

Sustainability Attitudes of College Students as Future Business Leaders

by

Garrett Hinton

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Author's Name

Greenville, NC

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Approved by:

Dr. Jon Kirchoff

Department of Marketing and Supply Chain Management

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Abstract

Limited time and finite resources are motivating firms to make significant changes in policy and business practices to maintain profits, sustain the environment, and further a companies' strategic goals. Managers now value sustainability information and do not discard sustainability activities as being a burden for a firm's financial viability. This is a step in the right direction, but the current CEOs and leaders of today's business world will only drive businesses for so long and will eventually hand to reins to a new generation of business leaders. The future of business lies with college students, the soon-to-be future employees in the business world.

Sustainability has become an almost ubiquitous term at colleges and universities across the United States and world. Professors and managers can stress the importance of sustainable business practices to their students and employees respectively, but are they listening and comprehending? Several recent studies on business education indicate that including sustainability as a topic in the curriculum of universities and business schools is becoming a trend. Introducing a select few students is just the first step though. To witness real change, sustainability must become a focus across all curriculums. This is just the first piece to our two-pronged question. Whether students are conceptualizing sustainability remains to be seen.

During the Spring, 2018 semester, an electronic survey will be distributed to undergrads in classrooms through Qualtrics Solutions. Survey participants undergrad students currently studying supply chain management at East Carolina University. These are students who have been introduced to the concept of sustainability. We will be testing to see what their attitudes and behaviors towards the concept are, and if there is any effect on their employment choices later in life.

Introduction

In our ever growing and changing society, businesses and their operations need to keep up with current trends. Not long ago, most managers regarded sustainability issues merely as a cost factor outweighing any potential benefits (Hahn and Reimsbach, 2014). Sustainable business practices are becoming more popular through a multitude of factors including, but not limited to, social, political, regulatory and competitive pressures. Furthermore, a long-term approach to business allows for and even encourages “environmental goods and services to have value on the balance sheets” and can be regarded as “short-term pain for long-term gain” (Martin, 2011, p. 21). This means that businesses are now moving in a direction to sacrifice upfront, short-term costs because they can see the potential of long-term benefits of sustainable practices. With regards to sustainability working in parallel with profit, researchers argue that “generating ecologically sustainable outcomes can therefore be regarded as a key component of organizational effectiveness, just as are profitability and employee satisfaction” (Swain, 2014 pg. 465). Therefore, sustainability can be a key driver of business, similar to profit, it just takes expanding one’s vision.

Limited time and finite resources are motivating firms to make significant changes in policy and business practices to maintain profits, sustain the environment, and further a companies’ strategic goals. Managers now value sustainability information and do not discard sustainability activities as being a burden for a firm's financial viability (Hahn and Reimsbach, 2014). This is a step in the right direction, but the current CEOs and leaders of today’s business world will only drive businesses for so long and will eventually hand to reins to a new generation of business leaders. The future of business lies with college students, the soon-to-be future employees in the business world. To address these evolving needs, sustainability is

becoming more prevalent in business education to increase student awareness of corporate ethical and sustainability concerns, as well as to train future leaders, managers, and employees to make ethical decisions (Swain, 2014).

Sustainability is a key issue for organizations in the twenty-first century as they increasingly acknowledge that their policies and practices have social and/or environmental consequences. Accordingly, many companies are implementing elements of sustainability into their business practices (Stubbs and Cocklin, 2008). This is seen by many as a positive sign, but skeptics remain. Business policy and strategy is instituted from the top-down, beginning with upper level management and filtering down to entry level positions. While upper level management may understand the importance of sustainability, most entry level workers do not. Many entry level jobs are now being filled by college students, who themselves still do not have a complete understanding of what sustainability is and what it means in practice. In a 2002 study, students' were required to give open-ended responses regarding their understanding of sustainability (Carew and Mitchell, 2002). Faculty at the institution understood the need for comprehension, and made it a requirement to graduate from the university. The authors voiced their concern that even after having coursework that explicitly covered the topic of sustainability, responses from 65% of the students were "not even ... close to the ideal of an expert-like understanding of sustainability" (Perault and Clark, 2017, p.195). The study shows a need for a call to action. This lingering incomprehension for a basic definition of sustainability makes it seem like an up-hill challenge to getting students and managers alike all on the same page in the mission to introduce sustainable practices into the business world. Once students and managers alike comprehend sustainability then can one potentially see a forward progression towards reshaping business practices and policies.

If a universal understanding of the importance of sustainability is achieved by management and students alike, there is the potential for a positive change to sweep the industries driving economies. Sustainability is involved with in all aspects of everyday life “which could deal with long-term financial and enrolment issues as well as social and economic aspects (Martin, 2011, p. 21)”. Sustainability as previously stated, is so broad and abstract that the borders for what all it encompasses remains a mystery. There is a clear an evident need for further research into this topic. I believe an area that serves as a good starting point is improving research in the expansion of current student knowledge and application of sustainable principles. Sustainability can create positive change, therefore a push towards this increasing understanding can prove very beneficial in the long run.

Purpose

Sustainability has become an almost ubiquitous term at colleges and universities across the United States and world. (Perault p.194) Professors and managers can stress the importance of sustainable business practices to their students and employees respectively, but are they listening and comprehending? Several recent studies on business education indicate that including sustainability as a topic in the curriculum of universities and business schools is becoming a trend (Hahn p.55). This study notes that increased resources have been allocated towards the comprehension of sustainability, which is a positive sign and is beginning to set a precedent for students. Introducing a select few students is just the first step though. To witness real change, sustainability must become a focus across all curriculums. It has been reported that more universities and businesses schools now offer elective courses on sustainability-related issues, and the call to holistically integrate such topics are increasing (Hahn p.55). This expansion of sustainability outside of business curriculums can be seen as the next step in

creating a wholesome understating for students of all majors. It is evident that the need for exposure on sustainability has been prompted a restructuring of curriculum across universities nationwide. This is just the first piece to our two-pronged question. Whether students are conceptualizing sustainability remains to be seen.

There is no universal definition to what sustainability is, so students need to think critically and thoroughly analyze sustainable issues, rather than memorize definitions as they often do. According to one study, sustainability is defined as an approach or process of community-based thinking that indicates we need to integrate environmental, social and economic issues in a long-/term perspective, while remaining open to fundamental differences about the way that is to be accomplished and even the ultimate purposes involved (Martin, 2011 p.12). Academics have described sustainability by “to carry on indefinitely without exhausting some aspect making it impossible to do so” and others say one’s definition of sustainability is tailored to one’s role or position (Martin, 2011 p.13) A search of the literature finds countless conceptualizations regarding what sustainability is, as well as repeated frustration surrounding the inability to find common ground on what an operational definition of sustainability should encompass (Perault p.200). As stated above there is no concrete definition, but rather a plethora of descriptions as to what sustainability encompasses. The main concern though, is student comprehension. In 2002, 65% percent of graduates were unable to give a suitable definition of sustainability (Carew and Mitchel 2002). Since 2002, has comprehension improved? Stayed the same? Or Regressed? In 2015 a study with a similar design to Carew and Mitchell’s was conducted. Researchers were curious to see if students had a student comprehension of sustainability had increased and carried into the workplace, were the concepts learned applied? “There is some evidence indicating that a sustainability orientation may not be reflected in actual

behaviors once students enter the workplace. This area is under researched and requires further investigation (Eagle, 2015, p. 651).” More than a decade later and the research on student comprehension has still yet to progress far enough to see whether understanding and application of sustainability has been developed in students.

In this study, we have chosen to focus on Environmental sustainability. Sustainability being such a broad topic, we have decided to narrow our scope of emphasis to one specific area of sustainability to link student comprehension to a frequently discussed topic structured toward their curriculum. Today, some students, employees, and managers still dismiss its importance and legitimacy (Swain 2014 pg. 466) while others view it as a necessary implementation. It is important for students to understand the worldviews that underlie different interpretations of sustainability in the context of business, to avoid this educational disconnect (Stubbs p. 207) It is these varying opinions on whether sustainability is an issue worth pursuing, is where I believe the disconnect with students is occurring. Professors and workplace leaders can push this concept of sustainability but if students do not understand or fail to realize its importance, then these organizational shifts may have been in vain.

The research conducted in the study looks to provide some insight as to where comprehension levels may be at today, and how students view sustainability in the workplace as necessary practice or just desirable. We are looking to see if the information taught about sustainable practices in the classroom transfer into any college student’s personal values. We are cautiously optimistic that business students incorporate sustainability information in their decision making (Hahn. P62).

- How does sustainability transfer into students' decision-making process?
- Do students have a preference towards companies that implement sustainable practices as opposed to companies that do not?
- Do students actively look at problems while working towards sustainably produced solutions?
- Do students believe that sustainably geared problem solving is an asset to companies?

These questions underlie the general focus of the research as they will be the very decisions that shape business in the future. We will develop hypotheses and a model which will help address our research questions.

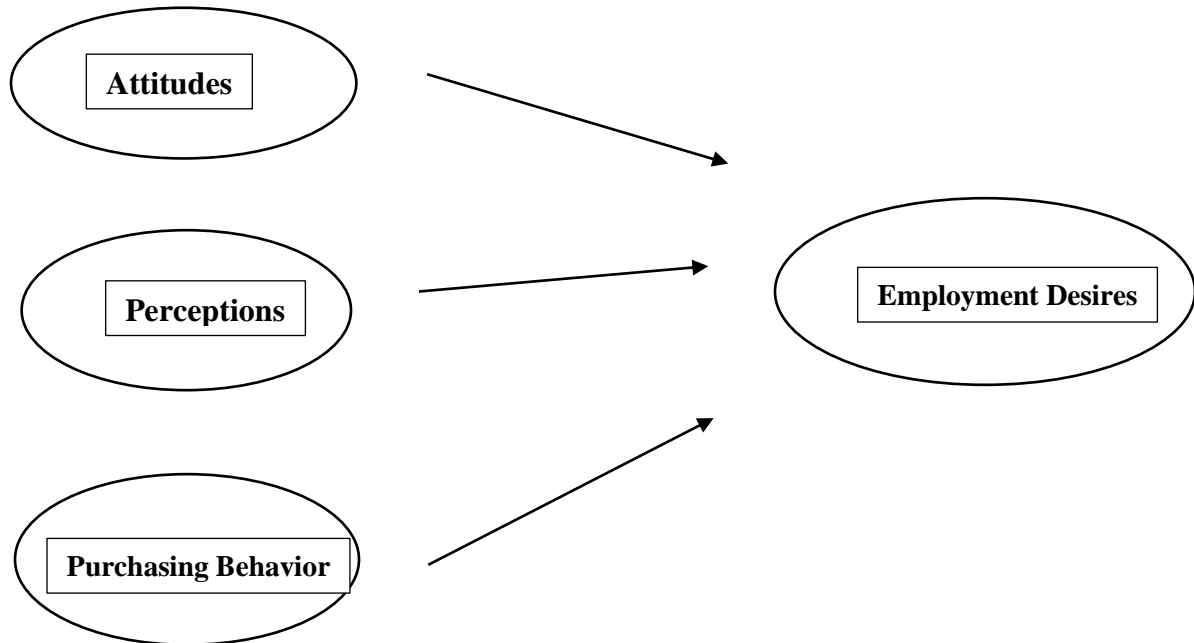
Hypothesis and Model Development

Included in our survey we have questions that cover four variables. The questions are asked in an objective manner to get an accurate and unbiased response out of participants. We are researching to see if there is a correlation between our variables. The variables we are researching are as follows

- 1. Students' Attitudes Toward Sustainability**
- 2. Students' Perception of Businesses and Sustainability**
- 3. Students' Purchasing Behavior and Attitudes**
- 4. Students' Perception of how Employers Adopt Sustainable Practices**

We hypothesize that there is a strong connection between the first three variables and our final variable. If a student reacts positively/agrees with the statements and questions in the first three variables, then their answers to the fourth variable shall reflect in agreement or in a positive manner. The same would be true with the opposite, if students disagree/ react negatively to the

first three variables then their answers to the fourth variable questions shall be the same respectively.



H₁. Students' Attitude Toward Sustainability's effect on their life is directly and positively related to their Employment Desires.

Currently, students at one American university are being encouraged to take a critical approach to current and future business practices informed with a better understanding of sustainability and its application as this is the direction that employers and businesses are trending (Eagle, 2015, p. 651). In this paper students are advised tackle business practices with a focus on sustainability as this is what business are looking for. This concentrated effort toward sustainability is only possible if, students are familiar with sustainability and can accurately conceptualize it.

We believe that through the questions posed by variable one, there will be an evident positive correlation between Student's Familiarity with sustainability and the way they view Employers Adoption of sustainable practices.

H₂ Students perceptions of Businesses and sustainability is directly and positively related to their Employment Desires.

According to "The Journal of Business Strategy," businesses are looking to use strategic proactivity to move their businesses down the path of sustainability to potentially create a competitive advantage, try to position themselves at the forefront of the charge towards sustainability (Perrott, 2014 p. 30). Businesses believe this innovation will allow them an advantage over its competitors to attract high level talent and become an employer of choice (Perrott, 2014 p. 30). Employees with a concrete understanding and application of sustainability are coveted and seen as highly competent. The business industry is already discussing how businesses are adapting sustainable practices to be an "employer of choice." Students entering the workforce with a solid foundation of sustainability are likely to be valuable assets to these businesses.

We believe that through the questions posed by variable two, there will be an evident positive correlation between student perception of current Business Adaptation of sustainable practices and the way they view Employers Adoption of sustainable practices.

H₃ Student purchasing behaviors is directly and positively related to their Employment Desires.

It is common practice at career fairs for students and recruits to converse openly. A main topic of discussion during these informal interviews is how recruiters understand sustainability and perceive their organization's engagement and resulting expectations for new hires

(Klingenberg 2015 p. 987). Career fairs are a nationwide tool for businesses to scout future employees, so this is not just a one-time instance. This is an almost weekly occurrence of the search for sustainably focused students. Students who have this knowledge are highly suited for the new sustainable business environment, which is why the search by recruiters and employers is nationwide. Sustainable is transitioning from an abstract concept to a vital component of companies' vision, and is why those students who can contribute are in demand.

We believe that through the questions posed by variable three, there will be an evident and positive correlation between Student Implementation of sustainable practices and the way they view Employer Adoption of sustainable practices.

Methodology

During the Spring, 2018 semester, an electronic survey will be distributed to undergrads in classrooms through Qualtrics Solutions. This will require Institutional Review Board (IRB) approval; therefore, an IRB request will be completed and submitted by Spring 2018. After all the results, have been gathered and reviewed, my mentor, Professor Kirchoff, and I, will analyze the responses using SPSS and structural equation modeling (AMOS). We will analyze the data for any evident trends in the perception of the importance of sustainability in mind when searching for potential employers as well as is it a value of these students when making decisions. The questions below are samples of model questions that will be assessed on a 1 to 7 Likert scale (from 1 = strongly agree to 7 = strongly disagree) (Valdez et. Al., 2014). The following Variables will be tested through the questions provided in each section.

Attitudes

- **I can contribute to a sustainable future.**
- **I see opportunities to apply sustainability to my everyday life**
- **I have the knowledge to understand most sustainable issues.**
- **I can solve problems with a focus on sustainability**

Perceptions

- **Businesses operate with sustainability in mind.**
- **Businesses that operate sustainably can be profitable.**
- **Sustainable businesses practices can reduce costs.**
- **Sustainable business practices will become a standard.**

Student Purchasing Behaviors

- **I shop for brands that I know are sustainable.**
- **I shop for sustainable brands, even if they cost more than other brands.**
- **Sustainability is an important consideration in my shopping decisions.**

Student Employment Desires

- **I want to work for a company that prioritizes sustainability.**
- **Businesses that value sustainability are attractive to work for**
- **Organizations that operate sustainably give me the best chance to make a positive impact on the environment.**

Results and Discussion

The survey was distributed out to students at the East Carolina College of Business, in the spring semester of 2018. In total there was 200 potential respondents. Of the 200 potential respondents, there was 168 survey respondents, with 164 responses that were usable. Our survey had a response rate of approximately 84%. For each variable we measured the Cronbach's Alpha of each variable to measure its reliability. Overall, all 4 variables had relatively high Cronbach's Alpha, except for the "Perceptions" variable. These numbers are available for reference in the appendix, Table A. Next, we ran a "Rotated Component Matrix" to see how well the question were grouped together. The data shows that overall, we had many scores over .700 which means they were strongly held together and grouped. This data is available in the appendix in Table B.

As for the results of the survey variables themselves, we analyzed the descriptive statistics for each question. This data is available in the appendix in Tables C, D, E, and F. The mean of the responses for the attitude questions was 2.35. This suggests that on average of the students who were surveyed means they moderately agreed with the attitudes stated in the survey about sustainability. The mean of the responses for the perception questions was 2.39. This suggests that on average of the students who were surveyed means they moderately agreed with the perceptions stated in the survey about businesses and sustainability. The mean of the responses for the Purchasing Behavior questions was 3.89. The data from this variable result that students were neither likely nor unlikely to shop for sustainably sourced products, or shopped with sustainability of products as a deciding factor in their purchase. The mean for the responses of the Employment desire questions was 2.61. This data suggest that students were somewhere between “moderately likely” and slightly likely” to want to work for a company whose driving value is that of sustainability and corporate responsibility. This data had some interesting results.

Careful analysis of the data led us to three conclusions. The attitudes hypothesis was inversely supported with a p-value of .05. The perceptions hypothesis was supported with a p-value of .05. As well as the Purchasing behaviors hypothesis was supported with a value of .05. Overall all three of our initial hypothesis were supported and found significant with the attitudes hypothesis being the only one inversely supported. These results can be found in the appendix in Table G.

According to the data students who responded to the attitude questions positively, responded to the employment desires negatively. This means, students who had a strong foundation and knowledge of sustainability did not want to work for companies who prioritized sustainability. Next, we found that students who positive perceptions of companies who operated

sustainably, responded positively to the employment desires. This means, if students believed that sustainability is a positive force, and one day may become an industry standard, then they had a strong desire to go and work for companies who focused on sustainability. The third and final variable showed us that students who responded positive to the purchasing behavior questions, also responded positive to the employment desires.

We were not very surprised by the positive correlation yielded by the data between the perceptions and purchasing behavior variables, and the employment desires variable. It is logical to suggest that students who believed sustainability to be a positive driving force, profitable, and one day may become the industry standard, would have a stronger desire to work for sustainable companies than those who did not. As well as with the respondents of the purchasing behaviors questions. It is no surprise that the students who shopped sustainably also had a desire to work for sustainable companies. These students showed that they make purchasing decisions based off of their values of sustainability, so it is not unreasonable to believe they would make employment decisions based off of that same set of values.

We found the attitudes hypothesis to be very interesting for multiple reasons. We thought that students who had a strong foundation of sustainability and their benefits would want to work for companies who prioritize sustainability because they know the long-term benefits, and understand its importance. According to the data though, these students had no desire to work for sustainable companies, and would rather work for companies who are not motivated by sustainability and corporate responsibility. As for why this was the result we found we carefully analyzed our sample. Our sample consisted of strictly East Carolina Students in the College of Business. In Greenville, North Carolina, we believe that there is a certain political and social climate that students have accepted as their own. This being one of business as usual. The overall

feeling of residents in Greenville can be classified as business is fine, there is no need to implement any new costly programs to save the environment when things have been running fine for so many years. We believe that this attitude could be one of the attitudes hypothesis was inversely supported. A second reasoning, we believe is that the demographics of our respondents could be cause for the inverse hypothesis. Greenville, N.C. is not a very liberal area, and leans more on the conservative side. We believe that if we were to take this same survey and distribute it in a more liberal area, such as Chapel Hill, N.C. the results from that survey could reflect differently, that the results from our survey. Chapel Hill is a much more liberal and less conservative area, so the respondents there could be more accepting of sustainable companies and those students who have a strong foundation of sustainability, would have a greater desire to work for companies who place sustainability at the core of their values. We also believe that through manipulation of the data if we would have separated the male and female responses, that the female results may have yielded results much different than the original survey results.

Conclusion

Sustainability is a concept that can have great potential. A limiting factor implementing sustainable practices into the private and public sectors whose sole business model has been profitability will take time. It starts with the students and entry level employees. When implementing strategic plan, everyone must be on board and understand why a company wants to move in this direction for it to achieve maximum efficiency and success. If companies, make the switch to being more environmentally friendly and the importance of sustainability is stressed in schools, there is a chance for positive change to be created and implemented, but the disconnect must be handled first. Once a wholesome understanding and knowledge of sustainability is achieved by the students then we may begin to see a change in the way

businesses are run. Until that happens the gap in understanding will remain and businesses may fall short of their strategic sustainable objectives.

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Appendix

Item Reliability

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Attitudes	0.722	0.731	4
Perceptions	0.580	0.600	3
Purchasing	0.857	0.853	4
Employment	0.823	0.827	3

Table A

Rotated Component Matrix

	1	2	3	4	5	6
ATT1	-.030	.098	.295	.030	.620	.496
ATT2	.131	.125	.086	.179	.866	-.056
ATT3	.162	.108	.850	.186	.022	.010
ATT4	.235	.120	.717	.064	.267	.210
PER1	.350	.162	.084	.256	.092	.718
PER2	.098	.224	.008	.748	.083	.324
PER3	.091	.173	.294	.768	.156	-.091
PURCH1	.887	.184	.153	.058	.107	.168
PURCH2	.898	.193	.139	.069	.029	.069
PURCH3	.868	.228	.171	.102	.043	-.005
PURCH4	.408	.447	-.154	.174	.246	-.473
ED1	.219	.798	.104	.163	.106	.055
ED2	.180	.858	.036	.178	.041	.009
ED3	.157	.787	.156	.071	.079	.092

Table B

Descriptive Statistics - Attitude

Attitudes	Mean	Std. Deviation	N
ATT1	1.96	.744	164
ATT2	2.24	.923	164
ATT3	2.59	1.093	164
ATT4	2.59	1.005	164

Table C

Descriptive Statistics – Perceptions

Perceptions	Mean	Std. Deviation	N
PER1	2.81	1.359	164
PER2	1.95	.939	164
PER3	2.41	1.073	164

Table D

Descriptive Statistics – Purchasing Behaviors

Purchasing	Mean	Std. Deviation	N
PURCH1	3.45	1.595	164
PURCH2	3.87	1.812	164
PURCH3	4.01	1.682	164
PURCH4	4.21	1.542	164

Table E

Descriptive Statistics – Employment Desires

Employment	Mean	Std. Deviation	N
ED1	2.80	1.027	164
ED2	2.48	.956	164
ED3	2.550	1.115	164

Table F

Hypothesis Testing

Hypothesis	Effect	p	Conclusion
H1	Attitudes -> Employment Desires	<.05	Inversely Supported
H2	Perceptions -> Employments Desires	<.05	Supported
H3	Purchasing Behaviors -> Employment Desires	<.05	Supported

Table G

Timeline

April 2017	Submit abstracts and Critiques
April 2017	Set up parameters of research project, define objectives and bias
September 2017	Create Electronic Survey for distribution
October 2017	Gain IRB approval for Survey
January and February 2018	Send out surveys and collect results
February 2018	Review results, quantify data, and put results into final project
March 2018	Review and Revise final project for presentation
April 2018	Senior Honors Project Presentation