005-2014 the Decade of Education for

Sustainable Development (DESD) (Grinsted, 2011). Seven themes arose as priorities for higher education institutions (HEIs). "Climate Change, Ecosystem Services, Disasters and Conflicts, Environmental Governance, Chemicals and Wastes, Resource Efficiency and Environment under Review" (Pradhan & Mariam, 2014, p. 2). In their final report, the UN indicated strong leaders must work to continue advancing the numerous strides made during the decade to further education for sustainable development in higher education (UNESCO, 2014). Lozano et al. (2015) found institutions of higher education who signed a declaration, or some other formal sustainability initiative demonstrated an increased commitment to and implementation of SD ideas. The study measured four variables related to commitment of SD, including "mission, vision and values, self-engagement, budget, and quality assurance" and five variables measured implementation of SD, including "campus operations, education, research, outreach and collaboration, on-campus experience, and assessment and reporting" (p. 13).

Whether management signed a declaration or not, the university setting must embrace sustainability concepts in order to advance society toward improved environmental practices (Botes, Low, & Chapman, 2014; Bowser, Gretzel, Davis & Brown, 2014; Dyer & Dyer, 2017; Motloch, Pacheco, & Vann, 2007). Implementing sustainability development at HEIs only described part of the sustainability picture. Within university operations, the notion of sustainability can take two different forms. First, through *implementation* of sustainable behaviors at the organization and second, by *teaching* sustainable behaviors throughout the curriculum. Incorporating both ideas was preferred (Chiong, Mohamad, & Aziz, 2017; Fihlo, Raath, et al., 2018). Lozano et al. (2015) found many institutions support sustainability development; however, the efforts

are “compartmentalized and not holistically integrated throughout the institutions” (p. 14). Research suggested institutions of higher education successfully implanting sustainability measures were most successful when actions included a multidisciplinary approach. Collaboration with other institutions and the surrounding community also provided maximum benefit for sustainability initiatives (Guerra et al, 2018; Thomashow, 2014a). Thomashow (2014a) summarized the areas necessary for implementing sustainability measures as “infrastructure, community, and learning” (p. 11). One case study documented efforts of the Land Design Institute and the partnership between universities and their corporate companions. Students learned integrated farming techniques using electronic and hands-on methods. Farmers in the developing region learned the procedures shared by the students (Motloch et al., 2007).

As seen above, there was significant interest in sustainability initiatives. Research shows “[t]here are scores of people from . . . campus life who deeply care about human flourishing, ecosystem health, and community empowerment” (Thomashow, 2014b, p. 127). Unfortunately, this interest is often student driven or initiated by employees not on the management team (Adams, 2013). Research cited several examples of student interest in sustainability education. In Australia, for example, a course developed covering sustainability accounting topics for corporate sustainability majors was filled to 90% of the course capacity by accounting students taking the course as an elective (Lodhia, 2010). Botes, Low, and Chapman (2014) found in their research that students in New Zealand not only value the importance of sustainability education, a majority of them expected dissemination of the knowledge to come from the university.

Resource allocation allowing sustainability information to be included must start with all university stakeholders since a holistic approach was preferred (Fihlo, et al., 2018). Pedagogy and coverage of the topic in the curriculum (Chiong, Mohamad, & Aziz, 2017), required administration and faculty involvement in the process. Support from senior management was necessary for sustainability efforts to be successful. Administrators signing one of the declarations available for universities demonstrated commitment to sustainability development (Gardner, 2017; Lozano et al., 2015). University administration must also work with constituents within the organization to revise the curriculum to include sustainability topics, both at the theoretical level and in practice. Mandating initiatives may backfire, making a collaborative effort recommended by the research (Thomashow, 2014a). Unfortunately, the research also sited lack of support from university administration as a barrier preventing implementation of sustainability initiatives (Thomashow, 2014b).

Other obstacles existed as well. In 2010, Walter Filho repeated a study done in 2000 attempting to determine the barriers preventing universities from implementing sustainable behaviors at their institutions. There were six categories that respondents could select, including “too abstract a topic, too broad a topic, no personnel, it demands too much resources, lacks a scientific basis, and too competitive” (Filho, 2010, p. 277). Results of the survey indicated that resources were the primary barrier to instilling sustainability practices. Budget cuts at many higher education institutions (HEI’s) require administrators to focus on spending and act in many ways like the chief executive officers of private companies, looking only at the short-term. Often in these cases, sustainability initiatives are not a priority (Eshete, Mohammed, Bedo, Simane, &

Mekuriaw, 2019). However, according to Kahn, Serafeim, and Yoon (2016), institutions with material investments in sustainability perform better in future periods than institutions that do not make this investment (p. 1716). The short-termism idea noted previously for businesses applies here as well. University administrators looking out for the long-term success of their institutions should probably take note of this finding.

Training faculty and staff on SD required many resources. Faculty accepting the transition to education for sustainable development guided their understanding and incorporation of the topics into the curriculum using their own pedagogical preferences (Agbedahin, 2019). However, faculty need education and training to ensure effective incorporation of the topics. Without proper training, sustainability education occurred on an "ad hoc basis" dependent upon interest of the faculty member incorporating the ideas into the classroom (Botes, Low, & Chapman, 2014, p. 95). Determining the perceptions and attitudes about sustainability as well as the knowledge base of the staff was necessary in order to put the proper training in place (Eshete et al., 2019). One European study compared pedagogical approaches to student competencies and found the most utilized approaches (lectures and case studies) were the least effective in developing competencies (Lozano, Barreiro-Gen, Lozano, & Sammalisto, 2019). Another worldwide study indicated an effective method of implementation, referred to as a cross-curricular approach encompassing many disciplines simultaneously, was rarely used (Vaughter, Wright, McKenzie, & Lidstone, 2013). With already strained resources, it was easy to see how administrators and faculty do not prioritize sustainability initiatives; although incorporating SD at the strategic level would encourage the proper budget and resources allocations (Eshete et al., 2019).

Lack of resources was not the only barrier found to inhibit the incorporation of sustainability initiatives, either at the organization level or as part of the curriculum. As noted previously, numerous declarations showing support for sustainability initiatives existed for administrators to sign. Most declarations focused on the initiatives and not the reporting, so other standards emerged over time to assist HEIs with sustainability reporting. The difficulty occurred since the reporting standards were voluntary (Lidstone, Wright, & Sherren, 2015), just like the frameworks established for not-for profit and for profit companies. Eshete et al. (2019) felt that this lack of a formal policy was another obstacle to the implementation of SD at HEIs. Nevertheless, when utilized, the two reporting systems used most often by HEIs were the Sustainability Tracking and Rating System (STARS) and the GRI.

Created by the Association for the Advancement of Sustainability in Higher Education (AASHE), the STARS tracking system allowed HEIs to demonstrate performance of sustainability measures. Increased transparency was a goal of STARS (AASHE, 2006). Since information tracked by the system was self-reported, the STARS rating "does [not] ensure the quality of the plan" (Lidstone et al., 2015, p. 729). Research showed the STARS system widely used by HEIs. A United Kingdom study examined use of the STARS system. In the study, 46 of 167 HEIs issued sustainability reports (Kosta, 2018). Another study performed in Canada found 21 of the HEIs throughout the Canadian provinces submitted reports using the STARS guidelines. Of the institutions submitting reports, 14 also had an active sustainability plan in place on campus. The plans incorporated environmental aspects at a higher rate than social and even economic factors (Lidsone, Wright, & Sherren, 2015). Another study of U.S. institutions mirrored

these results. The study examined the commitment of HEIs on four aspects of sustainability, including "Administrative, Social and Cultural, Academic, and Operational dimensions" (Casarejos, Gustavson, & Frota, 2017, p. 82). The authors found the social and cultural element lacked the same commitment afforded to the other dimensions.

The GRI standards, although a viable option, required modifications for universities to report on educational as well as economic, environmental, and social dimensions important in a university setting (Lozano, 2011). Without specific performance metrics in place, organizations had difficulty knowing what to measure (Filho, Manolas, & Pace, 2015). In addition, only a small number of universities even submit reports, or if a report was completed, it was only prepared once. One study looked at institutions filing reports in accordance with GRI standards. Eight U.S. universities completed reports from 2001-2012 and only three prepared more than one report during the period (Alonso-Almeida, Marimon, Casani, & Rodriguez- Pomeda, 2014). Kosta (2018) considered documenting comprehensive sustainability reporting "a method on in-house benchmarking" (p. 90) to permit better communication of sustainability activities to stakeholders of the HEI. Administrators following a framework have the ability to monitor and improve their institutions; however, many colleges and universities do not submit reports using any guidelines (Alonso-Almeida et al., 2014).

To encourage adoption of sustainability development at more colleges and universities, mandatory reporting may assist. Since HEIs are not required to meet the expectation of for profit organizations trading on the stock exchanges, Cort and Frank (2019) specified government action as the change agent citizens are waiting for. Even without the established regulatory requirements, other research showed sustainability

reporting was just the right way for universities "to motivate and empower both learners and teachers to . . . take action for sustainable development" (Agbedahin, 2019, p. 4).

It was important for institutions of higher education to implement sustainability development to show society the correct way to act. Williams (2014) stated "If universities can collectively reduce their carbon footprints, just think of the lessons our students will learn about their roles in carrying forward the life practices that will sustain our planet" (p. 7.6). The idea of "being green [sh]ould not be in the declaration only, but real, continual involvement and implementation" (Dagiliute, Liobikiene, & Minelgaite, 2018, p. 481). According to Eshete et al. (2019), HEIs often have poor practices in place making them a threat to sustainable development. Developing and implementing sustainability policies could help reverse this trend. One study performed on Canadian universities found that institutions with a formal sustainability policy in place were more likely to also have a sustainability officer as part of the management team and assess their sustainability performance (Vaughter, Wright, & Herbert, 2015).

Lack of measurement through assessment will not allow organizational leaders to make necessary improvements to achieve sustainability goals of the institution (Adams, 2013). One evaluation technique used to study HEIs in Saudi Arabia was the Sustainability Assessment Questionnaire. Findings of the study determined that even though over half of the institutions had some form of policy in place and promoted sustainability on campus, less than a third had specific courses related to sustainability in the curriculum. The study also found that sustainability research, waste recycling, and renewable energy initiatives were lacking as well as an inter-departmental approach encompassing the whole university (Alshuwaikhat, Adenle, & Saghir, 2016).

Unlike the findings in the SAQ study, some institutions of higher education have fully embraced the idea of sustainability and have incorporated the topic into the core mission of the organization. The addition of sustainability centers to encourage sustainability efforts demonstrated the commitment. One study completed in 2016, noted that 44 sustainability centers existed at various universities worldwide. Most of them established since 2006 and only 12 of which existed in the United States (Soini, Jurgilevich, Pietikainen, & Korhonen-Kurki, 2018, p. 1427). The centers focused on the environmental piece of sustainable development so there was room to grow with regard to the cultural and social aspects (Chiong, Mohamad, & Aziz, 2017; Soini et al., 2018). Especially since students believe the social characteristic is "most important for a sustainable university" (Daugiliute, Liobikiene, & Minelgaite, 2018, p. 477).

Also desired in the sustainability development conversation was collaboration among institutions (Agbedahin, 2019). Co-curricular activities included external parties like the surrounding community or partners sharing the same environmental or social impact goal. Examples in the research found collaboration between universities and the surrounding community for things like a recycling center for electronic waste, assessment of wind power, and collaboration for organic gardening, along with other campus initiatives (Thomashow, 2014a). One article described a successful internship program in the Rocky Mountains where over two dozen institutions, including universities and government offices worked together. Students in the program developed "broad skills related to environmental stewardship" and increased the "confidence in one's ability . . . to contribute to sustainability management issues" (Bowser et al., 2014, p. 699). Group projects with the community, students, faculty, and staff working together provide great

value to education since they mirror everyday experiences and allow participants to practice what has been learned (Thomashow, 2014a).

For successful implementation of pedagogy on sustainability topics in the curriculum, Thomashow (2014a) felt faculty must also understand the influence of external forces. Professional needs of business stakeholders, peer institutions' sustainability activities, and "enrollment management scenarios" were among the items identified (p. 155). Admittedly, some changes occur too rapidly for curriculum development to keep up with, so the research recommended emphasizing the "critical, creative, and cognitive thinking skills" (Thomashow, 2014a, p. 168). Learning diaries as a classroom tool enhanced student functional knowledge about environmental and social aspects of sustainability accounting (Lodhia, 2010).

Students learning sustainability is not enough. They must also know how to put their knowledge into practice to make the world a better place (Choing, Mohamad, & Aziz, 2017; Gardner, 2017). Turning the campus into a design studio where students learn by doing provided an excellent way to make this happen (Thomashow, 2014a). Universities must "assume a forceful and proactive role in advancing the necessary shifts in knowledge and social values and behaviors" (Casarejos, Gustavson, & Frota, 2017, p. 83). Community service or other project-based learning, preferably with an interdisciplinary team afforded the students the ability to develop empathy and collaboration based on their personal involvement (Lozano et al., 2019). Incorporating these ideas into pedagogy can help to not only educate the student about sustainability topics, but also allow to a perspective change. Integrating their own beliefs and attitudes into the curriculum while forming new judgements lead to significant transformative

learning for students (Casarejos, Gustavson, & Frota, 2017; Seatter & Ceulemans, 2017). Empowered with the knowledge and practical experience, these students, as future leaders, act as change agents, further incorporating sustainability behaviors when making decisions (Gardner, 2017; Lozano, Merrill, Sammalisto, Ceulemans, & Lozano, 2017).

Curriculum studies found engineering and science disciplines to have the greatest level of integration of sustainability topics (Cotton, Warren, Maiboroda, & Bailey, 2007; Vaughter et al., 2013). One study performed in the UK surveyed faculty to determine their opinions about sustainability development. Questions asked whether the topics should be included in the curriculum. Although 60% of the respondents felt sustainable development was a good thing, 17% indicated they were unsure what the term meant. In addition, "35% were uncertain about the links between their teaching and sustainable development" (Cotton et al., 2007, p. 589). Similar attitudes emerged in an Australian study when faculty considered the topic to be an addition to already crowded curriculum rather than a mindset change in which to base decisions (Christie, Miller, Cooke, & White, 2015).

"Universities globally. . . are slowly taking a holistic . . . approach to sustainability education, but . . . within accounting education still much progress is required" (Botes, Low, & Chapman, 2014, p. 118). Pippen et. al (2016) studied accounting programs across the nation and found that less than 2% offer courses in sustainability. This ratio was a bit disturbing, as there was "growing demand for CPAs with sustainability measurement and reporting knowledge" (para. 4). Educational programs must offer skills to students above and "beyond the basic fundamentals of mainstream accounting" (Lodhia, 2010, p. 15) with better incorporation of sustainability

topics throughout the curriculum (Botes, Low, & Chapman, 2014). Creel and Paz (2018) demonstrated specific ways to add sustainability topics to various accounting classes. Managerial accounting, intermediate level classes, and auditing were all considered excellent places to incorporate sustainability topics. Accountants already possess the evaluation and communication skills needed for sustainability reporting, the topic just needs thorough coverage throughout the curriculum (Keddle, 2018). The next section addressed tools to assist universities and programs with implementation of sustainability development.

Tools to Help Institutions Implement Sustainability Measures

Throughout the literature, many different mechanisms existed to assist higher education institutions when implementing sustainability measures. So many, in fact, that the organization must prioritize their needs prior to selecting the best tool. One instrument designed specifically with that purpose was the Sustainability Assessment Questionnaire (SAQ). This tool was intended for management teams at any institution of higher education to evaluate their practices on seven dimensions, including curriculum, research, operations, faculty and staff development/rewards, outreach and services, student opportunities, and administration/mission/planning (ULSF, 2009). At the time of creation, the expectation was that students, faculty and staff, and administration would be part of a whole institution approach to implementing sustainability measures. Rather than focusing on one area, including all seven dimensions was projected to "stimulate conversation and debate within institutions" (Calder, Clugston, & Rogers, 1999, para. 2). Several sustainability related expressions were included in the assessment to educate users on the meaning of sustainability terms (ULSF, 2009). Once the assessment

informed administrators of their institution's status towards sustainability development, guidance existed to implement measures based on the specific needs, goals, and desired outcomes of the organization.

As demonstrated in the reporting frameworks section of this literature review, the United Nations lead most initiatives towards increased sustainability reporting. They also developed many resources to support implementation of those frameworks. The UN Global Compact provided direction for institutions just beginning the process. This voluntary initiative delivered a means to improve corporate citizenship; however, an academic working group also promoted participation from institutions of higher education. Ten guiding principles outlined what businesses (and HEIs) should do under four main topics, including human rights, the treatment and employees, environment, and anti-corruption (UNGC, 2012). A similar toolkit referred to as Principles for Responsible Management Education (PRME) evolved as a sister initiative to the UN Global Compact specifically for business schools. Helping ensure future leaders developed the skills necessary to incorporate sustainability goals while also meeting economic expectations, this voluntary measure involved six principles and allowed administrators many avenues to engage and learn the skills necessary to implement the toolkit on campus (PRME, 2007).

The United Nations Environment Program (UNEP) developed another, more comprehensive plan for HEIs, referred to as the Greening Universities Toolkit. International collaboration guided the development of the plan from the definition of sustainability to all aspects of university life. Ultimately, continuous improvement in lowering carbon emissions, understanding and committing to reducing climate change,

and minimizing pollution and waste generated by the university became goals of the guidelines. One chapter in the toolkit hoped for a global standard to measure sustainability performance (UNEP, 2014).

From a pedagogical perspective, one study focused on energy consumption, use of water, management of waste, and CO2 emissions at various educational institutions. Gardner (2017) developed a sustainability toolkit and revealed four levels of education necessary to develop sustainability competencies in the study areas, as depicted in the figure below.

Figure 3. Level of Education Necessary for Sustainability Competencies. (Gardner, 2017, p. 60).

Students who reach the mastery level put the information learned into action upon graduation from their institution of higher education. The study discovered that behavioral-change strategies combined with technical knowledge provided the "potential for great reductions" (Gardner, 2017, p. 86) in each of the four environmental and waste management areas studied. Lake, Fernando and Eardley (2016) concentrated on social sustainability in another study and asked students to cooperate with community not-for-profit institutions with the goal of helping solve "wicked problems of sustainability" (para. 3). The authors concluded that allowing the students the responsibility to solve real problems afforded them the confidence and skills necessary to act as change-agents in their future careers. Strictly lecturing to students about sustainability being the *right* thing

to do could "lead to unsustainability" (Seatter & Ceulemans, 2017, p. 49). Tilbury and Ryan (2010) evaluated practices with the goal of empowering the students to act sustainably after graduation. The study found that workshops and campus activities do little to provide a lasting impression upon students. To better advocate change management, universities must embed sustainability topics within the curriculum for students to transform their behaviors, in addition to offering participation through campus activities.

The Catholic Church found the environment and helping the poor to be an important aspect of the mission and as such created a toolkit specifically for catholic institutions of higher education. The toolkit focused on five aspects, including prayer, learning about areas of need, assessing the status of the organization, acting or contributing to the solution, and advocating for vulnerable populations. Although specific steps for implementation did not appear in the article, the author recommended incorporating the ideas into the fabric of each organization rather than treating the ideas as an add-on (DiLeo, 2012).

While reviewing various writings about sustainability, the researcher became aware of several themes present in the literature. A holistic approach to implementation appeared as a common theme in the various toolkits and guiding principles. The Greening Universities Toolkit referred to this approach as the quadruple bottom line including economic, environment, social, and governance. The guidelines described incorporating each aspect into the mission or vision of the organization as well as the curriculum (UNEP, 2014). Tilbury and Ryan (2010) summarized the approach in their article title *Embedding Sustainability within the DNA of Universities.* Another article recommended

the approach used encompassed several disciplines rather than each segment operating independently (Lake, Fernanado, & Eardley, 2016). To the UN, two levels of responsibility existed for HEIs. One level focused on economic in addition to social and environmental concerns (the triple bottom line) and the second specified the responsibility of HEI's to mold their students into "socially responsible citizens" making decisions for "our world's future" (UNGC, 2012, p. 8). Gardner (2017) also stressed the importance of sustainability information coming from the HEI and the first PRME principle indicated appropriate language supporting sustainability must exist in the university mission (PRME, 2007).

Inclusion of the surrounding community into sustainability practices of the university was another theme consistently observed in the literature. Tilbury and Ryan (2010) indicated that society expects universities to act in their best interest and to "serve the public good" (para 2). Corporate outreach and public engagement practices were included in the DNA model described in the article. In addition, one of the six principles of PRME specified developing partnerships between HEIs and the surrounding business and civil community (PRME, 2007). To support the benefits of community involvement, one study surveyed students asked to participate with community organizations as part of a class project. The students indicated a greater commitment to future participation in work to benefit society because of the exposure during class (Lake et al., 2016). In another study students also demonstrated they valued the practical experience gained from hands on involvement (Lodhia, 2010). Seatter and Ceulemans (2017) coined the term for this change in attitude transformative learning.

Two other ideas also emerged consistently throughout the literature. Developing a methodology specific to the institution and dedicating the appropriate personnel to the task. Each institution must develop an individualized approach rather than apply a boilerplate technique that worked for another institution. Lake, Fernando, and Eardley (2016) found replicated processes not as effective in social sustainability implementation. The UN Global Compact Principles offered numerous ideas under each of the four areas of focus (human rights, treatment and employees, environment, and anti-corruption), but specified that no single method was the correct method to implement the principles (UNGC, 2012). Finally, the Greening Universities Toolkit included numerous case studies to demonstrate global differences in implementation based on geographic area (UNEP, 2014). Employees dedicated to sustainability will also help organizations strive for continuous improvement. DiLeo (2012) stressed, "Identifying who on campus can most effectively take action" (p. 49) was important to the process. Engagement of employees throughout the organization allowed the greatest success when embedding sustainability practices into the core of the business (Tilbury & Ryan, 2010). In addition, many organizations implementing the Global Compact had "dedicated positions that oversee the process" (UNGC, 2012, p. 11).

In the section above, which focused on sustainability development at the university level, research listed the lack of resources as a barrier to implementing sustainability measures on college campuses (Filho, 2010). Grant funding could mitigate this obstacle. One significant measure was the passage of the Higher Education Opportunity Act in 2008. The act allocated competitive grant funding for universities "to develop, implement, and evaluate sustainability" measures throughout the university

operations or within the curriculum (Hawkes, 2008, p. 370). Also incorporated into the act was a program called the University Sustainability Program, initiated with the goal of increasing sustainability development at HEIs as well as increasing the number of sustainability literate graduates (Elder, 2008).

For institutions not new to the incorporation of sustainability practices, but in need of guidance to advance the campus practices, other training programs and partnerships existed. One training method focused on developing competencies for faculty with the intent of developing a *rounder sense of purpose.* The authors concluded that this framework allowed educators to instill deeper sustainable values within themselves, which in turn encouraged understanding and action in the students they taught (Vare, et al., 2019). Incorporation of the model could potentially promote the ideas of mastery and transformative learning mentioned above. A Global University partnership on Environment and Sustainability (GUPES) also existed. The network strived for organizations to incorporate sustainability into teaching and research in addition to the surrounding community and management practices with the goal of students learning to take the ideas beyond the university walls (Pradhan & Mariam, 2014). A similar notion for faculty trying to incorporate sustainability topics within accounting courses appeared in the literature as well. Lodhia (2010) wrote about experiences teaching two sustainability accounting courses in Australia and found that journal articles and other published frameworks (like the GRI) offered more to student learning than a textbook. Assessment techniques measured student understanding. The next section addressed assessment guidelines and principles at the university level.

Assessment of Initiatives

Institutions worldwide implemented sustainability initiatives in some form or another. Over 1400 signed one of the over 31 declarations intended to increase sustainability implementation in HEIs (Alshuwaikhat et al., 2016; Grindsted, 2011). Little research regarding the assessment process existed, to see if institutions signing an agreement lived up to the expectations of that agreement. Instead, the literature displayed other assessment tests. Since no universal method existed for assessment (Bullock & Wilder, 2016; Rosen, 2017), HEIs used one of many different systems to evaluate their programs. Researcher found self-assessment techniques (Tilbury, 2009), the Global Reporting Initiative or Sustainability Tracking and Rating System reporting methods (Lozano, 2011), the Sustainability Assessment Questionnaire (ULSF, 2009), or the Assessment Instrument for Sustainability in Higher Education (Lambrechts, 2015) used most often to evaluate the quality of sustainability measures. Additional studies reviewed these assessment techniques for effectiveness (Bullock & Wilder, 2016) and offered criteria of quality assessment systems (Kosta, 2019).

Just as the reporting initiatives evolved over time, so did the measuring techniques. During the decade of education for sustainable development (2005-2014), a Global Monitoring and Evaluation Framework (GMEF) existed as a self-assessment technique. The tool allowed HEIs to document progress and lessons learned and allowed institutions to reflect and evaluate additional measures needed to achieve their goals (Tillbury, 2009). Assessment of the pillars of sustainability relevant to HEIs, education, environment, social, and economic aspects, started with reporting (Lozano, 2011). Bullock & Wilder (2016) discovered numerous methods widely used for sustainability

assessment, which limited the comparability from one institution to another. Other studies mirrored this barrier to effective reporting and demonstrated the lack of a standardized system. For example, Canadian universities used the Sustainability Tracking and Rating System (STARS) most often (Lidstone et al., 2015), while UK institutions followed GRI reporting standards (Lozano, 2011). Even the SAQ mentioned previously as an implementation tool doubled as an assessment tool (ULSF, 2009). One study, completed in Saudi Arabia, examined five of the seven elements of the SAQ to determine if institutions within that country, met the expectations of each dimension (Alshuwaikhat et al., 2016). Still another technique, referred to as the Assessment Instrument for Sustainability in Higher Education (AISHE) focused on quality management. The format of this report allowed university administrators to document barriers and other factors influencing the integration of sustainability measures (Lambrechts, 2015).

With so many options in place, it was difficult to determine which reporting system was the best. Even if using the same reporting system, comparability between institutions proved difficult. Since many institutions followed Global Reporting Initiative standards for their voluntary reporting, Lozano (2011) evaluated institutions who published sustainability reports using the framework. In order to compare the reports, he developed a Graphical Assessment of Sustainability in Universities (GASU) tool to "help university leaders . . . compare and benchmark their sustainability performance with relative ease (p. 68).

Kosta (2019) studied various ways organizations used sustainability assessment techniques to evaluate performance and measure progress. The study demonstrated the complexity of evaluating sustainability reports with no set standards for preparation or

evaluation in place. In addition, the lack of systems for data collection or established baselines made data quality questionable (Tibury, 2009). Bullock and Wilder (2016) examined nine competing assessment systems and found the STARS system developed by AASHE the most comprehensive. Since the frameworks was not well known outside of academia, the authors concluded "the GRI based approach . . . should be used for assess[ment]" (p. 300). Ironically, another study looking at assessment approaches for higher education did not include the GRI framework on the list of systems evaluated. Twelve systems reviewed for commonalities allowed the authors to make a recommendation of criteria needed in a comprehensive assessment tool for HEIs. The authors concluded that the framework would most resemble the STARS system and would "include[e] aspects of management; academia; environment; and engagement and innovation" (Alghamdi, den Heijer, & de Jonge, 2017, p. 107).

In summary, no single, perfect method to assess sustainability in HEIs existed in the research. Developing a standardized model would improve the comparability between institutions. In addition, Lambrechts, (2015) found sustainability assessment was important to policy development. In one study at the University of Leeds, the authors found the act of measuring and monitoring sustainability initiatives lead to changes in policies through the university system, allowing improvements in all aspects of sustainability (Lozano, Llobet, Tideswell, 2013). Lidstone, Wright, and Sherren (2015) mimicked this idea when stressing that sustainability assessment tools can assist university administrators with planning for improvements in sustainability policy and actions.

Conclusion/Future Expectations

As demonstrated in the previous paragraphs, society continues to expect the evolution of sustainability initiatives for businesses and higher education institutions alike. Some countries and stock exchanges already expect corporations listed on the exchange to report on environmental, social, and governance issues. Eventually, U.S. government regulations related to sustainability reporting may also shift from voluntary to mandatory. Businesses and institutions of higher education proactively incorporating sustainability development ideas and other efforts towards meeting the sustainable development goals hold an advantage over those waiting to react to the legal expectations. This was especially important for HEIs expected to lead by example (Dyer & Dyer, 2017). As demonstrated in this literature review, many tools existed for organizations with a desire to change their practices and operate with less impact on the environment and with greater social focus. Evaluation and assessment of progress towards meeting their goals could begin only after and organization implemented ESG practices (ULSF, 2009). The next chapter described the study methodology used by the researcher to determine the level of incorporation of sustainability topics into the accounting curriculum at Missouri four-year colleges and universities.

Chapter Three: Methodology

Overview of Past Research

Studies of sustainability development (SD) at institutions of higher education came in many forms. Different countries reviewed various aspects, demonstrating the global nature of the topic. Some studies took more of a case-study approach by focusing on one institution. For example, one study from the United Kingdom looked at faculty perceptions and opinions on the topic (Cotton et al., 2007). Another in Australia covered a story at the University of Tasmania, which successfully converted to a more sustainable culture throughout the institution (Salter, Murray, Davison, Fallon, & Towle, 2013). Other studies compared multiple institutions. Two studies in Canada evaluated the systems in place at various institutions; one evaluated commonalities for institutions with a sustainability plan in place (Fonseca, Macdonald, Dandy, & Valenti, 2011) and the other compared institutions which completed sustainability reports (Lidstone et al., 2015).

No studies reviewed specifically sought student input about sustainability development, but one study mentioned that students had an impact on the university choosing to report on sustainability measures (Fonseca et al., 2011). Another study, completed in Europe, focused on pedagogy and determined that different educational approaches must exist for student competencies and sustainability contributions to develop (Lozano et al., 2019). Thorough development of competencies preceded students acting in a sustainable manner after graduation (Gardner, 2017).

All the aforementioned studies occurred outside of the United States. Little research was located discussing sustainability development or reporting within the U.S.;

however, one study of accounting programs showed that very few taught courses in sustainability accounting (Pippen, et.al, 2016). This study intended to compare the state of Missouri with the U.S. as a whole to determine if differences existed. Institution size was also a factor the researched planned to test for variances.

Developing the Intervention

Butin (2010) explained the difference between theoretical and empirical research. The theoretical researcher "finds his data in the library (or more likely, online)," however empirical research was performed "in the field" (p. 71). Further breakdown of empirical research indicated it can be qualitative, quantitative, or mixed-methods. The advantage of mixed methods is that it allowed the researcher to "gather and analyze considerably more and different kinds of data" (Frankel, Wallen, & Hyun, 2015, p. 11). The researcher had both hypotheses and research questions to answer in this study. Each statement and question follow.

Hypotheses

Null Hypothesis 1. There is no difference in the rate at which accounting programs include sustainability topics in the curriculum at four-year colleges and universities in the state of Missouri compared to U.S. institutions overall.

Null Hypothesis 2. Institution size has no effect on the inclusion of a sustainability course in the curriculum

Null Hypothesis 3. Taking a sustainability accounting course has no effect on student perceptions of their understanding of sustainability development.

Research Questions

R1. In what ways do accounting programs without a specific sustainability accounting course incorporate sustainability topics into the curriculum?

R2. What impact does incorporation of sustainability measures at the university level have on the inclusion of sustainability topics in the curriculum?

R3. What level of understanding do faculty have with regard to sustainability development?

R4. What impact does faculty understanding have in determining how accounting programs include sustainability topics in the curriculum?

R5. What impact does faculty understanding have in determining why accounting programs do not include sustainability topics in the curriculum?

R6. What level of understanding do students have with regard to sustainability development?

R7. What level of involvement do students have in developing and implementing sustainability measures?

Multiple instruments using various analysis methods proved the best choice for summarization of the data gathered from this study. Using the theoretical approach, the researcher collected data through examination of the website for the colleges and universities in the population. According to the Department of Education website, 33 institutions of higher education in the state of Missouri offer a degree in accounting at the undergraduate or graduate level, or both (DHEWD, 2019). Sustainability, sustainability development, and sustainability accounting were the search terms used to determine the level of importance of the topic to each campus. An observation form completed by the

researcher summarized any elements that described sustainability behaviors, the list of courses, majors, and/or minors included in the curriculum, links to sustainability reports, etc. Each school then received a rating, assigned by the researcher, based on the inclusion of the topics, using the scale listed below.

- 1 = Sustainability not important to the organization. The search terms resulted in no or irrelevant matches.
- 2 = Sustainability present on campus but not in the curriculum. Sustainability topics presented in various seminars or meetings on campus or evidence of sustainable behaviors exist. No course titles, majors, or minors reflect the inclusion sustainability topics.
- 3 = Sustainability present in the curriculum but not throughout the organization. Organization had one or more sustainability courses, majors, or minors but no meetings or activities throughout campus covering the topic.
- 4 = Sustainability present around campus and included as part of the curriculum. Organization had courses, at least one major or minor including sustainability in the title, and numerous activities or meetings about sustainability topics throughout campus.
- 5 = Sustainability extremely important to the organization. Sustainability engrained into the culture and operations of the organization to the level that they completed a sustainability report, belonged to the Association of Advancement of Sustainability in Higher Education (AASHE) and/or won a sustainability award.

According to Frankel, Wallen, & Hyun (2015) observation entailed determining if a behavior existed, whereas rating used judgment about the behavior (p. 119). This rating scale demonstrated the level of significance sustainability was to each organization since

the research demonstrated that a holistic approach to instilling sustainability topics lead to more sustainable behaviors for the students after college (Fihlo, et al., 2018; Pradhan & Mariam, 2014).

In order to determine institution size for comparison purposes, theoretical research also entailed searching the Integrated Postsecondary Education System (IPEDS) for data regarding the number of full time equivalent (FTE) students at each institution in the population. IPEDS data displays measurements of student population using many different characteristics. The researcher chose to reference FTE for undergraduate students completing their education primarily on campus for this study. Taking classes online does not afford the student the ability to benefit from the on-campus climate and environment related to sustainability.

Empirically, a majority of the data collection for this study utilized a survey/questionnaire. Cotton (2007) along with three of her colleagues performed a study of lecturers' beliefs and attitudes about sustainable development for all academic disciplines at the University of Plymouth, in the United Kingdom. Their article, published in 2007, in the Environmental Education Research journal answered several questions also asked in this research, however for a different study population. The researcher contacted Dr. Cotton requesting permission to use the same questions as a basis for the survey in this study. To examine the note granting permission, see the Appendix.

Creation of the faculty survey for this study began with the list of questions provided to the researcher by Dr. Cotton. According to the article summarizing the results of that study, the survey "was developed by the team of researchers, using a mixture of closed and open-ended questions, and building on previous research in this field" (Cotton

et al., 2007, p. 584). Additional questions to gather detail for the specific research questions in this study asked participants about the various institutions, including the size of and the makeup of the accounting program at the school. In addition, participants answered questions regarding the sustainability measures in place at the different campuses throughout the state. The student version of the survey did not ask about attitudes and beliefs, but included the same questions posed to the faculty regarding sustainability measures in place on campus. A five-point symmetric Likert scale, selected for responses to both the faculty and student surveys, permitted the greatest flexibility when analyzing responses. A symmetric scale allowed the 'neutral' or 'do not know' responses "to fall directly between the poles of strongly agree and strongly disagree" (Joshi, Kale, Chandel, & Pal, 2015, p. 397). To increase validity and reliability prior to distribution, a team of experts evaluated the survey. One member of the team was an accounting faculty peer who would not be eligible to participate in the survey based on demographics, another was a faculty member with expertise in sustainability, and the third was a higher education administrator over an accounting department. Each member provided valuable feedback, which resulted in modifications to the instrument prior to distribution.

In addition to the survey/questionnaire, a focus group was another empirical method used for this study. Faculty attending the Missouri Association of Accounting Educators (MAAE) conference provided data related to their opinions and beliefs on including sustainability topics in their courses. Attendees divided into groups and rotated through tables discussing various topics. One topic, related to sustainability development,

attempted to answer questions to determine faculty understanding of the topic and any perceived barriers preventing coverage of the topic in the curriculum.

In summary, observations of university size and web presence facilitated creation of a rating system to evaluate the importance of sustainability topics at each college and university. Surveys of faculty and students to describe sustainability efforts among the campuses along with faculty opinions and beliefs provided additional data. Finally, a focus group provided the researcher valuable data collection for a proper mixed methods analysis, as described in the next section.

Data Collection and Analysis Procedures

The various institutions throughout the state of Missouri, as well as the faculty and students at those institutions, have the right to anonymity within the course of this research. Only a summarization of aggregate data was included in the dissertation, not the listing of individual colleges or universities. Qualtrics surveys sent to faculty and students utilized the anonymous link feature, which blocked the identity of any respondents. In addition, participants of the focus group of faculty attending the MAAE conference were identified by participant number (P1, P2, etc.), not by name or institution. This held true for the transcription process and the summarization of results. Data collection procedures for the different instruments used in the study follow.

At the conclusion of survey testing, the researcher sent an anonymous link to the instrument to the faculty/student liaison with the MOCPA for circulation. Qualtrics was the Web-based survey program required by the University for faculty and student research. This medium lived up to the expectation of being able to reach a large

population of demographically diverse participants with low cost. However, the disadvantage of low participation rates (Frankel et al., 2015) held true for the results.

Potential participants all but ignored survey collection efforts sent via email through the MOCPA. Specifically, the faculty survey forwarded to faculty by the faculty/student liaison on September 6, 2019, and again on October 11, 2019, received one response. During the MAAE Conference, on November 1-2, 2019, as part of the focus group discussion, the researcher mentioned the survey and personally invited participants to provide feedback. Upon completion of the conference, the researcher emailed each of the attendees from qualifying institutions a link to the Qualtrics survey. An additional 13 responses came in. To garner additional information, the researcher then located the directory for each of the 33 schools in the state with an accounting program and emailed a personal invitation along with a link to the survey on January 22, 2020. Eighteen more individuals responded, giving 32 surveys to compile. The researcher planned to perform a sample test of proportions in order to compare the survey responses from the sample to a nationwide study published in the CPA Journal using a z-test.

Student response to the MOCPA email requests mirrored faculty feedback. The researcher sent the student survey to the faculty/student liaison on September 23, 2019. The exact date of distribution to students is unknown by the researcher although a second request was emailed to students on October 23, 2019. See the Appendix for a copy of this communication from the liaison to the researcher. Only three responses came in after these two requests. A third request, again emailed from the faculty/student liaison to students on January 15, 2020, resulted in no additional contributions to the data. The researcher modified the IRB application, allowing the distribution of the survey between

eligible students using student groups or social media. Historically, sensitive topics benefited most by participants asking others to complete the instrument (Biernacki & Waldorf, 1981); however, the researcher hoped the peer referral process would increase the interest and participation rates of the survey. A majority of the responses came from two schools in the population. Thirty-four total responses came in but ten surveys did not answer any of the Likert scale questions regarding sustainability measures in place on campus and student knowledge of the topic. Excel tools analyzed the responses collected through Qualtrics after export to the software.

Searching the web site of each of the four-year colleges and universities in the state of Missouri with an accounting program showed varying degrees of sustainability coverage. Some searches found no results for each of the search terms sustainability, sustainability development, and sustainability accounting. Others listed numerous speakers, campus activities, majors or minors, and courses related to sustainability measures. Even winning a climate leadership award appeared in the search results at more than one institution. This data offered support and demonstrated examples of sustainability behaviors.

The researcher believed that the survey and focus groups provided flexible tools for analyzing data both quantitatively and qualitatively. Summarization of the data helped answer initial questions about sustainability development for the population studied and allowed for comparisons with different populations. Additionally, the focus group increased the level of detail and gained further insight about faculty knowledge and opinions about the topic. Theoretical research also provided another level of detail and increased validation of the study. For example, if a survey response indicated a school

included sustainability accounting class, the course catalog on the web site could verify the existence of the class in the curriculum.

Participants

This study used participants from HEIs, faculty, and student populations. One population was comprised of the four-year colleges and universities throughout the state of Missouri. The researcher collected data indicating institution size and searched for the inclusion of sustainability topics, but did not track other distinguishing characteristics. Faculty members teaching at these institutions were a second population. No demographic characteristics about the individuals were included in the survey. Only information about specific accounting courses taught and the pedagogical techniques used to share sustainability topics in the classroom were included. The third population included students studying accounting at colleges and universities throughout the state.

Accounting faculty and students majoring in accounting at Missouri institutions of higher education receive complementary membership to the Missouri Society of Certified Public Accountants (MOCPA). The researcher emailed the Executive Assistant to the Academic and Careers Manager and faculty/student liaison asking for permission to poll the faculty and student members. Her reply indicating a willingness to assist with the research was included in the Appendix along with the original message. Per the Executive Assistant, in the 2019-20 academic year close to 300 faculty and approximately 1700 students enrolled to receive this benefit. Faculty and student populations forwarded the survey by the faculty/student liaison had the option of voluntary participation. Contributors could sign up for a drawing for a gift card to either Starbucks or Barnes and Noble as an incentive for their involvement.

Polling only faculty and students teaching or taking accounting classes in Missouri had limitations. For one, these individuals may live in other geographic areas with differing views about sustainability topics than Missouri residents. The views of the population could also vary from other states in the U.S., or even different countries throughout the world. In addition, membership rolls of the MOCPA determined which faculty and students received the survey. It was possible that eligible participants did not enlist in complementary membership and therefore failed to receive the survey. As demonstrated by the response rate, recipients sometimes neglected to read email communications from the MOCPA and were unaware of the survey request.

Respondents to the survey and participants in the focus group may not represent the views of the entire population. When considering the survey, participants with no knowledge of sustainability may overlook the opportunity to provide input whereas individuals with a greater interest in the subject may respond at a higher rate. Moreover, some members of the population work or attend classes at the same institution as the researcher and may feel more compelled to answer the survey because of the existing professional relationship. For the focus group, only faculty attending the Missouri Association of Accounting Educators (MAAE) conference in 2019 participated.

A final set of limitations existed for the populations not included in the study. Institutions of higher education are not the only stakeholders when it comes to SD and the implementation of various initiatives. Businesses and society as a whole are also stakeholders in the process but were not included. Additionally, faculty and students from disciplines other than accounting may hold different viewpoints and opinions about sustainability development. Those populations were not part of the study group.

Conclusion

The researcher has been teaching as an accounting faculty member at one of the institutions included in this study for over 15 years. Throughout this time many changes in business and higher education have occurred. Upon reading Ivon Chouinard's book *The Responsible Company* and learning how some companies take a cradle to grave (or cradle-to-cradle) approach to the lifecycle of their goods the researcher became interested in sustainability development and began reading and learning about the topic. All the positive strides made throughout the world will continue with the right attitudes and measures in place. The researcher hopes to add to the research in this area to further the interest and acceptability of the topic so future generations know the same benefits the world has to offer as current citizens.

Chapter Four: Presentation of Data

Introduction

This study included three hypotheses and seven research questions. Data gathering through survey responses proved more difficult than anticipated; however, the researcher was able to "obtain information through different procedures to heighten the dependability and trustworthiness of the data" (Zohrabi, 2013, p. 254). Other methods included a focus group of accounting faculty and a review of the websites of all four-year institutions throughout Missouri. In addition, information gathered from the Integrated Postsecondary Education System, supplied data supporting institution size. Details surrounding each hypotheses and research question follow.

Hypotheses

The study included three different hypotheses in which the researcher intended to perform a sample test of proportions from the data collected in order to determine if evidence existed to reject the null. The following paragraphs provided detail about each hypothesis.

Null Hypothesis 1. There is no difference in the rate at which accounting programs include sustainability topics in the curriculum at four-year colleges and universities in the state of Missouri compared to U.S. institutions overall.

Information about U.S. institutions came from a study which determined that "of the more than 900 universities with undergraduate or graduate accounting programs, only 17 list a course entirely devoted to sustainability" (Pippen et al., 2016, para. 2). This translated into a rate of less than 2% (1.89 to be precise). Surveys sent to faculty at the 33 four-year colleges and universities throughout the state of Missouri served as the data

source to test this hypothesis and compare it to the national rate. Responses received from 100% of the participants indicated a 'NO' answer to the question 'Does your institution offer a sustainability accounting course?' Inferential statistical analysis could not continue as planned due to the null response provided by the study population. Instead, additional descriptive statistics summarized the data later in the discussion of the seven research questions.

Null Hypothesis 2. Institution size has no effect on the inclusion of a sustainability course in the curriculum

Universities measure student population in various ways and report the numbers to the Integrated Postsecondary Education System (IPEDS) on an annual basis. For the purpose of this study, the number of full-time equivalent (FTE) students established university size. Missouri institutions varied in size from 815 to 27,656 for the 2017-18 academic year. Upon consultation with an individual with over 25 years of experience in higher education, the researcher selected 11,500 as the cutoff number when determining institution size. Using this criterion, five HEIs in the state qualified as a large for the purpose of the study. The remaining 27 obtained the classification of small colleges or universities for the purpose of the study. Regardless of the size designation, testing for this hypothesis encountered the same difficulty noted above due to the null response provided by the study population. Since responses from 100% of the participants indicated 'NO' to the question 'Does your institution offer a sustainability accounting course?' inferential statistical analysis could not continue as planned. Later in the discussion, descriptive statics described differences based on university size.

Null Hypothesis 3. Taking a sustainability accounting course has no effect on student perceptions of their understanding of sustainability development.

Surveys sent to students served as the data source to test this hypothesis; however, like the hypotheses above, the testing could not continue as planned. As mentioned in Chapter Three, finding students to complete the survey proved to be a difficult task. Many requests made by the liaison between students and the MOCPA were ignored. Responses finally came in after the researcher used social media platforms and student-to-student appeals to obtain responses. Thirty-four students completed the survey, primarily from two HEIs in the state. On the surveys, three students indicated they have taken a sustainability accounting course at their institution. Since faculty responses did not agree with the student perception, additional analysis ensued. A follow-up question on the survey asked for the name of the course and only one response existed. The course title listed was Accounting Information Systems. Based on the title and researcher knowledge of the course, it was determined it did not qualify as a sustainability accounting course. In their study, Pippen et al. (2016) searched the course catalogs of HEIs in pursuit of sustainability accounting courses. The researcher performed a similar review of Missouri institutions and found no stand-alone sustainability accounting courses in the curriculum at any institution. The low student response rate coupled with the lack of representation of universities throughout the state caused the researcher to question the validity of the data collected. Further inability to validate the data from other sources caused the researcher to omit the hypothesis from the analysis rather than complete the test with unreliable data.

Research Questions

With the hypotheses testing not working out as planned, the researcher focused a lot of attention answering seven research questions. Data gathered from faculty and student surveys, the faculty focus group, and the website review of each institution demonstrated support for each question. Each medium brought unique aspects to the question analysis.

Both accounting faculty and students receive complementary membership to MOCPA, a professional organization for certified public accountants in the state of Missouri. The liaison between the organization and student and faculty members agreed to distribute a survey for the researcher. This medium of contact did not prove fruitful and alternative measures resulted in increased responses.

On the faculty side, the researcher sent a link to the survey to all faculty who attended the Missouri Association of Accounting Educator's (MAAE) conference. An additional personal request was distributed to all accounting faculty listed on the various websites for the 33 four-year colleges and universities in the state of Missouri with accounting programs. Combined efforts resulted in 31 faculty responses from 15 schools. The researcher felt the data provided by the participants represented the population based on the response rate coupled with the school characteristics included in the sample. Eleven faculty from three of the large institutions in the state represented those schools in the data. The remaining participants came from the 27 institutions labeled as small schools by the researcher. Twenty responses came from faculty teaching at smaller institutions. Although not a criteria breakdown for analysis, data provided also represented private and public institutions throughout the state.

After the requests for student participation from the liaison went unanswered, the researcher modified the IRB application to allow contact with students through social media. The peer referral process proved more fruitful; however, student responses came primarily from one small and one large institution. Thirty-four students began the survey process, but only 24 completed the Likert scale questions. Participant responses not representing the population existed as an initial limitation of the study, as noted in Chapter Three. Even with the limited responses from two institutions in the population, the researcher included the student survey data in the analysis as their perceptions could influence the future of SD.

A focus group collected more data about faculty. Each year accounting faculty across the state of Missouri meet at a conference to discuss updates to the profession and collaborate with peers regarding classroom practices. Members of the Missouri Society of Certified Public Accountants (MOCPA) and the State Board of Accountancy discuss the current state of the profession and changes that will occur in the future. Guest speakers share best practices and new content for faculty to learn and take back to their classrooms. In addition to these sessions, a faculty roundtable convenes so various topics can be addressed in small groups.

At the 2019 meeting, conference attendees divided into six groups of five to seven participants. Each facilitator had a separate topic to discuss and rotated among the groups. The researcher, as facilitator of one of these small groups set out to find the level of understanding of sustainability development among the faculty and determine if this level of understanding influenced the rate, at which sustainability topics were included in the curriculum. VoiceMemos, a recording software available on a smartphone, taped the

conversations of each group before transcribing. Once completed, the researcher highlighted, interpreted, sorted, coded, assembled, and described the data using an open coding technique learned though coursework in the doctorate program.

A web site review of each four-year college and university in the state of Missouri provided detail about the importance of sustainability to the institution. The researcher searched the terms sustainability, sustainability development, and sustainability accounting to gather data showing the sponsorship of sustainability activities by the university or the inclusion of sustainability topics in the curriculum. Each university received a score between 1 and 5, based on the observations made. The criteria for each score followed:

1 = Sustainability not important to the organization. The search terms resulted in no or irrelevant matches.

2 = Sustainability present on campus but not in the curriculum. Sustainability topics presented in various seminars or meetings on campus or evidence of sustainable behaviors exist. No course titles, majors, or minors reflect the inclusion of sustainability.

3 = Sustainability present in the curriculum but not throughout the organization. Organization had one or more sustainability courses, majors, or minors but no meetings or activities throughout campus covering the topic.

4 = Sustainability present around campus and included as part of the curriculum. Organization had courses, at least one major or minor including sustainability in the title, and numerous activities or meetings about sustainability topics throughout campus.

5 = Sustainability extremely important to the organization. Sustainability engrained into the culture and operations of the organization to the level that they completed a sustainability report, belonged to AASHE and/or won a sustainability award.

It should be noted that when looking at the curriculum criteria, the researcher scored the university as including the topic in the curriculum if it was encountered anywhere in the courses offered by the institution. The focus was not specifically on accounting classes. Scoring would have been much lower since no accounting classes existed in the observations. Based on the analysis, six institutions scored a 1, seven scored a 2, three scored a 3, eight scored a 4, and eight scored a 5. Using 11,500 as the dividing line between large and small institutions, by size, two of the largest institutions in the state scored a 4, and the other three earned a 5. Additional observations from the study instruments for each research question followed in the paragraphs below.

Themes noted in the data. Throughout the analysis, four main themes regarding sustainability were evident from the data. The first two subjects, combined for discussion, included lack of time to implement sustainability measures and lack of expertise in knowing which sustainability efforts to implement. These two ideas overlapped and during both the survey and focus group, faculty assessed them as the largest difficulties when incorporating sustainability development topics. Even though 83% of faculty who completed the survey felt sustainability topics were important, only 38% planned to include them in their accounting classes in the next academic year due to time and proficiency constraints. In addition, during the focus group, participants asked many questions looking for details about what SD encompassed and how to include the topics in the curriculum. Faculty demonstrated a need for training to allow them the ability to

increase their competencies of the subject and to know which topics to emphasize in their classes.

Survey responses from faculty and students showed they found environmental aspects of sustainability more important than social aspects, making it the third theme present in the data collected for this study. A question answered by both faculty and students listed 12 sustainable activities and asked participants to indicate which implied SD to them. Actions to benefit the environment received more responses that other items presented on the list.

The fourth theme, although apparent in the data, lacked an appropriate label. HEIs in the study demonstrated support for and in many cases prioritized sustainability ideas and initiatives. Unfortunately, this administrative level support did not properly filter to the accounting programs or the students at the institutions. Over half of the institutions included in the study either dedicated a section of their web sites to sustainability initiatives, earned a sustainability award, or filed a sustainability report. Faculty and student surveys also noted that nearly all of the institutions had recycling programs and other initiatives in place like encouraging the use of reusable water bottles. Even with this institutional support, none of the accounting programs included a sustainability accounting class in the curriculum. A level of disconnect appeared to allow the sustainability initiatives to dissipate, preventing a holistic approach throughout the institutions in the study. Further evidence supporting these themes follow in the discussion for each research question.

R1. In what ways do accounting programs without a specific sustainability accounting course incorporate sustainability topics into the curriculum?

Hypothesis discussion revealed that no HEIs in the state of Missouri included a full sustainability accounting course as part of the curriculum. The faculty survey asked for additional detail about the inclusion of SD topics. Only twenty-nine of the 32 survey respondents answered the question 'Will you be including any elements of sustainable development in your teaching in the coming year?'. At various points in the data collection process, faculty felt they possessed either a lack of time or lack of expertise of the subject. The survey responses support the notion as only 11, or nearly 38% of responses indicated 'YES,' sustainability topics would be included. Two additional questions requested further detail about methods of delivery and topics the faculty planned to utilize in the coming semesters. Question 1 contained a list of 12 teaching methods with an open-ended option for additional modes of delivery. The second included a list of 13 sustainability related concepts and asked which topics faculty included in their courses. When completing the survey, respondents could select all or none of the options. Each question along with the choices receiving responses were included in tables below.

Table 1

Faculty Responses about Delivery Methods for Sustainability Topics Included in the Curriculum

Which methods are used when teaching about aspects of sustainable development? (check all that apply)		
case studies	18.8%	3
small-group research projects	12.5%	2
guest speakers	6.3%	1
group discussions	12.5%	2
lectures	43.8%	7
other, please specify (textbook)	6.3%	1
Total	100.0%	16

Responses indicated faculty utilized more passive learning instruction techniques over active forms of pedagogy. Lectures were the most popular mode of delivery with 43.8% of the votes, followed by case studies with 18.8%. Group discussions and research projects each received 12.5% and guest speakers and textbook information received 6.3% of faculty responses. Several other topics on the list did not appear in the table since they received zero responses, including site visits, action learning, student-led debates, seminars, class debates, guided/independent study, and role-playing. A common theme noted in the data collection centered on lack of expertise. It is possible faculty felt incapable of utilizing active learning approaches based on proficiency of the subject.

Table 2

Faculty Responses to Question about Sustainability Topics Included in Their Teaching

What aspects of sustainable development will you cover within your teaching? (check all that apply)		
history of sustainability	8.7%	2
sustainability/sustainable development concepts	17.4%	4
health	4.3%	1
fair trade	8.7%	2
non-renewable resource management	4.3%	1
renewable resource management	4.3%	1
sustainable technologies	13.0%	3
cost reduction	17.4%	4
sustainability reporting	21.7%	5
Total	100.0%	23

Responses to this question also supported the lack of expertise on SD topics previously defined as a common theme in the data collection. No choice received an overwhelming majority as the most important topic faculty planned to cover. Sustainability reporting, ideas to help with cost reduction, and basic sustainable development concepts received the highest number of responses. Issues related to health

and resource management (both renewable and non-renewable) each received only one vote each. Discussion of any topics on the list resulted in giving the students underlying knowledge of the various aspects of sustainability. Additional training would allow faculty to understand all aspects of sustainability and increase their comfort level enough to cover all aspects in their classes.

R2. What impact does incorporation of sustainability measures at the university level have on the inclusion of sustainability topics in the curriculum?

Both the faculty and student surveys incorporated eleven questions about measures universities take to demonstrate understanding and support of sustainable initiatives. The literature review showed the main pillars of sustainability initiatives included environmental and social aspects. As a result, several questions requested information about simple observable topics related to water bottles, food composting, energy usage, and waste management. Other questions covered external issues like signing a declaration, charter, or initiative and matters related to the environmental impact of the institution. A five-point Likert scale allowed respondents to measure their views regarding institutional participation in each of the question areas. Each response received a score between one and five to convert it to a numerical value for calculations. This listing of the responses along with the corresponding point values followed in the figure below.

Disagree	Somewhat Disagree	Neutral or Don't Know	Somewhat Agree	Agree
1	2	3	4	5

Figure 4. Likert Scale Responses with Assigned Point Value.

Common calculations for data description include the mean, standard deviation, and variance. The mean demonstrated the average response from the survey participants whereas the standard deviation and variance describe the data under a normal distribution. Assuming a normal distribution, 68% of data points are within one standard deviation of the mean and 95% lie within two standard deviations (Bluman, 2015). The variety of questions afforded a wide range of sustainable initiatives for analysis.

Student and faculty perceptions of campus initiatives varied based on the topic of the question. Even though 34 students initiated the survey, only 24 completed the Likert scale questions about sustainability topics. Thirty-two faculty responded to the survey with 29 answering the questions. The third and fourth themes described by the researcher presented themselves often in the data for the eleven questions analyzed. Faculty and students valued environmental aspects more than social aspects of sustainability and sustainability initiatives do not always filter throughout an organization. Each of the questions along with their mean, standard deviation, and variance for student and faculty responses followed, along with a short write-up describing the data from each question. Further analysis linking the themes occurred after the data descriptions.

Recycle bins are prevalent throughout the campus at my institution.	Mean	Std Deviation	Variance	Count
Student Response	3.63	1.35	1.82	24
Faculty response	4.13	1.18	1.41	29

Figure 5. Faculty and Student Responses to Likert Scale Question 1.

From the data displayed here, it appeared as though most institutions in the study population actively participated in recycling programs. The raw data indicated 16 of the 24 or nearly 67% of students responding to the question agreed or somewhat agreed they

saw evidence of recycling efforts throughout campus. The faculty demonstrated a much higher awareness of recycle bins on campus as 24 of 29, or nearly 85%, answered positively. Most institutions in the study appear to value the environment and demonstrate the commitment by recycling campus waste.

My institution composts food waste on campus.	Mean	Std Deviation	Variance	Count
Student Response	2.58	1.15	1.33	24
Faculty response	2.97	0.62	0.39	29

Figure 6. Faculty and Student Responses to Likert Scale Question 2.

Not as many institutions composted their food waste as those with recycling programs in place. The mean showed faculty awareness of food composting efforts slightly higher than student awareness even though only three faculty and four students agreed or somewhat agreed to this question. As demonstrated by the low standard deviation, most faculty responded in the neutral position signifying they were unsure of the answer; however, students had a wider variety of responses as indicated by the larger standard deviation. The website review resulted in three institutions stipulating sustainable practices with their food service, but nothing specific to composting. This activity was not a priority to institutions in the study population.

My institution is doing what they can to reduce their carbon footprint.	Mean	Std Deviation	Variance	Count
Student Response	3.13	1.09	1.19	24
Faculty Response	3.17	1.10	1.22	29
My institution has signed the declaration to reduce carbon emissions.	Mean	Std Deviation	Variance	Count
Student Response	2.83	0.55	0.31	24
Faculty Response	2.90	0.41	0.17	29

Figure 7. Faculty and Student Responses to Likert Scale Questions 3-4.

Since the topic of these two questions addressed carbon footprint and emissions, the researcher chose to list them together. Student and faculty showed similar averages and standard deviations. Based on the standard deviation, a wider response existed for reducing the carbon footprint while more participants had a neutral response about signing a declaration. As noted in Chapter Two, many declarations existed for university administrators to sign. One declaration specific to U.S. institutions, the Presidents' Climate Leadership Commitment, did not appear in any website reviewed, although one institution won a climate leadership award. If any institutions sign an initiative, they do not appear to make it public knowledge and inform the university community of the commitment. Instead, two universities mentioned belonging to the Association for the Advancement of Sustainability in Higher Education and two used the Sustainability Tracking and Rating System to prepare a sustainability report. Another boasted about the publication of a sustainability report without specifying the standard followed. Sharing institutional successes related to sustainability could allow stakeholders like students and faculty to view SD as a high priority and encourage them to act in sustainable ways.

My institution has invested in solar technologies which are visible throughout campus.	Mean	Std Deviation	Variance	Size
Student Response	2.29	1.10	1.21	24
Faculty Response	2.34	1.17	1.38	29

Figure 8. Faculty and Student Responses to Likert Scale Question 5.

Of the eleven questions, solar technologies being visible throughout campus displayed the lowest mean for both students and faculty. The low response rate caused the researcher to believe very few were present at the institutions in the study since solar panels are large and easy to see. Use of solar technologies or any other renewable energy

sources never arose in the website review of the institutions either. Renewable energies can often result in lower utility costs and assist with reducing the carbon footprint for an institution. The data indicated that institutions in the population have not prioritized this money saving green initiative.

Faculty, staff, and students are encouraged to use a reusable water bottle on campus.	Mean	Std Deviation	Variance	Size
Student Response	3.58	1.38	1.91	24
Faculty Response	3.28	1.44	2.06	29
Water fountains at my institution make it easy to fill up a reusable water bottle.	**Mean**	**Std Deviation**	**Variance**	**Size**
Student Response	4.58	0.86	0.74	24
Faculty Response	3.90	1.37	1.88	29

Figure 9. Faculty and Student Responses to Likert Scale Questions 6-7.

Student and faculty responses to the two questions about water bottles varied. Installation of the water fountains demonstrated the importance of their use to the institution; however, not all faculty were mindful of the initiative. Students responded more positively than faculty to the question about feeling encouraged to use a reusable water bottle on campus. In addition, they found the water fountains made it easy to fill their bottles throughout campus. The student mean for this question scored the highest of all the questions from the student participants. Although the response does not indicate whether students fill their reusable water bottles or not, it appears as though the initiative was marketed more to students than faculty.

Students are encouraged to participate in sustainability measures at my institution.	Mean	Std Deviation	Variance	Size
Student Response	3.33	1.11	1.22	24
Faculty Response	3.24	1.18	1.40	29
Student organizations can receive grants from the institution for developing and implementing a sustainability initiative on campus.	**Mean**	**Std Deviation**	**Variance**	**Size**
Student Response	3.13	0.93	0.86	24
Faculty Response	2.97	0.82	0.68	29

Figure 10. Faculty and Student Responses to Likert Scale Questions 8-9.

Two questions addressed student encouragement and grant funding to participate in overall sustainability initiatives on campus. The question asking if students were encouraged to participate in sustainability measures received similar averages between students and faculty. The high standard deviation indicated nearly as many agreed as disagreed to the statement, leading to the near neutral average. The second question, related to grants for sustainability initiatives, showed a mean near neutral for students and faculty. A smaller standard deviation indicated a majority of responses were close to neutral, indicating few if any grant resources existed for student projects. The website review showed 12 institutions had sections of their websites dedicated to sustainability. Another six listed a dedicated sustainability office (one institution labeled the office as a student office for sustainability) and three specified existence of a sustainability committee. To summarize, nearly 58% of institutions in the study showed support of SD on their websites. Unfortunately, the priority did not appear to filter through the institution to students and faculty.

My institution actively sponsors or encourages participation in activities to clean up or protect the environment.	Mean	Std Deviation	Variance	Size
Student Response	3.04	1.31	1.71	24
Faculty Response	3.34	1.04	1.09	29

Figure 11. Faculty and Student Responses to Likert Scale Question 10.

The question about encouragement by the university in activities to clean up and protect the environment was another area where students and faculty responses were close to neutral. The web site review indicated the environment was the area where sustainability topics met the curriculum. Ten institutions showed course work, minors, or majors dedicated to environmental aspects. Faculty and students in the survey did not demonstrate knowledge of the activities. Information about environmental causes appeared to focus on those already committed to the topics rather than disbursing it through the entire institution.

My institution actively sponsors or encourages participation in social (community service) activities.	Mean	Std Deviation	Variance	Size
Student Response	3.75	1.20	1.44	24
Faculty Response	4.31	0.85	0.72	29

Figure 12. Faculty and Student Responses to Likert Scale Question 11.

More students and faculty were aware of community service activities than environmental activities according to survey responses, supporting the idea that these activities are more prevalent throughout the university community. The higher mean and lower standard deviation in faculty responses demonstrated a greater awareness of the activities taking place on the various campuses. The web site review did not specifically search for community service, but most of the institutions had sustainability presentations

or activities listed. Further review would almost certainly support university participation in or sponsorship of community service events.

Faculty and student responses to the 11 Likert scale questions revealed familiarity with the basic sustainability initiatives like recycling and promoting the use of reusable water bottles. Although important, other, more significant activities encourage a reduction in carbon footprint and provide assurance of an institution's commitment to support the environment and the surrounding community. One theme in the data suggested faculty and students value environmental aspects of sustainability. As a result, HEIs may want to work to incorporate more green initiatives in which they can participate. More than half of the institutions in the study boasted about their commitment to SD through actions like completion of a sustainability report, presence of a sustainability office on campus, or inclusion of environmentally focused course work in the curriculum, to name a few. Somehow, communication of university sustainability related undertakings dissipated within the organization as survey results disclosed faculty and students lacked knowledge of these accomplishments. Another theme noted in the data from this study centered on sustainability priorities of the HEIs not filtering down to the individuals throughout the institutions even though everyone working together towards a shared goal would enhance an organizations ability to achieve the desired results faster.

R3. What level of understanding do faculty have with regard to sustainability development?

Information to answer this question utilized data from the faulty survey and focus group. Several questions on the survey gathered detail surrounding faculty attitudes

towards SD and their understanding of the topic. One question asked participants their opinion about the topic of sustainability being central to their discipline and a second question asked about the importance of the topic to their own teaching schedule. Only 28 faculty responded to the two questions. Detail including the mean, standard deviation, and variance followed:

To what extent would you agree that sustainable development issues are:	Mean	Std Deviation	Variance	Count
central to your discipline as a whole?	2.93	1.22	1.48	28
central to your own teaching schedule?	2.36	1.16	1.35	28

Figure 13. Faculty Responses to SDs Relationship to Discipline and Teaching Schedule.

The mean of the two questions revealed more faculty found the topic relevant to the discipline as a whole than to their own teaching schedules. In addition, the raw data showed only six faculty agreed or somewhat agreed that the topic was central to their own teaching schedule; however, 13 found it central to the discipline as a whole. The information from these questions supports the theme related to lack of time to devote to enhancing skills associated with sustainability development topics. More discussion of this theme appeared later in this section.

Before determining faculty understanding, another question on the survey asked participants about their attitude of the topic of sustainability. Summarized responses follow in the table below.

Twenty-nine faculty answered the question and most (82.8%) felt it was very important/a good thing. Only 10% considered themselves a passionate advocate to the cause and nearly 7% felt it was acceptable for others to participate. Fortunately, all

faculty reported they knew the meaning of the term and no one found sustainable development to be a waste of time.

Table 3

Faculty Responses to Question about Attitude Towards Sustainability Topics

It is extremely important-I am a passionate advocate	10.3%	3
It is very important-I think it is a good thing	82.8%	24
I do not know what you mean by sustainable development	0.0%	0
It is slightly important-I think it is acceptable if others want to do it	6.9%	2
It is not at all important -I think it is a waste of time and effort	0.0%	0

To gather additional data about faculty understanding, the survey included another question-asking faculty to choose which items from a list of twelve implied sustainable development to them. Participants could choose none or all twelve from the list. Summarizing the responses into a table substantiated that concepts related to the environment received more votes than social causes for the study population. The list of all 12 aspects along with the number and percentages of each response followed in the table below.

Environmental aspects occurred the most often, supporting the third theme noted in the data. 'Effective protection of the environment' and 'Recycling waste products' garnered the highest number of responses with 24 votes each. 'Developing new technologies to reduce the impact of harmful by-products' and 'respecting ecological limits' were not far behind with 21 responses each. At the other end of the spectrum 'Maintaining equity between generations' and 'Putting the needs of nature before those of humanity' each received only six votes from the participants. Individuals who consider themselves *passionate advocates* tend to understand sustainability topics better.

Table 4

Faculty Responses to Question about Which Items from the List Implied Sustainable Development

Social progress which recognizes the needs of everyone	6.1%	11
Effective protection of the environment	13.4%	24
Maintaining biodiversity in the local environment	7.3%	13
Developing new technologies to reduce the impact of harmful by-products	11.7%	21
Recycling waste products	13.4%	24
Safe and efficient public transport	10.1%	18
Exploiting natural resources for human benefit while maintaining critical natural capital	5.0%	9
Maintaining equity between generations	3.4%	6
A significant degree of local production and consumption	5.0%	9
Putting the needs of nature before those of humanity	3.4%	6
Respecting ecological limits	11.7%	21
Potential cost savings to consumers in using recycled products	9.5%	17

Since so few respondents labeled themselves as passionate advocates, it is not surprising they had a wide variety of responses to all of the items on the list, which represented sustainable development concepts. Two themes exhibited throughout the study lack of expertise and lack of time to enhance skills presented themselves in the analysis of this research question. More support for and discussion of the themes appeared after the focus group discussion in a later section.

R4. What impact does faculty understanding have in determining how accounting programs include sustainability topics in the curriculum?

Survey responses discussed for question R1 and R3, applied to this question too. Rather than duplicate the table presentations, the researcher chose to discuss only relevant data displayed in the tables in the following paragraphs. Please refer to the tables in the previous sections for additional detail. When asked if they would incorporate SD into their teaching, 38% of faculty respondents said ‘YES’. Table 1 showed responses to

the question-asking faculty which teaching methods they plan to use in the coming semester. Most faculty indicated lectures and case studies were the preferred teaching methods. Table 2 listed answers to the question asking which topics faculty found most relevant and planned to cover. From the results, respondents felt more comfortable discussing the topics of reporting, basic sustainability concepts, and cost reduction as those topics received the most votes. Other topics like poverty/living wage, pollution-carbon footprint, pollution-clean water, and 2030 agenda for sustainable development received no selections. Since lack of time and lack of expertise appeared as themes throughout this study, increased education may be necessary for accounting faculty to enrich their skills and see benefit in incorporating additional topics. Finally, Table 3 inquired about faculty attitude towards sustainable development. Most faculty (nearly 83%) felt 'it is very important-I think it is a good thing'. Only 10% felt 'it is extremely important-I am a passionate advocate'. Importance of the topic to the individual could influence the amount of time devoted to learning about the topic and, as a result, the level of understanding.

Supplementary questions asked of the 11 faculty who indicated they would be covering sustainability topics in their classes, gathered additional data to determine if they still encountered difficulties when covering the topics. The question simply asked 'Do you experience any difficulties from the list below when including sustainable development issues in your teaching?' and provided a list of 12 choices. Respondents could select none or all of the choices. One participant indicated no difficulties existed, but other faculty shared their opinions about what difficulties they encounter. Table 5 listed the detail, both in terms of number and percentage, below.

Table 5

Faculty Responses to Question about Difficulties Encountered when Teaching about Sustainable Development

I and my colleagues lack the necessary subject expertise.	27.3%	6
I can't see the relevance to my teaching.	0.0%	0
My academic colleagues see any relevance to our teaching.	4.5%	1
My students do not perceive it to be relevant to their area of study.	9.1%	2
I don't have enough time to make the necessary changes to my courses.	9.1%	2
I have concerns about a lack of academic rigor in the topic.	4.5%	1
Colleagues' have concerns about a lack of academic rigor in the topic.	0.0%	0
Financial considerations limit the degree to which I can make the necessary adaptations.	0.0%	0
Institutional structures limit the degree to which I can make the necessary adaptations.	4.5%	1
There is confusion over what needs to be taught with respect to 'sustainable development' in my area.	18.2%	4
Restrictions are imposed by the benchmarking requirements of courses that I teach.	4.5%	1
I find a lack of inspiring examples (eg of sustainable development teaching in this area) which might help me.	13.6%	3

Top choices indicated that even though SD development appeared in the curriculum, it was not in great depth, further enforcing the theme related to lack of expertise. As seen in the table, faculty agreed with the notion as lack of subject matter expertise received the most votes at six, while confusion over what to teach and lack of inspiring examples scored four and three votes, respectively. Items from the list not of concern to faculty teaching SD in their courses included lack of relevance to teaching, concern over academic rigor, and financial concerns limiting changes. Responses indicated additional resources must accompany the time needed to increase knowledge and coverage of the topic in the accounting curriculum.

R5. What impact does faculty understanding have in determining why accounting programs do not include sustainability topics in the curriculum?

Faculty understanding played a role in the level of inclusion of sustainability topics in the curriculum. If faculty do not know about or understand the topic themselves, it cannot be included in the course. To determine if faculty not including SD in the curriculum encounter the same difficulties as faculty including the topic in their courses, the researcher asked a similar question.

Table 6

Faculty Responses to Question about Difficulties Encountered Preventing them from Teaching about Sustainable Development

I and my colleagues lack the necessary subject expertise.	15.2%	10
I can't see the relevance to my teaching.	9.1%	6
My academic colleagues see any relevance to our teaching.	1.5%	1
My students do not perceive it to be relevant to their area of study.	6.1%	4
I don't have enough time to make the necessary changes to my courses.	16.7%	11
I have concerns about a lack of academic rigor in the topic.	1.5%	1
Colleagues' have concerns about a lack of academic rigor in the topic.	0.0%	0
Financial considerations limit the degree to which I can make the necessary adaptations.	6.1%	4
Institutional structures limit the degree to which I can make the necessary adaptations.	7.6%	5
There is confusion over what needs to be taught with respect to 'sustainable development' in my area.	16.7%	11
Restrictions are imposed by the benchmarking requirements of courses that I teach.	6.1%	4
I find a lack of inspiring examples (eg. of sustainable development teaching in this area) which might help me.	12.1%	8
Other	1.5%	1

The question provided a list of 12 choices for participants and respondents could select none or all of the choices when answering ‘Which of the following do you consider to be

the biggest difficulties in including sustainable development issues within your teaching?'. The two themes of lack of expertise and lack of time appeared in the top three responses to the question. Table 6 looks similar to Table 5 and listed detail of the 12 choices and participant responses, both in number and in percentage.

As observed in the table above, faculty not including information about SD in their courses encountered various difficulties. Lack of time and confusion over what specific topics to cover both received 11 votes. The feeling of lack of expertise was also one of the top three choices, receiving 10 votes. Faculty including the topic in their classes and faculty not covering SD found 'lack of subject matter expertise' at the top of their lists of difficulties. Other noteworthy comments included lack of inspiring examples, lack of relevance with teaching area, and limits from their HEI preventing changes which received eight, six, and five votes, respectively. With both themes, lack of time and lack of expertise, portrayed as barriers to implementation, institutional support of faculty training may allow instructors to devote the time necessary to increase their knowledge, allowing more coverage of SD topics in the accounting curriculum.

According to the table, six responses did not find the topic of relevance to the accounting curriculum. Review of the websites for the various institutions in the state mirrored this opinion as sustainability topics presented themselves in other areas of the curriculum. Eighteen schools listed either coursework, a major, or a minor with sustainability outcomes; however, none of the courses or degrees mentioned accounting. Sustainability majors or minors tended to focus on environmental sciences. One institution offered an undergraduate degree in sustainability and another included a graduate degree. Other universities offered management courses or internships with a

sustainability focus. One even listed a sustainability related study abroad trip to a third-world country. The topic appeared to have greater importance to the institution and to non-accounting areas of the curriculum.

Focus Group Responses Applicable to R3-5

Research questions 3-5 set out to determine a level of understanding faculty had towards sustainability development and sought to determine how that level of understanding influenced coverage of the topic in the curriculum. Data from the survey responses filled the paragraphs above; however, the researcher also completed a focus group of accounting faculty, which provided additional detail to answer these three questions. As mentioned above, three themes presented themselves repeatedly within the data. Two of the themes, lack of expertise and lack of time occurred repeatedly during the focus group discussion.

Many faculty admitted to having little or no knowledge of the topic of sustainability development. Coverage of the topic does take place in some classrooms, however, not in great depth. One participant mentioned, ‘I’ve informed my students that it exists. We’ve gone to the website. So, they know about the SASB’. Another stated, ‘We mention it’. A third faculty member said she mentions that, ‘it’s a thing,’ but prefaced the comment by stating ‘I don’t really know any more than that either’. Other faculty shared this lack of understanding of the topic. Participants made comments like ‘I’m not at all familiar with it,’ ‘I don’t know much about it,’ and ‘I would need more information about the actual accounting for sustainability within an organization’. Other comments in the focus group indicated faculty understanding superseded inclusion of the information in the curriculum. On participant mentioned, ‘a [fellow] faculty member . . . incorporated it in

her courses . . . that was her area of research'. The same faculty member also stated 'probably [in] 40-50% of the chapters we talk about it just a little bit'.

Within the focus group, the researcher mentioned the lack of response to a survey sent to faculty and some speculated that the lack of understanding was a reason for a low response rate. One attendee stated, 'Maybe one of the reasons your survey isn't being filled out is because no one knows anything about it'. Another concluded, 'The lack of data is data in and of itself. . . No one knew about it so we need to educate'. This need for clarification was also evident by the number of questions asked by participants during the sessions. Attendees asked several questions related to reporting. Some questions requested clarification about the need for and reliability of sustainability reporting. Comments like, 'Is sustainability reporting value relevant to the investors?' and 'Does this impact the bottom line of the company? Not in the short term but over time'? Finally, a participant asked the question 'is it audited'? Other questions addressed the location of the information. Participants asked, 'So they put it in their annual report what they're doing?' and 'Is it buried in the CSR report'? In addition to reporting, questions about textbooks came up. Some questions were specific to the books for a particular class, but one participant asked, 'Is there much incorporation in our textbooks'? 'How do you get the measures?' asked by one participant summarized several questions that arose about measurement issues. Other clarification was needed specific to the curriculum. Two different participants addressed the group by asking 'Do any of you have a sustainability class in your college of business?' and 'Do you [cover it]?' Another asked, 'Is there a justification as to why it should be [included in the curriculum]?'

The paragraphs above indicate that faculty understanding does play a role in the level of inclusion of sustainability topics in the curriculum. If faculty do not know about or understand the topic themselves, it cannot be included in the course. Questions supporting this notion came up during the focus group. Participants asked questions looking for guidance on how to include some of the information in their coursework. One faculty stated 'I'm curious as how you present sustainability as far as social issues in an accounting class'. Another faculty contemplated a specific class and requested clarification about a way to cover it by asking 'so . . . how management delegates, and how they do things at the top, and how it filters down, right'?

During the focus group, participants mentioned other factors that also contributed to the inclusion of non-inclusion of the topic. One factor is the attitude/opinion of the faculty member. Responses for sustainability development included things like 'it's super important' and 'I think it's a good idea'. Even with this support, time constraints limit the inclusion of the topic. Some were almost apologetic when stating things like, 'it's become more important, but we're still not really talking all that much about it' and 'I feel badly about it because I think it's important'. Many other comments related to time demonstrated how the lack of time was a limiting factor in the inclusion of the topic. Statements like 'you have to pick and choose what you cover' and 'I didn't cover it. I didn't have time' appeared several times during the conversation. On the other end of the spectrum, one participant adamantly stated, 'If it's not going to be on the CPA exam, the I'm not going to waste my time'. He went on to say, 'I purposefully do not cover sustainability and I tell the students I'm not going to waste your time or my time'. Another supported this idea and said, 'If it was on the certification exams it would get

covered'. Time and opinions were not the only reasons attributed to not covering the topic. Faculty made statements like, 'I don't think it is in the textbook'. Others disagreed until there was some consensus that it is starting to show up in some of the more popular textbooks, but usually as segments of chapters. Even with the availability of the information, one participant expressed concern about covering sustainability topics. 'I'm not sure we have people who can teach it'. One faculty member said it best when she stated, 'that takes time and I just haven't taken the time to educate myself'.

Faculty had many ideas about where sustainability would fit in the curriculum. Some did agree that the accounting curriculum would be the best location. Two participants stated, 'I could see it in managerial accounting' and 'I could see how this would figure in with Auditing'. Since the lack of time to include it in accounting classes came up throughout the discussion, several participants thought it would be a good fit for a management class. One even stated, 'I think we have a sustainability course at our institution…[it] might be a management course'. Another taught a management course that included sustainability topics. Other attendees felt 'part of the business core or [general education] . . . requirement' or 'a business ethics class' would be an appropriate place for it.

To summarize, faculty demonstrated the theme of lack of expertise by admitting they had little understanding of the topic. Some faculty even questioned *how* to include the topic in the curriculum. In addition, various questions related to sustainability reporting, including how to measure the data, showed a need to increase competencies of the material. Faculty interest in the topic appeared to supersede comprehensive coverage of the topic. For the general faculty member, a lack of time to commit to learning about

SD appeared often as a barrier, resulting in the second theme reoccurring in the data. Additional resource allocations on the part of the institution of higher education must precede faculty ability to take the time necessary to educate themselves on sustainability related topics and become proficient enough to include sustainability related subjects in the curriculum.

R6. What level of understanding do students have with regard to sustainability development?

Student self-perception, not formal testing, defined student understanding of sustainability development. Students answered a variety of survey questions intended to determine their attitude towards and knowledge of sustainability development along with terms related to the topic. As with faculty, the first question asked students about their attitude towards SD. Most respondents completed the survey during their junior year and 30 students answered the question. No one indicated it was a waste of time, and most (56.7%) felt 'It is very important-I think it is a good thing'. Four of the participants labeled themselves as *a passionate advocate*.

Next, students examined a list of 12 sustainability related actions and indicated which implied sustainability development to them. Respondents could choose all or none of the options. Detail of student responses displaying the number of responses and the percentage followed in Table 7.

Three students indicated they did not know what sustainability development meant, demonstrating the theme labeled as lack of expertise was present for students as well as faculty. Fortunately, the remaining responses established that this was not the norm for everyone. Many of the options on the list received more than 10 votes.

Table 7

Student Responses to Question about Which Items from the List Implied Sustainable Development

Social progress which recognizes the needs of everyone	5.0%	8
Effective protection of the environment	11.8%	19
Maintaining biodiversity in the local environment	8.7%	14
Developing new technologies to reduce the impact of harmful by-products	9.9%	16
Recycling waste products	13.7%	22
Safe and efficient public transport	8.7%	14
Exploiting natural resources for human benefit while maintaining critical natural capital	5.6%	9
Maintaining equity between generations	7.5%	12
A significant degree of local production and consumption	5.0%	8
Putting the needs of nature before those of humanity	3.7%	6
Respecting ecological limits	11.2%	18
Potential cost savings to consumers in using recycled products	7.5%	12

Choices garnering the highest responses included ‘recycling waste products’ (22 votes), ‘effective protection of the environment’ (19 votes), and ‘respecting ecological limits’ (18 votes). At the other end of the scale, ‘Putting the needs of nature before those of humanity,’ ‘social progress which recognizes the needs of everyone and ‘exploiting natural resources for human benefit while maintaining critical natural capital’ received six, eight, and nine votes, respectively. Student responses support the notion that they value environmental aspects of sustainability more so than social aspects. Choices related to societal needs received less votes than green initiatives.

In addition to the opinion questions, eight of the Likert scale questions, asked students to indicate their agreement or disagreement to various statements about the importance of SD. Labeling the importance of SD to business and the accounting curriculum covered four of the questions. The survey then inquired about their

knowledge of two sustainability related terms and their abilities to define and explain these terms. The list of the questions along with the mean, standard deviation, and variance followed in Table 8.

Questions with the highest averages were the questions about importance. Students felt sustainability was important to the corporate world most, but only slightly more than the importance to the accounting curriculum. They also agreed that the SASB and the triple bottom line were prevalent terms related to SD.

Table 8

Student Responses to Questions about the Importance of Sustainability Development to Business and the Accounting Curriculum

Question	Mean	Std Deviation	Variance	Size
Sustainability development is covered as part of the curriculum in at least one class.	3.08	1.26	1.58	24
Sustainability is an important topic to cover in the accounting curriculum.	3.75	1.13	1.27	24
Sustainability accounting is important in the corporate world.	3.92	0.95	0.91	24
Corporations often report on their environmental and social impact in addition to economic terms.	3.67	0.90	0.81	24
The triple bottom line is becoming more and more prevalent in corporate financial reporting.	3.63	0.81	0.65	24
The Sustainability Accounting Standards Board is an organization in place to help corporations reporting on environmental and social factors.	3.63	0.99	0.98	24
I feel confident in my ability to define sustainability development.	3.33	1.21	1.47	24
If asked to write a one paragraph essay about sustainability development I could do so without consulting outside sources.	3.08	1.38	1.91	24

Although not as prevalent with the students as with the faculty, the theme about lack of expertise appeared in the survey responses applicable to this research question. The last two questions 'I feel confident in my ability to define sustainability development' and 'If asked to write a one paragraph essay about sustainability development I could do so without consulting outside sources' focus on competencies of the subject. In terms of their abilities, students felt more confident in their ability to define sustainability development than they were about writing a paragraph on the subject. The high standard deviation for both questions indicates a wide range in responses. Considering the lack of coverage in the curriculum noted in the faculty survey and focus group, student's perceptions of themselves at near neutral on the scale in terms of knowledge of the concepts was expected.

R7. What level of involvement do students have in developing and implementing sustainability measures?

Student surveys did not specifically ask if students participated in the development of sustainability measures, however two questions tried to determine participation in environmental and community service activities sponsored by their universities. Listed below, the first question provided detail about student participation in environmental cleanup activities.

Question	Mean	Std Deviation	Variance	Size
I participate in activities to clean up or protect the environment sponsored by the institution.	2.88	1.39	1.94	24

Figure 14. Student Responses to Question about Participation in Environmental Cleanup Activities.

Eleven of the respondents disagreed or somewhat disagreed to the question about participating in activities to clean up or protect the environment. Although slightly more (twelve) mentioned they somewhat agreed or agreed with the statement, most only somewhat agreed indicating that participation might not be a priority. One theme noted in the data indicated students found environmental aspects of sustainability more significant than social aspects. Responses to this question support the idea that although important, students were not committed to participating in environmental activities. The second question summarizing responses about student participation in community service activities received a higher average, standard deviation, and variance, as seen below.

Question	Mean	Std Deviation	Variance	Size
I participate in social (community service) activities sponsored by my institution.	3.42	1.26	1.58	24

Figure 15. Student Responses to Question about Participation in Community Service Activities.

More students participated in community service activities than in environmental initiatives. The raw data for this question showed 15 of the respondents somewhat agreed or agreed to the question. Again, most only somewhat agreed indicating participation might not be considered a high priority to the students. At the end of the survey, students answered an open-ended question as a follow-up to the Likert scale questions allowing them the opportunity to add additional comments about any of the survey topics. Although few comments existed, one student mentioned ‘there are a significant amount of service opportunities involving sustainability [at my university]’.

Another survey question simply stated ‘I wish my institution had more sustainability measures in place’. Students overwhelmingly agreed or somewhat agreed to this statement. Twenty of the 24 respondents would like to see their university put more sustainability measures in place. Previous discussion demonstrated university support for sustainability through dedicated web site pages touting measures in place at the institution or the existence of a sustainability office on campus. Student responses indicated university support for SD did not always flow through the organization, a theme noticed often throughout this study. Responses to the open-ended question at the end of the survey also supported the idea that administrative decisions related to sustainability dissipated within the university community. One student even indicated ‘[my university] has the money and resources to adopt a more sustainable approach at learning’. Another student stated ‘I am unaware of most of the school's programs or activities regarding sustainability’. Although these statements do not indicate the universities do not participate in sustainability activities, it does imply that the university may need to take additional steps to communicate with students about the opportunities available on campus.

Conclusion

Student perceptions about sustainability topics came up in more than one group during the faculty focus group sessions. Faculty mentioned repeatedly about how interested students are in the topic of sustainability development. One participant said it best when stating ‘the current generation of college students is interested in sustainability’. One faculty member added, ‘They’re very environmentally aware, very socially aware and that’s important to them.’ Another stated, ‘They want to go work for a

company that has sustainability practice[s]'. Sustainability topics also engage the students more as one faculty mentioned, 'If we discuss any sort of company in class that has sustainable practices, they seem to be more interested'.

Regardless of the time or training difficulties or the dilution of organizational objectives, noted above, most faculty seemed interested and inspired by the future of sustainability reporting. Within the focus group, one faculty mentioned a CFO at a major company referred to sustainability reporting as 'a marketing thing,' indicating the business application to sustainable practices were not always the result of the right intentions. On the other side, attendees speculated about how this initiative could really help with the waste of bags and packaging used when shipping products. These comments supported the notion that the area of sustainability reporting will continue to expand in the future. One participant summarized it best and indicated, 'The accounting field really needs to embrace this voluntary corporate social reporting. It's something that people aren't doing, [and] it should be dealt with'. Another seemed encouraged by the idea that 'The auditing profession could provide that'. Whether referred to as the triple bottom line, corporate social reporting, or any other combination of environmental, social and governance issues, sustainability development expanded over time as businesses have lengthened their financial reports to include non-financial measures. The researcher anticipates the evolution to continue, as 2030 draws closer and reaching the sustainable development goals becomes reality. Chapter Five summarized the findings and presented suggestions to help faculty better incorporate sustainability development topics in the accounting curriculum.

Chapter Five: Conclusion, Discussion, and Recommendations

Introduction

The literature review discussed sustainability evolution in the following:

- Evolution of the reporting frameworks.
- Evolution by expansion of corporate sustainability reporting.
- Evolution of sustainability in the higher education institution; both from incorporating practices into university operations and including appropriate topics in the curriculum.

As the year 2030 draws closer, the Sustainable Development Goals (SDG) will increase in importance for all organizations, from for profit businesses to not for profit organizations to government entities. Eventually regulations may exist, as governments strive to control their commitment to meeting the SDGs. Responsibility for preparing the reports containing both financial and non-financial information will fall upon the accountants. Coverage of sustainability topics in the accounting curriculum is imperative for the profession as evolution continues into the next decade.

This study focused on accounting programs at four-year colleges and universities throughout the state of Missouri, with the purpose of determining if the curriculum included sustainability topics. Originally, three hypotheses and seven research questions made up the study. Since none of the programs had a course specifically titled sustainability accounting, hypothesis testing could not continue as designed. A survey distributed to faculty and students throughout the state provided most of the data for answering the seven research questions. Thirty-two faculty and thirty-four students responded to the survey. Faculty responses came from almost half of the institutions

included in the study population and contained a good mix of participants from large and small colleges and universities. Student responses came primarily from two institutions, one large and one small. Even though faculty responses better represented the population, student data provided some insight as to their interest level and knowledge of the topic, so student data was included in the write-up.

Other data came from a faculty focus group. Accounting faculty throughout the state have an opportunity to attend a conference every year, making the venue a perfect location to gather data for determining details of faculty opinions and level of understanding of nearly any topic. The researcher served as one of the table leaders for the faculty roundtable. Leaders rotated tables every 10 minutes while the participants remained at the same table. This method allowed discussion with all conference attendees to solicit responses to questions designed to expand data collected from the survey; however, it limited the amount of detail collected. The remaining study data consisted of secondary records and information. HEIs must provide numerous data points to the Integrated Postsecondary Education Data System (IPEDS) annually. Numbers documenting full-time equivalent students represented university size for purposes of the study. The remaining information resulted from a review of the terms sustainability, sustainability development, and sustainability accounting on the web sites for each institution in the study population. Summarization of the results of the search allowed the researcher to provide each institution of a score between 1 and 5, with 1 being little to no sustainability information on the site and 5 showing great support of sustainability initiatives by the institution. The next sections outlined discoveries made by the data collected and described in Chapter Four.

Hypotheses

This study intended to analyze three different hypotheses as listed below.

H1. Accounting programs at four-year colleges and universities include sustainability accounting courses in the curriculum at the same rate as U.S. institutions overall.

H2. Larger institutions include a sustainability accounting course in the curriculum at a higher rate than smaller institutions.

H3. Students with a sustainability accounting course offered at their institution perceive themselves to understand sustainability development at a higher rate than students without the option of a sustainability accounting course.

After collecting survey responses from faculty and students, the researcher discovered no colleges and universities in the study population offered a sustainability accounting course to students. Unfortunately, zero positive replies meant hypothesis testing could not continue as planned. Chapter Four explained the limitations preventing the use of inferential statistics to analyze the data. However, the study also included seven research questions, which afforded the researcher ample data to use for future recommendations. The next section summarized the findings from each research question.

Research Questions

R1. In what ways do accounting programs without a specific sustainability accounting course incorporate sustainability topics into the curriculum?

Thirty-eight percent of survey respondents indicated sustainability topics would appear in the accounting curriculum. Participants taught courses from all levels of the curriculum including, but not limited to entry-level financial and managerial accounting,

intermediate-level financial and cost classes, tax accounting, advanced auditing, and CPA review classes. Lectures and cases studies received the most votes as the primary teaching methods listed by participants. Another study found faculty in Europe also liked sharing knowledge using the same pedagogy. Unfortunately, the results of that study demonstrated lectures and case studies were the least effective in developing student competencies (Lozano, et al., 2019). Other, more hands-on experiential approaches afforded students the opportunity to both learn sustainability concepts, and act as agents of change in the future (Gardner, 2017; Lozano, et al., 2017). Action learning and other forms of student led debates or participation received no votes from survey participants, indicating faculty have an opportunity to expand their own knowledge and coverage of the topic. In addition, the focus group discussion indicated that most faculty mention and introduce the topic to students, but omitted detail and practice using the concepts. Faculty with an area of interest tended to go into greater depth, but others do not feel they have the time to devote to learning enough about it to enhance the coverage in their classrooms. Increasing student competencies towards sustainability topics was the goal of education for sustainability. As a result, faculty training on sustainability must increase. Additional knowledge about appropriate topics to cover in the classroom would allow Missouri HEIs to increase coverage of sustainability topics.

R2. What impact does incorporation of sustainability measures at the university level have on the inclusion of sustainability topics in the curriculum?

Eleven survey questions asked of both faculty and students combined with a web site review of all colleges and universities in the study population attempted to answer the degree of importance sustainability was to each institution. Faculty and students were

aware of common environmental practices like recycling, using refillable water bottles, and community services activities. They were less likely to notice solar panels throughout their campuses and few knew detail about the institution's climate commitment or dedication to environmental cleanup.

Just because faculty and students were not aware of university commitments to sustainability activities on campus, does not mean none existed. The rating system developed by the researcher showed eight institutions scored a 4, which meant they had sustainability activities present on campus and offered the topic somewhere in the curriculum. Another eight scored a 5, which meant they displayed evidence of university commitment to sustainability activities. One university in the study population won a climate leadership award and others either belonged to the Association for the Advancement of Sustainability in Higher Education or used either Sustainability Tracking, Assessment, and Rating System or another reporting system to file a sustainability report. In addition, 12 institutions had a section of their websites dedicated to sustainability.

From the self-rating included in the survey 83% of faculty and nearly 57% of students felt sustainability topics were important or *a good thing*. Not as many found themselves as passionate advocates. Past studies demonstrated that to make the world a better place, students must use their knowledge to put sustainable practices into place (Choing, Mohamad, & Aziz, 2017; Gardner, 2017). College campuses can provide excellent resources and act as a project workplace where students learn by action (Thomashow, 2014a). To meet the SDG, steps to encourage more faculty and students to not only find the topic interesting, but also possess the desire to advance to a more

sustainable society must exist. Sustainability for higher education declarations like the Talloires Declaration (the first of its kind) or the President's Climate Leadership Commitment (a U.S. initiative) could support and guide the sustainability efforts at HEIs. Chapter Two covered additional detail about several declarations, charters, or initiatives available for university administrators. If adopted, publicizing the commitment to the university community and allowing students a hands-on approach to action would further their ability to make changes. Not only on campus while attending, but also at their careers in the future.

R3. What level of understanding do faculty have with regard to sustainability development?

R4. What impact does faculty understanding have in determining how accounting programs include sustainability topics in the curriculum?

R5. What impact does faculty understanding have in determining why accounting programs do not include sustainability topics in the curriculum?

Research questions 3-5 encompassed determining how faculty understanding played a role in whether or not sustainability development topics were included in the accounting curriculum. For simplicity, the researcher grouped discussion for the three questions in one section. Those with a high level of understanding more thoroughly incorporate sustainability topics in the curriculum and the hope is they will share their expertise to increase the level of understanding of all accounting faculty. Survey responses determined basic knowledge of faculty understanding and further detail from the faculty focus group provided data needed to address all three questions.

Data from the survey suggested more faculty found sustainable development central to their discipline than to their own teaching schedules. Things like recycling and environmental protection actions garnered the most votes from the list of actions that implied sustainability to the respondents. Eighty-three percent of survey participants found sustainability a good thing and 11 faculty members planned to include basic sustainability concepts like reporting and cost reduction topics in their classrooms in the coming year. Respondents highlighted lectures and case studies as the primary methods utilized. This mirrors other research showing ways to include sustainability topics in classes like managerial accounting, intermediate level financial accounting, and auditing classes (Creel & Paz, 2018).

During the focus group questions arose from participants asking for clarification on many sustainability related topics like reporting, how to include the information in the curriculum, how to measure, and if the information existed in teaching materials like textbooks. In addition, many statements indicated a lack of knowledge about the topic. Some faculty held the opinion that covering the topic was a waste of time while others expressed near remorse for not having enough time to cover it in more detail. This lack of time was a common theme expressed in the comments. As a result, participants shared ideas about where the topic would fit in the already overcrowded curriculum.

Faculty understanding played a large role in determining whether they included the topic in their accounting classrooms or not. They themselves need a level of understanding and support of the topic before adequately sharing its importance to the students. Those with a higher level of personal interest tended to cover the topic in more detail, compared to others. For the rest, a lack of commitment to the topic from the

participants resulted from time constraints and a shortage of relevant resources. Specific time constraints arose from lack of time to increase expertise in the subject matter and time necessary to make changes to their courses. Resource difficulties indicated proper textbooks and/or inspiring examples were lacking. Some also expressed confusion as to what should be included related to sustainable development. Faculty could increase their level of understanding and expertise by taking part in training through continuing education courses, which would combat each of these challenging roadblocks. Properly designed continuing education could also provide classroom resources allowing a seamless transition into the coursework. Finally, topics shared in the continuing education classes could eliminate confusion about what to cover.

In summary, survey and focus group responses demonstrated many participants found the topic important; however, responses seemed to indicate they were important, but *not to me-someone else should cover them*. Development of the proper resources by experts with a personal interest in environmental, economic, or social causes could alter the perceptions allowing all faculty to embrace sustainability topics. If more faculty self-assessed as a passionate advocate, dedicating the time necessary to add information to the accounting curriculum would become more of a priority. Although faculty cannot do it alone. The HEIs where they teach must help. At numerous times throughout this dissertation, cited research mentioned the necessity of a holistic approach to sustainable development with inclusion of the topic in the curriculum as only part of the picture. Proper resource allocation at the university level would demonstrate the importance of sustainability efforts to the institution and provide faculty with the opportunity to incorporate the topics.

R6. What level of understanding do students have with regard to sustainability development?

Student surveys provided the data to answer this question. Self-rating of attitude towards sustainable development began the process of determining understanding. Nearly 57% of students labeled themselves as finding the topic important. Other questions asked for detail about which activities implied sustainability development and a Likert scale allowed students to rate the importance of the topic to the accounting curriculum. Just like Cotton et al. (2007), where faculty "indicated a possible predisposition towards environmental issues compared with social and economic issues" (p. 592), the students listed activities related to recycling and other environmental concerns the highest in their responses. Likert scale responses proved that students understand SD terms and the importance of the Sustainability Accounting Standards Board (SASB) and the triple bottom line to the corporate world. They also noted the importance of covering the sustainability topics in the accounting curriculum. Since many of the students did not have significant coverage of these topics in their accounting classes, less felt confident about their ability to define sustainability development or to write a paragraph explaining the term.

Faculty perceived student interest in topics related to sustainability as high, but felt they lack the expertise to know which topics were most valuable to the curriculum. Prior to changing student competencies, the higher education institution must prioritize resources allowing faulty to increase and develop their skills. With proper resources allocated for training, faculty could further advance their own level of understanding, affording them the opportunity to incorporate relevant topics in the curriculum. With

additional knowledge, students could not only define and write paragraphs about SD, but also feel empowered to act sustainably and make changes when employed after graduation.

R7. What level of involvement do students have in developing and implementing sustainability measures?

Students answered two questions related to their involvement in environmental and community service events sponsored by their institutions. Responses indicated activities involving community service were more popular than events with an environmental focus although neither type of activity appeared to be a high priority to the participants. Overwhelmingly though, the students showed interest in having their HEIs sponsor more sustainability related measures. Faculty also noticed a higher student interest in class discussions and projects if they focused on companies utilizing a sustainability focus.

Student attitude mimicked faculty attitude noted above which stressed the importance of sustainability to the institution; however, it lacked commitment at the individual level. “Modeling good practice is a more accessible and appropriate way of engaging with [education for sustainable development (ESD)]” (Cotton et al., 2007, p. 590). Signing a declaration, regularly distributing a sustainability report, and properly allocating resources to show support for the HEIs commitment to sustainability would allow faculty to further the institution’s pledge to education for sustainability development. Faculty modeling effective behaviors would in turn allow students to garner additional interest and potentially develop into agents of change in their future careers.

Recommendations for Practice

Many past researchers spouted the importance of a holistic approach to SD. For higher education, that means practicing sustainable behaviors throughout the organization as well as covering sustainability topics within the curriculum. Lozano et al. (2015) found that not using a holistic approach could indicate a lack of commitment on the part of the institution. Fihlo et al. (2018) concluded a holistic approach superseded proper resource allocation. Even the toolkits and frameworks developed to assist HEIs with implementation stressed the importance of a holistic approach (Tilbury & Ryan, 2010; UNEP, 2014).

A rating system developed by the researched helped categorize HEIs in the state by their level of commitment to SD based solely on appearance of the terms sustainability, sustainability development, and sustainability accounting on their web sites. Sixteen of the 31 institutions in the study scored either a 4 or 5 using the rating system, which appeared to demonstrate a more holistic approach. To earn that score sustainability topics were contained within aspects of the curriculum and the organization as a whole. However, to earn the score, existence of each characteristic only had to occur once. Further analysis of the data disclosed that each of the institutions filing a sustainability report, filed it only once, and many filed it more than five years ago. In addition, presence of a specific sustainability page on the web site of the HEI influenced the score although the researcher did not perform detailed analysis of page effectiveness. So far, discussion focused on institutions scoring high in the rating, but 13 institutions in the study scored a 1 or 2, indicating no coverage of sustainability topics in the curriculum could be seen on the web site review. None of the faculty survey respondents indicated

significant inclusion of sustainability topics in the curriculum either, indicating the HEIs in the study failed to prioritize SD or their seemingly holistic approach disseminated between administrative decisions and coverage of the topic in the accounting curriculum.

This study demonstrated student awareness of the importance of environmental and social issues. Adams (2013) also found student interest in SD. Without proper resources and guidance, it would not be possible for students to initiate change to a more sustainable university. As a result, the change must start with commitment from top administrators then filter throughout the institution.

For institutions with a desire to move to a more sustainable culture, the researcher recommended a five-step process. Each step was bulleted below and detailed explanations of each step followed.

- Sign a declaration, charter, or initiative showing support for SD.
- Incorporate sustainability language into the mission, vision, and/or strategic plan of the institution.
- Allocate resources in accordance with the plan.
- Train faculty as well as others throughout the organization.
- Incorporate sustainability topics into the curriculum.

The first step to demonstrating commitment to SD involved signing one of the numerous declarations discovered in the research or showing commitment to some other sustainability initiative. Each declaration highlighted in Chapter Two demonstrated commitment to various aspects of SD. Previous researchers cited the original document, the Talloires Declaration, most often. Other global declarations existed, but the Presidents' Climate Leadership Commitment originated in the U.S. with the goal of

carbon neutrality (Dyer & Dyer, 2017). Formal signing of a declaration would not be necessary if a university opted to follow an initiative like the United Nations'Agenda 2030 which developed the SDG (Busco et al., 2018). With so many past declarations, charters, or initiatives in place, university administrators could commit to one with similar philosophies and beliefs to what they use to manage their HEIs.

Once administration established commitment to SD, appropriate language added to the strategic plan or mission of the institution would solidify the priority. Examples of for-profit businesses and HEIs incorporating sustainably measures into the mission of the organization occurred throughout this dissertation. Companies like Patagonia and Unilever fully implemented sustainable methods in the way they treat employees and suppliers. Both companies have strong customer loyalty and increased profits because of their efforts (Choinard, 2012; Unilever, 2018). Even the toolkit developed to assist Catholic HEIs with implementation outlined the importance of weaving sustainability ideas into the fabric of the organization (DiLeo, 2012). Incorporating sustainability related terms within the mission, vision, or strategic plan of an organization also encouraged proper resource allocation.

Step three of the recommendations asked administrators to allocate resources in accordance with the plan. Ideally, topics stressed in the strategic plan demonstrate the priorities of the institution and budget funding follows. Administrators must avoid a short-term focus (labeled as short-termism) and concentrate on the long-term when making decisions in this area. Many initiatives may save the institution money in the end, but could have high up-front costs. Solar panels, for example require initial capital outlay, but will result in lower energy costs in the future. Some initiatives, like implementing a

policy to turn of lights at night or increasing the set point of the air conditioning in the summer could lower costs immediately and these savings could fund other projects. Government grants exist in the U.S., so for those institutions finding it difficult to allocate the necessary resources, grant funding may assist. For a fully holistic approach to SD, administrators must also allocate proper resources for faculty training and development.

The fourth step of the process develops faculty competencies through training. In the focus group faculty expressed concern over their lack of time to devote to educating themselves on sustainability topics. Accounting faculty with a CPA designation must complete 40 hours of continuing professional education (CPE) each year. Their HEIs could sponsor CPE covering sustainability topics, allowing faculty to improve their skills while also meeting the expectations of the profession. The literature review documented that training takes many resources. For effective training, Eshete et al. (2019) mentioned institutions must determine where the faculty are in their opinions and attitudes on the topic before working to add the appropriate training methods.

Once training increases faculty knowledge and skills, incorporation of the topics in the curriculum becomes the final step. Accounting students must possess reporting skills to build corporate sustainability reports following the SASB or Global Reporting Initiative (GRI) frameworks making these topics a priority in the coursework. Past research also found a cross-curricular approach most effective (Vaughter et al., 2013), so the researcher also recommends following a multidisciplinary approach. Utilizing more hands-on or action-based activities have also proved more effective than traditional lectures and case studies on the topic (Lozano et al., 2019). These methods will increase

student proficiencies in SD and allow them to develop their capabilities to influence change.

Implementing these five steps require dedication from the entire HEI and for increased effectiveness could encompass the surrounding community. Administrators may have their work cut out for them depending on the university culture at the time they initiate change. However, since all 193-member nations of the United Nations agreed to the SDGs, the researcher anticipates government regulations to increase as the year 2030 draws closer. Instead of waiting for the regulations and reacting to the requirements, taking a proactive approach and incorporating SD now would give institutions a lead in the sustainability movement. The recommendations that follow resulted from analysis of the seven research questions included in the study.

Recommendations for Future Studies

Future studies could further enhance understanding of SD by examining different demographic areas or going into more detail about any of the three study populations included in this study. The researcher focused on colleges and universities in the state of Missouri. It would be interesting to see if the same study performed in another demographic area would have the same or different results. Expansion of the web site review to include additional terms may also lead to further understanding of the inclusion of sustainability topics at the various institutions. Only sustainability, sustainability development, and sustainability accounting contributed to the findings of this study. Searching other terms like triple bottom line, environmental protection, community service, or one of the numerous terms under the umbrella of sustainability development

could find results that are more thorough and influence the scores assigned using the rating system developed by the researcher.

Mean, standard deviation, and variance for the survey questions displayed throughout the study resulted from a small number of faculty and students responding to the instrument. Using an intervention designed to increase the number of participants could alter the results. Surveys attached to an email and distributed by the liaison between faculty and students and the MOCPA received little attention. Using personal requests and social media resulted in additional responses. In a society bombarded with email and surveys, future researchers must accommodate for the information overload experienced by the study population and reach out in a way to grab their attention and entice their participation.

This study argued that to meet the needs of corporate employers, colleges and universities must incorporate sustainably topics into the accounting curriculum. The researcher viewed employers as stakeholders in higher education since they hire the students upon graduation. Other research cited supported this idea; however, additional research could target specific knowledge employers expect from college graduates. For example, surveying or interviewing specific corporate partners where graduates find employment could determine the business need. Findings from the research would then assist faculty, helping to pinpoint the topics necessary to cover so students receive a full understanding of sustainability topics. Development of additional pedagogy using information derived from corporate partners could also result in greater familiarity and awareness for students, insuring they prepared for their futures during their years in higher education.

Conclusion

Various stakeholders of the HEI had opinions related to SD. Faculty felt sustainability topics were important, but lacked the time necessary to educate themselves thoroughly, limiting their ability to incorporate the ideas into the curriculum. Accounting students found sustainability topics interesting and wished their colleges and universities would do more to expand their knowledge and demonstrate their commitment to the initiatives. Corporate employers are increasing their use of non-financial reporting through corporate sustainability reports and other initiatives. As a result, it is imperative that accounting educators find a way to expand the curriculum to encompass sustainability development. The commitment must begin at the institution level for a holistic approach to exist.

The researcher outlined a five-step approach intended to incorporate several ideas discovered in past literature and from this dissertation study. Each step intended to incorporate characteristics most often observed throughout the process including holistic, multidisciplinary, community-based, and action-oriented, to name a few. Each of these ideas brings a unique aspect to integration of sustainability development throughout the university environment and within the curriculum. Many researchers call for universities to lead the change to a more sustainable society. Accounting students must know how to prepare sustainability reports and there is a call for their higher education institutions to provide the proper education and training to make it happen. If the university starts with changing the *tone at the top* related to SD, then uses the change in priority to modify the mission of the organization, allocation of resources to include training and incorporation

into the curriculum follow. Not an easy task, but necessary for students to possess the skills needed to act as agents of change and have a positive influence on the future.

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Appendix: Permission Letter from Dr. Cotton

Inquiry about Higher Education Research Instrument

Debby Cotton <D.Cotton@plymouth.ac.uk>
Wed 3/6/2019 2:38 PM
To: Brickler-Ulrich, Kimberly <KBrickler-Ulrich@lindenwood.edu>; saman.khan@wmich.edu <saman.khan@wmich.edu>

1 attachments (185 KB)
ESD CETL Survey DRAFT.doc;

Hi both,

I am writing this combined email in case you wish to make contact with each other since you have both recently requested a copy of the survey (attached) that underpinned our 2007 paper on Sustainability in Higher Education. I do apologise for the delay - it has been a long time since I have been asked about this one and it took a bit of tracking down! The document attached is marked draft (and it has some quite odd formatting) but I'm pretty sure that these were the final questions we used. Please bear in mind that there was nothing high powered about this survey - it was intended as rough and ready understanding of our faculty's views on sustainability as we were just at the start of a very big project and wanted to get a baseline. However, the paper just seemed to strike a chord with people and it is one of my most highly cited publications! But I suggest you take the survey for what it is - it has not been empirically tested for validity etc.

If you do use it in your research, clearly I would like you to cite it appropriately - and the paper in which it is used - but I'd also be interested to hear about your findings, so do please let me know how you get on with your research.

All best wishes,
Debby

Professor Debby Cotton
Head of Teaching and Learning
University of Plymouth
Tel: 01752 587614
https://hes32-ctp.trendmicro.com:443/wis/clicktime/v1/query?url=http%3a%2f%2fwww.plymouth.ac.uk%2fstaff%2fdcotton&umid=145ccab4-bc47-41bd-9a0f-58366e6736ce&auth=bc7ac43e330fa629f0cfb11786c85e83c10d06b8-9192331110cf007b17fc8bc6cc495745664a8a7e
Follow me on Twitter: @ProfDcotton

Appendix: Communications with MOCPA Faculty/Student Liaison

Request and Agreement to Assist

From: Brickler-Ulrich, Kimberly <KBrickler-Ulrich@lindenwood.edu>
Sent: Saturday, January 26, 2019 3:41 PM
To: Liz Schaetzel <lschaetzel@mocpa.org>
Subject: Request related to faculty research

Hi Liz-

I am reaching out to you as the liaison between accounting educators and the MOCPA. As an accounting professor at Lindenwood University and also a member of the MOCPA, I am currently beginning the dissertation writing process as partial completion of my doctorate degree in education. My topic pertains to sustainability in the accounting curriculum. Through my research I have discovered that accounting programs at few universities cover sustainability in much depth and even less have a course dedicated to the topic. I would like to find out if Missouri 4-year colleges and universities follow the same pattern as other schools throughout the U.S. and even the world.

In order to answer my research questions I need to reach out to faculty teaching at Missouri institutions as well as the students attending those colleges and universities. Since many faculty and students take advantage of the complementary membership offered by the MOCPA, this population would be an excellent data source. I understand that you cannot provide any personal information about the members, but was hoping I could work with someone to send a message to the members requesting their participation. I would be happy to meet with you or someone else at the organization to discuss the project and research survey in more detail. In exchange for the assistance, I would also be willing to give a presentation about sustainability and discuss my findings at the Missouri Association of Accounting Educators conference at Tan-Tar-A, either this year or next November.

Thank you for your time and consideration of my request. I look forward to hearing from you.

Best regards,

Kim Ulrich
Associate Professor of Accounting
Lindenwood University

RE: Request related to faculty research

Liz Schaetzel
Thu 1/31/2019 2:54 PM
To: Brickler-Ulrich, Kimberly <KBrickler-Ulrich@lindenwood.edu>
Hi Kim,

Sorry for the delay in responding. I'm happy to include a blurb in either the student or educator updates with a link that if anyone is interested or willing to participate to either click on a link to the questions. The student updates are sent on Wednesdays and the Educator updates on Friday.

Please let me know your thoughts.

Liz

Request sent to students

From: Liz Schaetzel <lschaetzel@mocpa.org>
Sent: Wednesday, October 23, 2019 3:00 PM
To: Liz Schaetzel <lschaetzel@mocpa.org>
Subject: Happy Wednesday from MOCPA! 10-23-19

If you're interested in assisting with this voluntary study, please use the survey link below. If you prefer you may also copy and paste the survey URL in to your browser: https://lindenwood.az1.qualtrics.com/jfe/form/SV_dhWtRPBWPtIjk9f

Feel free to contact me if you have any questions, you can reach me at lschaetzel@mocpa.org or 314-392-5834.

Have a great day!

Liz

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