



Integrating And Assessing Student Perceived Sustainability Literacy In An Integrated Marketing Communications Course

By: **Pia A. Albinsson**, Bidisha Burman, **G. David Shows**, and **James E. Stoddard**

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INTEGRATING AND ASSESSING STUDENT PERCEIVED SUSTAINABILITY LITERACY IN AN INTEGRATED MARKETING COMMUNICATIONS COURSE

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ABSTRACT

This paper examines whether marketing educators' efforts in integrating sustainability-related issues in an undergraduate Integrated Marketing Communications (IMC) course affect students' perceived sustainability literacy. Using the Taxonomy of Significant Learning, a traditional IMC course was redesigned to include sustainability-focused concepts and assignments related to and integrated with the traditional course concepts. Analyzing student pre- and posttests of self-reported data from two questionnaires, one at the beginning of the semester and one at the end of the semester, impact on students' perceived awareness and knowledge of sustainability issues was demonstrated.

Marketing educators have provided strong justification for incorporating ethics, sustainability education, and mindful marketing into the marketing curricula (Beitelspacher & Rodgers, 2018; Hagenbuch & Mgrdichian, 2020; Pentina & Guilloux, 2010; von der Heidt, 2018; Wilhelm, 2008). Although some general business and introductory marketing courses include sustainability-related content, sustainability-oriented topics have an excellent fit within marketing promotion courses. The integrated marketing communication course focuses on understanding the role of advertising and other promotional tools to achieve maximum effectiveness of marketing communications based on clear objectives, time, and budget. Revisiting the core concepts of sustainability in relevance to integrated marketing communications benefits both the student and society in two fundamental ways. It is not just about teaching students the importance of considering social and environmental problems but also largely about learning to fit the methods in promotion strategies with sustainability efforts to build stronger connections with the market and community.

Past research has included as key components of sustainability efforts the three P's; product (e.g., sustainable design, biomimicry, dematerialization of packaging, resource efficiency), pricing (e.g., full cost accounting including environmental cost and fair wages in the supply chain), and place (e.g., ensuring distributors and suppliers meet labor standards)

(Wilhelm, 2008). We suggest sustainability efforts include the fourth P (i.e., efficient and sustainable promotional strategies) as well. This fourth P, corporate/brand image and media advertising, has sometimes been overlooked by marketers when discussing Corporate Social Responsibility (CSR) (Cox, 2008). Marketing communication courses can best prepare the students to effectively manage and promote sustainability initiatives, media utilization, social media activities related to sustainability communication, designing marketing campaigns to raise awareness, and other effective sustainability communication activities. Reilly and Hynan (2014) posit that "green" firms tend to be more active than non-green firms in addressing sustainability in their corporate communication as well as general social media activity. Small (e.g., New York's BBMG and KSV, Brazil's Full Jazz) to large advertising agencies and marketing companies (e.g., Omnicom group, Publicis Groupe, WPP) have begun to focus on developing more sustainable, transparent, and purposeful communication that builds stronger connections between brands and consumers (Jones, Comfort, & Hillier, 2018; Lindsay, 2014). The larger advertising and marketing firms also provide sustainability reports (Jones et al., 2018), where they discuss their commitment to the UNs Sustainable Development Goals. Henderson (2013) states "... a new ethic is afoot within this industry, ... among a new wave of creative agencies and practitioners Now advertising seems to be

embracing all the new opportunities in the global sustainability drive toward cleaner, greener economies and more ethical, just forms of development.” New capabilities by creatives and agencies to meet more responsible communication objectives are sought out by brands from various industries and areas of the world (e.g., Disney, Cengage, L’Oreal, Nike, Planned Parenthood, Target, Origins, etc.).

An organization’s commitment to sustainability is reflected in its communications (Reilly & Hynan, 2014). Content, style, and tone of corporate communications provide important insights into the organization’s culture and underlying value (van Marrewijk & Were, 2003). Companies that emphasize and highlight CSR and sustainability achievements such as listing and highlighting sustainability awards and recognitions on their websites, press releases, and news features are found to have higher recognition of sustainability achievements than those who don’t (Reilly & Hynan, 2014). USA today reported that one-third of large companies now regularly use social media like Facebook, Twitter, YouTube, and other platforms including blogs, wikis, etc. (Reilly & Hynan, 2014). Formally or informally, industry norms for sustainability reporting should be considered (Jones et al., 2018; Reilly, 2009; Reilly & Hynan, 2014). Since greenwashing is not uncommon when environmental changes made by companies are different or insufficient compared to the actual promises claimed in their promotions (Bridges & Wilhelm, 2008), a marketing communication course can be a valuable learning opportunity for sustainability education seekers and valuable to society in the long run.

Covering ethical issues in a business curriculum became a focus of the Association to Advance Collegiate Schools of Business (AACSB) as early as in 1976. Recently the criterion of including a commitment to CSR in their guidelines for accreditation was added (AACSB, 2020; Weber, 2013). The AACSB now recognizes that issues such as diversity, sustainable development, environmental sustainability, and other emerging corporate and social responsibility issues are important and require responses from business schools and business students. While many business education programs and marketing programs share the vision of carrying sustainability education forward as charged by AACSB and the Principles for Responsible Management Education (PRME) (unprme.org), this paper suggests that educators in all areas of marketing need and can take on this responsibility. We posit that, while courses like Principles of Marketing provide good exposure to basic sustainability concepts, increases student awareness of core concepts, as well as sensitizes students to environmental issues (Wilhelm, 2008), all

marketing mix (4 Ps) courses can contribute further to building specific strategies concerning sustainability education. Businesses are increasingly adopting a “green” image, and public relations, advertising, and other forms of communications that are instrumental in promoting and expressing their concern with the environment to the public (Pentina & Guilloux, 2010). Hence, an Integrated Marketing Communications course can contribute to maximizing the effective communication/promotion of sustainability commitments and values of the respective companies. The current study assesses the effectiveness of incorporating sustainability into an IMC course. The research was guided by the question of whether integrating sustainability issues in an Integrated Marketing Communication (IMC) course affects students’ sustainability awareness and sustainability literacy. First, a brief overview of recent literature on methods of sustainability in marketing and business education is presented. Next, information on the instructional format of the IMC course in this study is provided. Finally, the assessment of student sustainability literacy, as well as student feedback relative to their participation in the course is reviewed.

Literature Review

The term “sustainability” is often used interchangeably with other terms as “green” or “environmentally friendly” (Peattie, 1995; Minton et al., 2012). About 82 percent of companies are spending more on green marketing; 74 percent of these companies are increasing green marketing spending using the Internet, while 50 percent are increasing the green marketing spending on traditional media (Tillinghast, 2010; Milton et al., 2012). Regardless of whether such expenses are focused on creating a green corporate image or focused on the environmental benefits of their products or services, there is undoubtedly a rapid increase in both interest and spending on green marketing.

Sustainability topics have been well integrated into many existing business courses, but also specialized courses such as Sustainability Reporting and Analysis, Business and Sustainability, Strategies for Sustainable Development, Corporate Social Responsibility, and Sustainability have been designed (Gomez & Preciado, 2013; Weber, 2013). There has been an increase in research on the integration of sustainability in the marketing curriculum (e.g., Albinsson, Perera, & Sautter, 2011; America, 2014; Borin & Metcalf, 2010; Bridges & Wilhelm, 2008; Kendrick, Fullerton, & Kim, 2013; Rountree & Koernig, 2015; Mills, Robson, & Pitt, 2013). Currently, tools and teaching methods for

sustainability and CSR vary widely. For example, Mills et al. (2013) used political cartoons to teach CSR, Albinsson et al. (2011) showcased the use of free online sustainability teaching resources to offer students a more holistic learning experience using Bloom's taxonomy of cognitive domain. Borin and Metcalf (2010) presented 25 sustainable marketing exercises to educators teaching a variety of marketing courses using Fink's Taxonomy of Significant Learning. Others offer complete course descriptions to enhance student social consciousness (Rountree & Koernig, 2015) and to influence students' "ability to identify and apply sustainable business concepts to different areas of marketing strategy" (Bridges & Wilhelm, 2008, pp. 43).

There is, however, limited literature on the "assessment" of the integration of sustainability in the marketing curriculum. Albinsson et al. (2011) conducted a qualitative content analysis of students' open-ended responses on sustainability-infused class follow-up surveys, as well as course evaluations. It was found that students who were exposed to learning activities with a sustainability focus had a greater understanding of the topic, and an increased belief that "business as usual" practices had to change. Similarly, Beitelspacher and Rodgers (2018) conducted a content analysis of student comments based on CSR initiatives in a retailing setting. They measured pre and post means of student responses to supply chain issues in a Retail Management course, where they incorporated a CSR assignment and found that there were positive changes in student attitudes and awareness toward CSR issues.

Sustainability Literacy

One way to assess student learning is through the concept of *sustainability literacy*, the process of enabling students to "understand the symbiotic relationship between environmental, social and economic dimensions of sustainable development" (Parkin, Johnson, Buckland, & White, 2004, pp. 9). Incorporating sustainability in higher education has been a challenge due to a lack of certainty of the meaning of the term or the time-consuming nature of pedagogy with sustainable development education (Cotton & Winter, 2010; Velazquez, Munguia, & Sanchez, 2005; Winter & Cotton, 2012). Often believed to be a concept that is more ideological, sustainability literacy's relevance to certain disciplines is still questioned (Butcher, 2007). Sustainability education is not necessarily limited to active learning. Winter and Cotton (2012) suggest that a more discipline-neutral sustainability literacy comes from the campus environment, an informal yet important source of learning about

sustainability. What students observe on campus in terms of the sustainability conduct and practices of the university affects student learning (e.g., energy efficient lighting on campus, recycling, composting). Such informal learning may lead to a negative impact when unsustainable practices around the university send incompatible messages about sustainability (e.g., energy inefficiency through excessive lighting on campus, steam holes, poor waste management) (Cogut, Webster, Marans, & Callewaert, 2019; Winter & Cotton, 2012).

Course Redesign Incorporating Sustainability into Integrating Marketing Communications

There is currently a paradigm shift occurring in "advertising and marketing communications education, from CSR as ethics-and-messaging, to CSR as shared value with society," requiring educators to learn new strategies and pedagogical tools to reflect this shift (Kendrick et al., 2013, pp. 149). While a course like Integrated Marketing Communications shares the responsibility of preparing students to make ethical and socially responsible decisions in the professional world, the students of IMC should also be prepared for matters concerning the environmental impact of their decisions as well as their client's decisions. Strategies about how to communicate sustainable brand appeals are essential for today's students. Pentina and Guilloux (2010, p. 22) posit that "Skills related to sustainability marketing and advertising appear to be in high demand by commercial and non-profit organizations." This is echoed by PRME which states that "students that are sensitized to sustainability values are in high demand among leading international businesses and organizations" (unprme.org). Previous research on ethics education has shown that using "an active learning technique consistent with constructive controversy theory, the generation of deliberate discourse, is believed to enhance students' moral development" (Meyer, 2012, pp. 215). It is therefore reasonable to posit that by incorporating a sustainability-focus and using similar active learning techniques, students can become more interested in making ethical choices and identify greenwashing and other dishonest tactics by firms' communication strategies.

The current IMC course incorporating the above purpose was redesigned using Fink's (2013) Taxonomy of Significant Learning (see Figure 1). Fink's dimensions include the foundational dimension, the application dimension, the integration dimension, the human dimension, the caring goals dimension, and the learning how to learn dimension. The major dimensions of Fink's

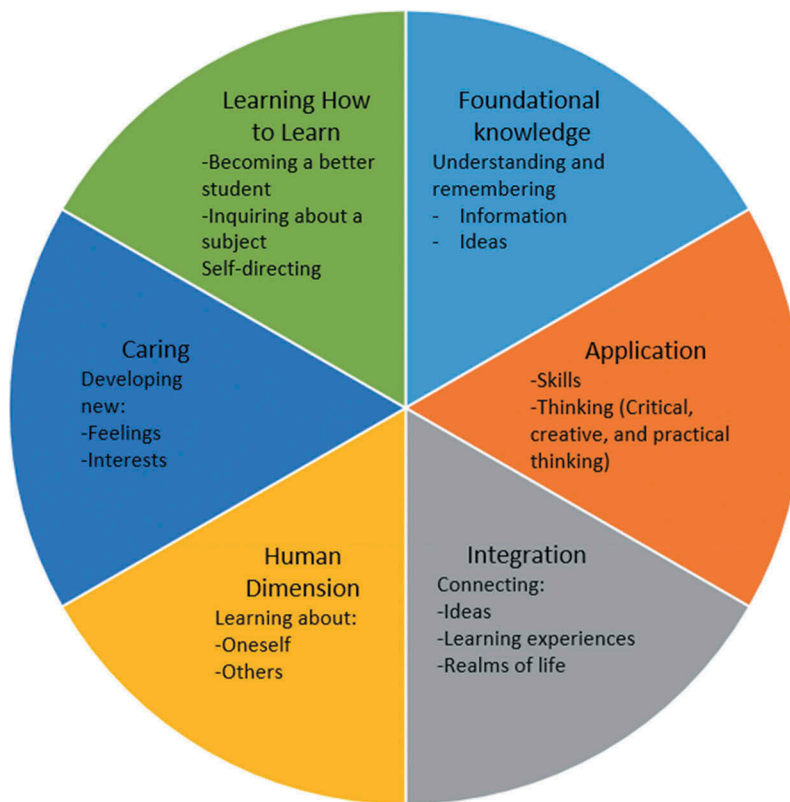


Figure 1. Taxonomy of significant learning.
Source: Dee Fink (2013).

taxonomy start with *Foundational knowledge*, which is the basis for any other type of learning (i.e., understanding of key content such as marketing theories, principles, IMC-related concepts, and sustainability concepts). The second dimension of Fink's taxonomy is *Application* of the material learned in a class such as planning skills, budgeting, and communicating clearly. Thinking skills and other physical and intellectual skills, managing complex projects, applying the key content to a real-world project (sometimes called Service Learning or experiential learning) presented by a community partner (either nonprofit or for-profit) are all part of *Application*. The third dimension is *Integration* and takes place when students connect ideas, different learning experiences, marketing knowledge, and apply them to research on competitive environments and situational analyses of organizations, and are able to integrate this knowledge to provide a solution to the organization using appropriate promotional tools. The fourth, *Human Dimension*, involves the students learning about themselves as well as others and their ability to reflect on their own contribution and the team contribution, the dynamics of team interaction, and the dynamics of working with clients. The fifth, *Caring* dimension, is when students develop new feelings, interests, or values. As Fink (2013, p. 36) states: "Without the

energy for learning, nothing significant happens." By experiencing firsthand how it is to work with a client in a team-based setting and provide a solution for the client's communications needs, students can achieve the caring dimension. By working in particular with nonprofits, rewarding, stimulating, and challenging projects can be designed. The last of Fink's dimensions, *Learning How to Learn*, is about lifelong learning and learning how to be more effective during the learning process. Students understand that a process led by both an extrinsic and intrinsic focus helps to gain not only knowledge, but hopefully, wisdom.

The goal of the course redesign was to make sustainability and ethics both a relevant and an obvious choice when making business decisions. To move beyond low engagement levels from students, material, and activities related to real-world issues, both local and global, were presented. Several online student engagement techniques (SETs) were incorporated to include active learning components in both the online and face-to-face learning environments (Barkley, 2009). Course content was designed around threshold concepts (content areas) (Cousin, 2006). The instructor redesigned the course using Fink's (2013) course recommendations of designing significant learning goals. In addition to

the way the course was delivered (both face-to-face and online), the instructor worked with a higher education publisher to customize a textbook to include sustainability issues related to the course content (i.e., reflecting IMC topics). The course redesign included sustainability assignments such as virtual field trips (visiting corporate websites and other organizations to study their CSR statements and sustainability efforts). These field trips were adapted from Martin and Schouten's (2012) suggested assignments. Sustainability-related articles were pre-requisites for the assignments. In addition, the students had to watch several sustainability-focused movies and other voluntary (not controlled for) movies that dealt with social justice, natural capital, and the dark side of "business as usual" in advertising and corporate communications provided through the university's library and sustainability film series.

Although there are numerous sustainability literacy scales available, they are normally used on the whole university student population for classification purposes and not in individual classes/courses. For example, the Sustainability, Tracking, Assessment, and Rating System (STARS) is commonly used by higher education institutions to assess sustainability literacy among its populations (Horvath, Stewart, & Shea, 2013). One aim of this research was to close this gap between university-wide and individual course measures by assessing sustainability knowledge using a Sustainability Literacy scale.

Course Description and Assessment of Significant Learning Outcomes

The content of the course was described as follows:

This course views promotion from a manager's perspective and allows students to explore the importance of sustainable integrated marketing communications which emphasizes coordination of various marketing and promotional elements to achieve a more efficient and effective communication program. The course provides an overall perspective of rapidly developing communication functions of marketing with respect to consumers, technology, media and sustainability. In the process of understanding how advertising and other elements of a firm's promotional mix are combined to form an integrated marketing communications program, we will also examine the process of market segmentation, positioning, consumer behavior analyses as well as understand the environment in which integrated marketing communications operate.

For *Foundational knowledge and learning*, weekly quizzes, weekly video exercises with follow-up questions, discussion forums, various homework assignments, a group

project, and two exams were administered. To assess students' sustainability knowledge in specific terms (e.g., the triple bottom line, carbon footprint, greenwashing, etc.) an assessment survey form was administered (both at the beginning and end of the semester). (Note: sustainability and ethics knowledge is also part of the *Human/Caring* dimensions). In terms of the group project (*Application/Integration*), sustainability was a requirement in terms of incorporating sustainable branding (Belz & Peattie, 2012). The students worked with established clients and had to focus on how to position sustainable brands and communicate the brand benefits in a sustainable way.

Sustainable advertising refers to not only promoting the brand but also promoting thoughts and ideas that will help the long-term maintenance of society (Prianthi, 2011). To communicate in a sustainable way includes adopting local culture, using local resources, and communicating a moral message (Prianthi, 2011). In addition, addressing implicitly or explicitly the relationship of the product/service and the biophysical environment, promoting a green lifestyle with or without the use of the brand, or presenting a corporate image of environmental responsibility can be other ways of communicating in a sustainable way (Banerjee, Gulas, & Iyer, 1995; Cox, 2008).

The appeals chosen for students' communication plans had to focus on sustainability-oriented messages. Instructor feedback at four different stages provided comments on content, formatting, and advice on how to structure their IMC plan and maintain focus on the sustainability approach of their campaign. In addition, the students were encouraged to turn in their final project report and presentation for a quality check prior to the final due date to the client.

To evaluate students' learning process in terms of the *Human/Caring/Learning How to Learn* dimensions, critical reflective writing assignments were used. Around the midterm and the end of the semester two critical reflection assignments were provided to prompt students to critically reflect on their contribution and peer contribution to the group project. Critical reflection exercises consisted of reflection of course content in terms of IMC concepts, sustainability issues, and students' assessment of their own learning experience (See Table 1 for illustrative student reflective quotes on the sustainability learning experience).

Critical reflection is important to students' cognitive development and can be helpful in changing future behavior and experiences (Deer & Zarestky, 2017; Lindh & Thorgren, 2016). In addition to individual reflections, the present study included specific prompts on what students had learned and possible changes that could benefit the

Table 1. Select student quotes from reflection exercises.

Before this course I was always aware and supportive of sustainability movements, but never delve in too much research on the topic. I found it very interesting how different corporations are using new and innovative ways to cut down on their carbon footprint. While I was looking up different jobs to apply for, I found myself looking at their CSR statements. I now feel more passionate about being sustainable, environmentally friendly, and social responsible. It's a big deal, and everyone should be a part of it. Male – senior	I believe that the sustainability exercises and topics covered in this class have helped me to become a more aware consumer, in many facets. I am now much more aware of the environmental and social impacts of my lifestyle and consumerism. Female-senior
Sustainability has been a constant aspect of my schooling since high school, but that is not say I shrug it off. This class gave me opportunity to look a bit more deeply into the business side of sustainability, as opposed to the general “green” teachings of other classes. As far as the influence of sustainability on my future career, I believe it will be pivotal, but I think it will wind up being pivotal in anyone's career. That is just the way the world is moving. I hope to own my own landscaping business in the future and that industry certainly has a lot of room to grow in terms of sustainable practice. I hope I can be successful while also being part of a larger change in the industry. Male – senior	In terms of sustainability exercises and topics covered in class I was able to reaffirm that sustainability is one of my passions. I am going to look for an interior design job that will allow me to ability use sustainable design. I also found out that I value companies that utilize the triple bottom line as well as green practices. These things matter to me because they not only impact my generation, but those behind me. I don't think I would have done anything differently, I enjoyed learning about these topics. Female – junior
When I first registered to this class I didn't think too much of the sustainability focus. I thought the course was just labeled that way and we really wouldn't do much with it. However, throughout the course I was proven very wrong. This course has taught me more about sustainability than I ever imagined and I quite enjoyed it. I feel this new knowledge will help me not just in the present, but also in the future, whatever career path I choose. Sustainability is becoming more and more important to our society, which is great, and they are demanding the companies they frequent care about sustainability too. This will hopefully cause companies to begin more green practices and hiring people who are sustainability friendly. In the long run having a focus on sustainability will help the company not only in marketing to consumers but in saving on actual operating/manufacturing expenses. Companies that take their impact on the environment seriously have a better brand image in the mind of consumers. I feel this course prepared me better for the now more sustainability focus job market. Female – junior	Speaking to the exercises I completed for this course, I learned a lot about the sustainability practices for a corporation I will actually be interning for this summer. The work assigned allowed me to research Delhaize, the company I will be working for, in more depth and get a better understanding of their values. I think that this class has made a tremendous impact on my future career, including my internship because I will be working to make their private label brands more environmentally friendly. I know that I will absolutely be putting the knowledge I have gained from the sustainability topics covered in this class to work in my professional career. I have learned that reducing waste is extremely important for the future of our planet. I have also learned that I am most passionate about product packaging and the practice of making it more sustainable because of the topics we have covered. Reducing waste in product packaging matters because it will be a major step for the environment but a relatively simple fix. I think that this concept is very tangible and not far from being a reality in the world today. I would not do anything differently looking back on this because it has lead me to be more knowledgeable and become more passionate about something that is actually important. Female-senior

team as a whole. Reflection and self-assessment can assist students in getting to “know thyself” which is important for self-awareness (Bourke, 2014). See Appendix A for the redesigned course based on Fink's learning dimensions with the integration of sustainability issues with the IMC content.

It is important to note that some of the assessment measured *actual learning* (i.e., learning that reflects a change in knowledge identified by a rigorous measurement of learning) and some measured *perceived learning* (e.g., students' self-report of knowledge gain) (Bacon, 2016; Vinuales, Magnotta, & Kulkarni, 2019). Based on our literature review and course redesign, the following hypotheses were developed:

H₁: Integrating promotional strategies with sustainability topics into an IMC course will increase student interest in sustainability after the course.

H₂: Integrating sustainability into an IMC course will increase students' willingness to be more effortful in their behavior toward sustainability, after the course.

H₃: Integrating sustainability into an IMC course will influence students to place more importance on sustainability practices after the course.

H₄: Students' foundational knowledge of a) sustainability practices and b) concepts such as triple-bottom line reporting, carbon footprint, and greenwashing will increase after the course.

H₅: Students' caring dimension in the form of recycling behavior will increase at the end of course.

Research Context

The research context for this study was an undergraduate IMC course taught at an AACSB accredited business school at a public master's level university in the southeastern United States. The business school is also a basic signatory of PRME. The course is a required course for undergraduate marketing majors and has the Principles of Marketing course as a prerequisite. The

course had the label “this course is taught with a sustainability focus” in the course catalog. Students self-selected themselves into the course based on scheduling preference and interest. Many non-marketing majors such as management, apparel and fashion merchandising, music studies, advertising, and public relation students also enroll in the class. The class is taught both face-to-face and online, primarily to on-campus students.

Sustainability Literacy Assessment Instrument

Measurement items and scales were adapted from the UNC Chapel Hill Student Sustainability Literacy Survey (SSL) (see [Appendix B](#)). In addition to the sustainability-related items, knowledge of specific marketing terms and awareness of campus efforts were assessed via open-ended questions and demographic questions. Similar to the approach used by Hay and Eagle (2019), two ungraded overall assessments were performed, one on the very first day of the semester and one in the last week of the semester. The semesters were 16 weeks long. The surveys were administered in class for face-to-face classes and online via SurveyMonkey for distant-learning classes. Data collection was conducted during a two-year period, from fall 2014 to spring 2016, during which both class formats were taught by the same instructor and with the same content. All graded sustainability exercises and assignments were consistent in both course formats. Pre- and post-testing has been previously utilized to assess the effectiveness of ethics and sustainability assessment research (Beitelspacher & Rodgers, 2018; Fraedrich, Cherry, King, & Guo, 2005; Hay & Eagle, 2019).

Sample Descriptive Statistics

Data were collected from 125 marketing students prior (first day) to taking the Integrated Marketing Communications course with a sustainability focus and after taking the course (last week of the semester). The students’ average age was 21.77. Eighty-five percent of the sample reported being seniors and 15 percent juniors. The sample was majority female (66 percent).

Results

Face-To-Face Versus Online Responses

As mentioned, data were collected from both face-to-face classes as well as online classes. A one-way analysis of variance was conducted to test for differences in the metric measures on the survey between the face-to-face

class responses versus the online class responses. Difference variables were formed from the post-class data minus the pre-class data. The results are presented in [Table 2](#). As the table shows, class format did not have an impact on student responses to the metrically measured survey questions.

Interest in Sustainability

To evaluate the impact of the class on sustainability issues, repeated measures *t*-tests were performed. The first test assessed students’ level of interest in sustainability before and after the class. The response variable was measured using a 5-point magnitude scale, anchored by (1) “I have no interest in sustainability” and (5) “I have a passion for sustainability.” The hypothesis was that students would have a greater interest in sustainability after the class. Paired sample *t*-test showed that post-class student interest in sustainability (mean = 3.81, SD = .80) significantly increased from pre-class interest in the same (mean = 3.63, SD = .72). The significant increase in student interest in sustainability after the class than before the class, *t*-value (124) = 2.45, *p* < .01 (one-tailed), supported the first hypothesis.

Effort and Behavior toward Sustainability

A second set of repeated measures *t*-tests were employed to assess student agreement with various statements relating to sustainability anchored by (1) “Strongly disagree” to (7) “Strongly agree.” Our second hypothesis stated that students would express a greater willingness to be more effortful in their behavior toward sustainability after the class than before the class. Since multiple comparisons were conducted, the critical *p*-value was adjusted using the Bonferroni correction α/m , where $\alpha = .05$ and *m* was the number of comparisons being made. All comparisons were made based on the corrected *p*-value of .008. [Table 3](#) reports the paired sample statistics. [Table 4](#) presents the *t*-test results. As [Table 4](#) shows, students agreed more strongly with all statements after the class than before the class except the willingness to learn more about sustainability while in college, partially supporting *H*₂. The last question, asking students if “I would like to learn more about sustainability while in college” was not significant; however, this is not surprising as most students were seniors when taking the class (either graduating the same semester or the next). Also, the mean for this question pre-class was rather high (*M* = 4.02) as compared to other variable means. A posttest mean of 4.17 did not show a significant difference.

Table 2. Pre-class versus post-class differences in metric variables.

Variable	Class Format	N	Mean Difference	Standard Deviation	F	p-Value (Two-Tailed)
Interest in Sustainability	Online	28	.00	.770	1.632	.204
	Face-to-Face	95	.22	.814		
Effort to be Knowledgeable about Environment	Online	28	.96	.962	2.836	.095
	Face-to-Face	95	.54	1.236		
Effort to be Knowledgeable about Sustainability	Online	28	1.04	1.138	1.567	.213
	Face-to-Face	95	.73	1.153		
Behavior Reflects Concern About Sustainability	Online	28	.57	1.069	.023	.881
	Face-to-Face	95	.61	1.249		
Value Food Grown Locally	Online	28	.57	1.345	.608	.437
	Face-to-Face	95	.37	1.136		
Carbon Footprint of my Choices	Online	28	.39	1.227	.118	.731
	Face-to-Face	95	.48	1.237		
Learn More About Sustainability in College	Online	28	.43	1.260	2.452	.120
	Face-to-Face	95	.06	1.029		
Importance of Recycling	Online	28	.07	1.464	.101	.752
	Face-to-Face	95	.16	1.206		
Importance of Minimizing Waste at Landfill	Online	28	.39	1.548	.439	.510
	Face-to-Face	95	.22	1.093		
Importance of Choosing Food Based on Environment	Online	28	.29	1.272	.229	.633
	Face-to-Face	95	.19	1.098		
Importance of Water Conservation	Online	28	.39	1.474	1.981	.162
	Face-to-Face	95	.02	1.148		
Importance of Purchasing Environmentally Friendly Products	Online	28	.00	1.305	.823	.366
	Face-to-Face	95	.20	.929		
Importance of Energy Conservation	Online	28	.18	1.278	.201	.655
	Face-to-Face	95	.28	1.038		
Importance of Minimizing Carbon Footprint	Online	28	.54	1.427	3.066	.082
	Face-to-Face	95	.06	1.201		

Table 3. Effort and behavior toward sustainability paired sample statistics.

Variable	Time	Mean	Standard Deviation	N
I make an effort to be knowledgeable about environmental issues	Preclass	3.72	.781	124
	Postclass	4.39	1.087	
I make an effort to be knowledgeable about sustainability issues	Preclass	3.46	.885	125
	Postclass	4.26	1.115	
My daily behavior reflects a concern about sustainability issues.	Preclass	3.40	.763	124
	Postclass	3.97	1.168	
I value knowing that my food is grown locally.	Preclass	3.70	.915	122
	Postclass	4.19	1.230	
I think about the carbon footprint of my choices.	Preclass	3.30	.994	125
	Postclass	3.78	1.230	
I would like to learn more about sustainability while in college.	Preclass	4.02	.772	125
	Postclass	4.17	1.243	

Importance of Sustainability Issues

A third set of repeated measures *t*-tests were employed to assess student beliefs in the importance of common sustainability practices, anchored by (1) “Very unimportant” and (5) “Very important.” The third hypothesis was that students would place more importance on sustainability practices after the class than before the class. Again, the Bonferonni correction was applied to the *p*-value due to the number of comparisons being made. The tests were conducted at a *p*-value of .007. After the Bonferonni correction, the importance of energy conservation after the class (mean = 4.42, SD = 0.84) than before the class (mean = 4.16,

Table 4. Repeated measures *t*-tests for student effort and behavior toward sustainability issues.

Variable	Mean Difference	Standard Deviation	t	df	p-Value (1-Tailed)
I make an effort to be knowledgeable about environmental issues	.669	1.110	6.717	123	.000
I make an effort to be knowledgeable about sustainability issues	.800	1.150	7.777	124	.000
My daily behavior reflects a concern about sustainability issues.	.573	1.177	5.418	123	.000
I value knowing that my food is grown locally.	.484	1.085	4.923	121	.000
I think about the carbon footprint of my choices.	.472	1.229	4.295	124	.000
I would like to learn more about sustainability while in college.	.152	1.086	1.566	124	.060

SD = 0.89) was significantly greater, $t(124) = 2.72$, $p < .007$ (one-tailed). Hence, partially supporting H_3 .

Assessment on other sustainability practices like importance of recycling ($M_{pre} = 4.20$, $M_{post} 4.39$) $t(121) = 1.01$, $p = .156$ (one-tailed), importance of minimizing waste at landfills ($M_{pre} = 4.18$, $M_{post} 4.40$) $t(123) = 2.16$, $p = .017$ (one-tailed), importance of choosing food based on environmental impact ($M_{pre} = 3.65$, $M_{post} 3.85$) $t(124) = 1.98$, $p = .025$ (one-tailed), importance of water conservation ($M_{pre} = 4.22$,

Mpost 4.33)t(122) = 1.22, $p = .132$ (one-tailed), importance of purchasing environmentally friendly products (Mpre = 3.98, Mpost 4.13) $t(124) = 1.67$, $p = .049$ (one-tailed), importance of minimizing carbon emissions from transportation (Mpre = 3.92, Mpost 4.10) $t(124) = 1.57$, $p = .060$ (one-tailed), did not show significant before-after change using the Bonferonni correction at p -value of .007. It should be noted that postcourse means were in the correct direction; however, responses to these facets of sustainability were rated as highly important prior to the class.

Knowledge of Sustainability Practices and Terminology

Students were asked whether they knew about certain sustainability practices prior to taking the survey. The measure was categorical, asking students to check all that applied. A Chi-Square goodness of fit test was used to assess whether the observed frequencies were equal to the expected frequencies, the null hypothesis. The frequencies are presented in Table 5. The null hypothesis was rejected supporting H_{4a} ($\chi^2 = 47.69$, $df = 8$, $p < .001$). Examination of Table 5 shows that the largest contributors to the Chi-Square statistic were (1) "Interior Temperature" and (2) "Double Sided Printing," both experiencing increased frequencies post class. Therefore, supporting H_{4a} .

The next few questions assessed students' foundational knowledge of sustainability terms. First, students were asked a multiple-choice question about the definition of triple bottom line reporting. The frequency table shows the responses (see Table 6). A Chi-Square goodness of fit test showed no differences between the observed and expected frequencies for the students' responses ($\chi^2 = 4.339$, $df = 3$, $p = .227$). Therefore, there was no significant change in the students' responses to this question after the course, but we observed that an overwhelming majority already knew the correct answer prior to the course.

Next, students were asked a multiple-choice question about the definition of a carbon footprint. The frequencies reported in Table 7 show the students' responses. A Chi-Square goodness of fit test found no differences between the observed and expected frequencies of

responses ($\chi^2 = 3.517$, $df = 3$, $p = .319$). Therefore, there was no significant change in students' responses as an overwhelming majority of students knew the definition of a carbon footprint prior to taking the class.

The students' familiarity with greenwashing was assessed by asking them to provide their own definition of greenwashing. Coders translated the students' definitions into (1) a correct definition and (2) an incorrect definition. Table 8 shows the resulting frequency table. A Chi-Square goodness of fit test found differences between the observed and expected frequency of responses ($\chi^2 = 32.533$, $df = 1$, $p < .000$). Examination of the frequencies shows that the course had an impact on students' knowledge of the definition of greenwashing. Therefore, hypothesis 4b was partially supported.

Recycling Practices

Hypothesis 5 proposed that students would care more about recycling after taking the course than before. When asked whether they recycled on a regular basis, students responded as per the frequency chart shown in Table 9. A Chi-Square goodness of fit test found no differences between the observed frequencies and expected frequencies for this response set suggesting there was not much change on students' recycling behavior after the course ($\chi^2 = .174$, $df = 1$, $p = .676$); therefore, H_5 was not supported. Students that responded that they do not recycle were asked for the reason why. The frequencies of responses are shown in Table 10. Using the Chi-Square goodness of fit test, no difference was found between the observed and expected frequencies suggesting that the class had no impact on the reasons students did not recycle ($\chi^2 = 6.332$, $df = 5$, $p = .275$). The reasons led to the understanding that the town provided limited recycling pick-up and absent recycling abilities in student housing off campus. The lack of in-town provided infrastructure led students to believe that it is an inconvenient behavior to adopt.

Students were asked whether they were aware that the class was taught with a sustainability focus. The frequency of responses is reported in Table 10 Table 11. A Chi-square goodness of fit test found differences between the observed and expected frequency of responses ($\chi^2 = 5.335$,

Table 5. Knowledge of sustainable practice frequency table.

Pre/Post Class	Double-sided Printing	Interior Temperature	Limit Meat Consumption	Use Alternative Transportation	Power Down Devices	Report Building Issues	Short Showers	Lights Off	Opening Windows	Sum
Pre-class	114	87	43	112	93	36	89	122	88	784
Post-Class	223	187	55	93	94	48	100	122	99	1021
Sum	337	274	98	205	187	84	189	244	187	1805

Table 6. Triple bottom line definition response frequency table.

Pre/Post	Three Forms of Financial Reporting	Environmental, Social, Financial Performance	Health, Vision, Dental Care	Community, Labor & Government	Sum
Preclass	2	93	1	0	96
Postclass	1	92	0	3	96
Sum	3	186	1	3	192

Table 7. Carbon footprint response frequency table.

Pre/Post	Age of an Archeological Site	Carbon on the Ground Each Time You Step	Size of the Carbon Chain in a Given Quantity of Gasoline	The greenhouse Gasses Released by Burning Fossil Fuels	Sum
Preclass	2	1	5	117	125
Postclass	0	3	3	119	125
Sum	2	4	8	236	250

Table 8. Greenwashing response frequency table.

Pre/Post	Correct Answer	Incorrect Answer	Sum
Preclass	44	81	125
Postclass	89	36	125
Sum	133	117	250

Table 9. Recycling regularly frequency table.

Pre/Post	Yes	No	Sum
Preclass	87	38	125
Postclass	90	35	125
Sum	177	73	250

Table 10. Why students do not recycle frequency table.

Preclass	4	2	0	5	15	0	26
Postclass	1	2	2	3	16	2	26
Sum	5	4	2	8	31	2	52

Table 11. Aware class is taught with a sustainability focus frequency table.

Pre/Post	Aware	Unaware	Sum
Preclass	43	82	125
Postclass	61	64	125
Sum	104	146	250

$df = 1, p = .021$). Examination of the frequencies shows that more students reported being aware that the class was taught with a sustainability focus subsequent to the class than prior to the class. See Table 12 for a summary table of the Hypothesis testing results.

IMC Plans – Sustainable Communication Strategies

In terms of how students integrated sustainability ideas into their course assignments, the focus for assessment was mainly how they incorporated sustainability in their IMC

Table 12. Summary of hypotheses and results.

Hypothesis	Result
H1: Integrating promotional strategies with sustainability topics into an IMC course will increase student interest in sustainability after the course.	Supported
H2: Integrating sustainability into an IMC course will increase students' willingness to be more effortful in their behavior toward sustainability will increase after the course.	Partially supported
H3: Integrating sustainability into an IMC course will influence students to place more importance on sustainability practices after the course.	Partially supported
H4: Students' foundational knowledge of a) sustainability practices and b) concepts such as triple-bottom line reporting, carbon footprint, and green washing will increase after the course.	a. Supported b. Partially supported
H5: Students' caring dimension in the form of recycling behavior will increase at the end of course.	Rejected

plans. Students worked in groups of 4–5 in their service-learning client projects where the objective was to create an IMC plan for a local client with a sustainable/triple bottom line focus. The sustainability focus could include either environmental (planet) or social justice (people) issues or both, depending on the client's product/service. For example, in one semester groups worked with the on-campus Scholars with Diverse Abilities program to increase awareness and knowledge of inclusivity and access to education for everyone. Other students worked with a newly opened local restaurant that focused on local sourcing of their foods and which offered living wages for their employees. In another semester, students worked with a new vegan restaurant that focused on health, wellness, and locally sourced food. Another client was a foreign social enterprise that wanted to have a sustainable IMC plan since their product worked with the one-for-one model of giving similar to TOMS shoes. The company wanted to communicate that their product, which uses sustainable raw material and is CO₂ negative in the production process, also provided additional social value to a vulnerable population.

Students had to work with the clients to establish the best way to move forward with their campaigns and check-in with the client to ascertain that they were meeting the brand objectives. Most of the time, the objectives included communicating transparency of the production/service process, establishing trust between the consumer and brand, while highlighting the sustainable aspects of the product/service to build a positive brand image (McDonagh, 1998; Pentina & Guilloux, 2010). All these examples are well aligned with Banerjee et al. (1995) suggested criteria for meeting green advertising criteria.

Discussion

This research examined if students' sustainability literacy could be increased by redesigning an Integrated

Marketing Communications course to include sustainability-focused assignments in both face-to-face and online course formats. Previous research has shown that both course formats can achieve similar levels of perceived competence among students (and similar evaluations) as long as the instructor keeps the perceived communication and perceived challenge the same in both formats (Ganesh, Paswan, & Sun, 2015). As the results show, there were no differences in course format on the survey responses.

The redesigned course used the dimensions in Fink's (2013) Taxonomy of Significant Learning in framing the course learning objectives (See Appendix A). The sustainability literacy questionnaire mainly measured students' foundational knowledge in terms of sustainability concepts but also measured the caring dimension as it deals with value and interests. The quantitative results are discussed first.

The pre and posttest survey results confirmed the following in terms of the behavioral outcomes. Students' willingness to be more effortful in their behavior toward sustainability increased significantly. More specifically, not only did their willingness to be knowledgeable about sustainability and concern for sustainability in their daily behavior increase, but students also showed increased value for locally sourced food as well as an increased willingness to deliberate on their overall carbon footprint. Students' willingness to learn more about sustainability while in college did not increase post-class which may be related to the fact that most of the respondents were graduating the same week as the posttest or within a semester.

With respect to sustainability practices such as recycling, minimizing waste, and other practices, students showed a high level of knowledge of the importance of such practices both pre- and posttest. In understanding students' lack of recycling knowledge, the research found that the town where students reside had an inferior recycling infrastructure in many apartment complexes catering to students. The property owners had no bins for recycling nor did they coordinate with the town for recycle-pickups, leading students to believe that it is inconvenient to recycle. Previous studies on sustainability-related awareness and behavior show similar results. For example, Cogut et al. (2019) found that University of Michigan students increased their sustainability awareness of campus waste-prevention and sustainable travel options over a three-year period; however, there were mixed results in terms of students' behavioral changes.

The results included an increased student awareness of sustainability practices such as using double-sided printing and indoor temperature regulation. These

behavioral changes are easier for students to implement at an individual level and do not require communal infrastructures which could explain the lack of the above-mentioned recycling behavior.

Fink's integration dimension, human dimension, and learning how to learn dimension were assessed through critical reflection exercises. Analysis of the qualitative data confirms an increase in sustainability awareness through documentation in the critical reflection exercises. Particular terminology introduced through the exercises were exhibited by the students' choice of words in describing their learning outcomes (Deer & Zarestky, 2017).

The majority of the open-ended comments were positive; many students claimed they had a new appreciation for sustainability and an incentive to learn more about sustainability issues. Many students shared that they would incorporate sustainability thinking in their future careers. A few students reported that sustainability issues were not relevant for their future careers but that they understood their personal habits and behaviors could have an impact on the communities and people around them (Table 1 provides selected quotes from the critical reflective exercises).

The knowledge-related questions confirmed an increase in the students' knowledge of the definition of greenwashing, but showed that students already had a high level of knowledge of carbon footprints at the beginning of the course. Future studies should include additional measures for the knowledge dimension.

As we were wrapping up the data collection, the Common Ground initiative was launched in June 2016 by Ban Ki-moon, United Nations' General Secretary. The 17 Sustainable Development Goals posited by UN in 2015 are now supported by six of the world's leading marketing and advertising companies: Dentsu, Havas, IPG, Omnicom group, Publicis Groupe and WPP (Jones et al., 2018). To have the largest companies integrate sustainability across their value chain is a huge shift in the communication industry and will further assist instructors teaching IMC in emphasizing the importance of sustainability in their courses. WPP, one of the leading agencies state "marketing is a powerful tool that can change people's view and behavior ..." and this "... creates opportunities for us to have a positive influence by helping our clients engage customers and citizens on sustainability ...," which in turn can "help our clients increase the market for sustainable products and services" (as cited in Jones et al., 2018, p. 3). The Publicis Groupe works with their clients on "how to best communicate sustainability initiatives is a growing concern for our clients as they are an increasingly important factor in the decision making process for consumers"

(cited by Jones et al., 2018, p. 4). These are strong indications of the importance of combining sustainability knowledge with marketing promotions in preparing students for the needs of the future business world.

Conclusion

There is more to be done before a claim can be made that this project resulted in a complete and successful incorporation of sustainability into the Integrated Marketing Communications course. The attempt was to introduce new ways of assessing sustainability literacy in marketing students. The course was intended to enable students to critically think and broaden their perspectives on sustainability topics related to IMC, and it did. Improvement could include adding qualitative techniques such as focus groups and interviews. Also, asking students in other sections not taught by the instructor may be an avenue for future research as a control group.

The objective of the project was to develop a marketing communications-specific course redesigned to improve student knowledge and awareness with relevant sustainability content. There is a need for such professional initiatives to prepare students for a more sustainability-energized marketplace. The results of this research demonstrate that integrating sustainability topics in an Integrated Marketing Communications class can positively affect student awareness and knowledge of core and related sustainability topics. The findings illustrate that individual instructors' efforts of integrating sustainability topics in marketing courses can have a positive impact on student learning outcomes and possibly influence a change in values and interests. Given the utmost importance of sustainability and its implications for the planet and the future generations, individual efforts (by both instructors and students) are more vital than ever before. For those people who work at higher education institutions, where no official sustainability-oriented courses or programs are offered, the results of this research can assist in motivating and encouraging instructors in their decision to start their curriculum changes of greening their courses.

A limitation with the current research is that the community clients and their campaign needs changed each semester limiting the ability to compare the sustainability ideas across semesters. However, each semester between 4 and 5 groups worked with each client allowing for some cross-comparisons between teams. Another limitation is that the assessment scale was mainly focused on behavioral outcomes, which presents an opportunity for marketing educators to develop more encompassing sustainability literacy scales that are adapted for business

students. Future research can look at educators who incorporate UN's SDG number 12, which relates to responsible consumption and production in their courses. Other experiential learning activities using the SDGs in business education have recently been posited by Dean, Gibbons, and Perkiss (2018). As these goals came out in 2015, the current research did not specifically highlight these because data collection was still ongoing and the instructor wanted to keep the content constant within the course material covered. However, as the SDGs become more prevalent in what business schools teach, especially for PRME signatories, there are a plethora of opportunities ahead (IJME, 2017).

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Appendix A. Redesigned Course Components

Taxonomy of Significant Learning Components	Learning Goals for Course	Procedures for Evaluating Student Learning (Assessment)	Learning Activities	Resources
Foundational	<p><i>Conceptual understanding of key concepts:</i></p> <p>Develop an in-depth knowledge and understanding of the various marketing principles, concepts, theories and applications.</p> <p>Comprehend the dynamics of marketing and analyze how its various components interact with each other in the real world (local and international).</p> <p>Develop knowledge and understanding of the environment in which advertising and promotion takes place and the various regulatory, social and economic factors that affect an organization's IMC program.</p> <p>Understand that sustainability and ethics now drive business decision making in a competitive world.</p> <p><i>Practical/critical thinking and managing complex projects:</i></p> <p>Students will be able to use practical/critical thinking to analyze an organization's situation and related threats and opportunities in the environment. Based on analysis they will make suggestions on actions to follow.</p> <p><i>Creativity:</i> Execute a group project and present their results/solutions to instructor/client/class members.</p> <p><i>Performance skills:</i> Students will develop skills in communicating efficiently both in writing and oral communications.</p>	<p>Weekly online chapter quizzes – instant graded feedback.</p> <p>Weekly video exercises with follow-up questions – instant graded feedback.</p> <p>Two sustainability virtual field trips – guided by grading rubrics – graded.</p> <p>One midterm examination (multiple choice/essay questions) – graded.</p> <p>One final examination (multiple choice/essay questions) – graded.</p> <p>Group project: to develop an IMC plan. Four status reports (students will use and define many concepts covered in text) throughout semester and instructor will provide timely written feedback and record general feedback sessions for all students (UDL).</p>	<p>Online and Text book readings/interactive assignment such as online forum discussions and individual and group assignments.</p> <p>UDL (Universal Design for Learning): Interactive PowerPoint lectures – narrated.</p>	<p>Text book – Customized IMC book and four chapters from Sustainability Marketing text book.</p> <p>Moodle</p> <p>Pearson Education's – MyMarketingLab – accompanying website to customized textbook.</p>
Application	<p><i>Practical/critical thinking and managing complex projects:</i></p> <p>Students will be able to use practical/critical thinking to analyze an organization's situation and related threats and opportunities in the environment. Based on analysis they will make suggestions on actions to follow.</p> <p><i>Creativity:</i> Execute a group project and present their results/solutions to instructor/client/class members.</p> <p><i>Performance skills:</i> Students will develop skills in communicating efficiently both in writing and oral communications.</p>	<p>Graded – Weekly online video exercises (watch and answer questions) – instant graded feedback.</p> <p>Group project – Apply concepts and respond to specific company/industry situational factors, instructor will provide timely written feedback and record general feedback sessions for all students (UDL).</p> <p>Creativity aspect is graded based on promotional tools used, advertising theme, logo, use of budget. Peer evaluations of group contribution.</p> <p>Individual assignment – critique a current company's IMC efforts – to gain a better understanding for current IMC practices. Peer feedback in online forum, instructor feedback – graded.</p> <p>Graded feedback from instructor and comments from client/peers.</p>	<p>UDL: Weekly online video exercises.</p> <p>Watch a video – answer questions.</p> <p>Status reports will cover – Review of Marketing plan, competitive review.</p> <p>IMC – theme and logo/objective.</p> <p>Media plan/budgeting.</p> <p>Observe and critique a company's IMC plan to be better prepared to design their own.</p> <p>Create and design a print ad individually to prepare for group project creative process.</p> <p>Online discussions.</p>	<p>Pearson Education's – MyMarketingLab</p> <p>Moodle</p> <p>Client information, library and online resources.</p> <p>Company website and media impressions/publicly available advertising campaigns.</p>
Integration	<p>Students will integrate their knowledge to develop a unique IMC plan (advertising and promotion plan) for a pre-specified organization.</p> <p>Students will integrate their knowledge to be able to differentiate between honest environmental/sustainability claims and greenwashing in an organization's IMC.</p>	<p>Assemble status reports into a final IMC plan where students integrate earlier feedback and deeper knowledge of all topics covered during the semester.</p> <p>UDL: Prepare a narrated PowerPoint or video presenting report.</p> <p>Online discussions.</p>	<p>Assemble status reports into a final IMC plan where students integrate earlier feedback and deeper knowledge of all topics covered during the semester.</p> <p>UDL: Prepare a narrated PowerPoint or video presenting report.</p> <p>Online discussions.</p>	<p>Moodle</p>

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Taxonomy of Significant Learning Components	Procedures for Evaluating Student Learning (Assessment)			Resources
	Learning Goals for Course	Learning Activities		
Human Dimension	<p>Students will be confident that they can contribute and develop a unique IMC plan to assist with an organization's IMC needs.</p> <p>Develop an understanding of self's strengths and weaknesses of working with others. Some students will develop strategies for effective leadership/others for effective followership – all to develop efficient teamwork skills.</p> <p>Understand the advantages of interacting with a group in analyzing the marketing environment and determining the appropriate marketing mix for the target market.</p> <p>Develop an appreciation for group dynamics, group decision-making and the variety of relationships that may evolve during the decision-making process when working within a group.</p> <p>Self-critique of own applications.</p> <p>Evaluate self and peer effort and contributions to group assignments.</p> <p>Citizenship: Students will be more empowered to see through false/deceptive advertising claims and to live and be guided by ethical principles.</p> <p>Develop an understanding and appreciation of ethical applications and practices in marketing.</p>	<p>Peer-evaluations and self-assessment of team work/contribution.</p> <p>Written reflection assignments. Personal Growth category: Did you experience any difficulties working with others in your group or with the client? Experiencing difficulties or challenges can lead to important learning opportunities about your strengths, weaknesses, skills, behavioral tendencies, emotional responses etc. Please describe any strengths, weaknesses, skills, behavioral tendencies, assumptions, or emotional responses that became apparent throughout the semester working with your group.</p> <p>Civic Engagement category: The limited impact of a service project with a community partner (IMC plan for a small division/company/nonprofit) can make you more aware of the need to work on more fundamental, systemic issues. Trying to accomplish the class goals of designing an IMC plan with the client's specific marketing goals may sometimes be challenging. Was your group successful in meeting the goals of the client? In the future, would you need to change your approach? If so, how? Would it be easy or difficult to change? Why?</p> <p>Academic Enhancement category: Challenges putting theory into practice can teach you about the true complexities of a seemingly "simple" academic concept. What academic concepts were utilized in the project? List at least two and describe.</p> <p>For each category, please also comment on: What did you learn about yourself? How did you learn about it? Why does it matter? What would you have done differently (if anything) looking back at this experience?</p> <p>Pre/post assessment of sustainability concepts and terms.</p>	<p>Online written reflection assignments.</p> <p>Group-learning contracts outlining policies, procedures and penalties regarding group work (Barkley, 2009, Exhibit 9.1)</p>	<p>Instructor welcome email/video and online forums.</p> <p>Story of stuff: www.storyofstuff.com</p> <p>Documentary Waste = Food: http://topdocumentaryfilms.com/waste-food/</p> <p>Link to current Sustainability business example. https://www.youtube.com/watch?v=uw96ei2V6-4#t=239</p>
Caring Goals	<p>Develop new values of sustainable IMC and how corporations manage their identities through communication.</p> <p>Develop new values for the importance of ethics and sustainability – both in personal life and in their careers.</p> <p>Caring about client's needs and goals based on the current marketing and environmental factors.</p>	<p>Students will have to incorporate sustainability strategies in their IMC plans.</p> <p>Online discussion.</p>	<p>Online survey instrument</p>	

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Taxonomy of Significant Learning Components	Learning Goals for Course	Procedures for Evaluating Student Learning (Assessment)	Learning Activities	Resources
Learning how to learn	Become a Self-Directed Learner To be able to find self-motivation through identifying topics of personal interest and apply them to IMC.	First-day of class reflection Q's: Who are you? Why are you here? Where are you going? What do you want? Based on Stephen Carroll's prompts for students to become more aware of their own life goals and how their current activities and habits prevent them from achieving these goals (D. Fink, 2013, p. 60.) Graded feedback on narrated presentation – using a rubric as the assessment tool.	Reflection on readings, movie clips, discussion etc. Deconstruct quizzes/exams etc. Individual presentation – narrated PowerPoints or video of assigned topic (critique an IMC plan). Online gallery of achievements – students post their accomplishments online. Expected and surprising findings.	Carroll's You Tube video: youtube.com/user/learninghabits/videos Part 1 and 2 Online narrative PowerPoints and additional supplemental video lectures/examples.

Appendix B. Pre- and Post-Survey

Please indicate which of the following statements best describes your level of interest in sustainability (Strongly agree – Strongly disagree)

I have a passion for sustainability.
I have considerable interest in sustainability.
I am neither interested nor disinterested in sustainability (neutral).
I have little interest in sustainability.
I have no interest in sustainability.

Please rate your level of agreement with the following statements (Strongly agree – Strongly disagree)

I make an effort to be knowledgeable about environmental issues.
I make an effort to be knowledgeable about sustainability issues.
My daily behavior reflects a concern about sustainability issues.
I value knowing that my food is grown locally.
I think about the carbon footprint of my choices.
I would like to learn more about sustainability while in college.

Please indicate the degree of importance you place on the following personal sustainability issues (Very important – Very unimportant):

Recycling
Minimization of waste being sent to the landfill
Choosing food based on its environmental impact
Water conservation
Purchasing environmentally friendly products
Energy conservation
Minimizing carbon emissions from transportation

Of the following, which did you know was an example of sustainable practices before taking this survey? (Please select all that apply.)

Selecting double-sided printing
Keeping indoor temperatures close to outdoor temperatures and dressing for that temperature

Limiting meat consumption
Using alternative transportation
Powering down electrical devices when not using them for more than 15 minutes
Reporting building issues to Facilities Services for repair
Taking short showers and turning off the water when shampooing and conditioning
Turning off the lights when you are the last one out of a room
Opening windows only when outdoor temperatures and humidity levels are comparable to indoor temperatures and humidity levels

Do you recycle on a regular basis? Yes/No

If you do not recycle on a regular basis, please select the statement below that best describes why you do not recycle:

I choose not to because I do not care to.
I choose not to because I think there are negative consequences of recycling.
I choose not to because I do not think recycling makes a positive difference.
I do not know how to recycle properly.
Recycling is inconvenient for me.
Other? (added by current authors).

Sustainability Literacy Measures

Corporate social responsibility implies a commitment to triple bottom line reporting, which includes

Three forms of financial reporting.
Environmental, social, and financial performance.
Offering health, dental, and vision care to employees.
Incorporating community, labor, and government representatives on the board of directors.

What is meant by the term “carbon footprint”?

The age of an item found at an archeological site
The carbon left on the ground each time you take a step
The size of the carbon chain in a given quantity of gasoline
The greenhouse gasses released by burning fossil fuels for electricity