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Sustainability in the Business & Marketing Curriculum: Exploratory Study

Introduction

The first sentence of the call for papers for the Academy of Marketing Conference 2017 asserts that marketing is increasingly seen as a force for good, particularly in connection with building awareness of environmental issues and sustainability. In this paper we focus on the education of business students, and particularly marketing students, in issues to do with sustainability. The primary purpose of this paper is to report on an empirical investigation of the beliefs and perceptions of our own students with respect to sustainability. This investigation is planned to be a benchmark study, so that we can track changes in students' beliefs and perceptions as sustainability issues are further embedded within the curriculum.

While environmental sustainability has been a matter of widespread interest and concern for many years, the 2015 Paris Agreement within the United Nations Framework Convention on Climate Change (UNFCCC) can be regarded as the most significant development in recent history. In October 2016 the Paris agreement achieved entry into force, having been ratified by 109 of the 197 Parties to the Convention. The central aim of the Paris Agreement is to strengthen the global response to the threat of climate change; the goal is to restrict global temperature rise to no more than 2 degrees Celsius this century, while making efforts to restrict global temperature rise to no more than 1.5 degrees Celsius (UN, 2015).

Given the prominence received by sustainability at the political level, it is not surprising that business schools are being encouraged to include it explicitly within the curriculum. Business school accrediting bodies mandate the inclusion of sustainability in the business curriculum (see appendix for extracts from accrediting body requirements).

Sustainability in Business & Marketing Education

Universities are increasingly recognized as having a role as change agents in addressing long-standing problems of indifference and inaction regarding climate change impact, environmental protection and sustainability (De la Harpe & Thomas, 2009). Successful strategies for embedding sustainability content into curricula appear to be grounded in a clear understanding of the knowledge and attitudinal base from which students start studying the themes and how studies change their knowledge, attitudes and beliefs over time (Buissink-Smith, Mann, & Shephard, 2011). However these studies have not tracked long-term effects, and there is European evidence indicating that a sustainability orientation may not be reflected in actual behaviours once students enter the workplace and “vanishes with business experience” (Kuckertz & Wagner, 2010: 524).

The theory of generational replacement (Wray-Lake, Flanagan, & Osgood, 2010) suggests that changes in adolescent attitudes are indicators of long term social change, thus if changes are evident in attitudes of students as they progress through their studies, this may indicate the prospect of changes within society as a whole. Prior research has found that students “undergo profound changes in epistemological assumptions and in identity during their undergraduate years” (Myers & Beringer, 2010: 51), thus changes in knowledge, attitudes and behaviours regarding sustainability and related issues are possible as students progress through their studies. The nature of these changes has not been examined within the business studies context. The findings reported here indicate that achieving significant long-term changes in behaviours may be a substantial challenge for curriculum design.

Students are subject to many other influences than the formal education process. Peattie & Peattie (2003) argue that any behaviour change messages embedded in the curriculum will be

subject to a range of competing messages and social encouragement or discouragement through peer and family influences as well as perceived and actual behavioural norms. Families, through socialization and influence, are known to influence the environmentally-relevant behaviours of adolescents, but the magnitude or duration of this influence is unknown as research has been concentrated on under-18 year olds living at home (Grønhøj & Thøgersen, 2009, 2012).

Painter-Morland et al (2015) found signs that sustainability issues are becoming a mainstream concern in European business schools. Doh & Tashman (2014) suggested that there are three different approaches to sustainability education in business schools: introducing sustainability concepts into existing taught modules; developing specialist modules dedicated to sustainability; or, developing majors and minors on sustainability. Cultural differences appear to be significant in connection both with the design of sustainability education, and the response of students to the teaching of sustainability issues (Doh & Tashman, 2014). The most common method of teaching sustainability, regardless of country, is case studies (Wu, Huang, Kuo, & Wu, 2010). However, research has found a learning-application gap in connection with teaching sustainability; knowledge acquisition about sustainability does not reliably lead to behavioural change among students. Lozano and Young (2013) highlighted the need to assess the impact that current sustainability-related curricula have on students' future behaviour in their professional and personal life.

Sustainability has been raised as a specific concern for marketing professionals, scholars and educators. For example, Hill & Martin (2014: 27) argue for: "an educational imperative across all [marketing] students and managers to ensure that they leave classrooms with an understanding of their places within and impact on bioeconomic systems occupied now and in the future". In the field of marketing education specifically, Bridges & Wilhelm (2008) have pointed out that marketing has often been seen as part of the problem rather than part of the solution in connection with environmental sustainability. They advocate a holistic approach to sustainability in the marketing curriculum, a marketing curriculum that "reimagines the marketing profession and what it means to be a marketing educator ... that espouses a sustainability worldview" (Bridges & Wilhelm, 2008, p44). Borin & Metcalf (2010) explicitly built on the work of Bridges & Wilhelm (2008), by providing a wide range of suggested interactive learning activities to be used on a marketing sustainability module.

There is evidence that sustainability specifically, in contrast to marketing ethics and corporate social responsibility (with which sustainability is often associated), has only arrived relatively recently in the marketing curriculum and remains a relatively neglected topic (Nicholls, Hair, Ragland, & Schimmel, 2013; Weber, 2013). For example, in their study of deans and heads of marketing departments at AACSB accredited schools in the USA, Nicholls et al (2013) consistently found that sustainability figured less prominently than ethics or CSR in the marketing curriculum. One illustration of this is that ethics figured as "required course content" in 57% of undergraduate marketing programmes, with comparative figures of 26% for CSR, and only 19% for sustainability.

Methodology

The empirical study can be characterised as an exploratory single-institution case study conducted at the authors' own business school employing the analysis of documents and the administration of a student questionnaire. The university of which the business school is a part, in common with many others (Lozano & Young, 2013; Wright, 2004), has made an explicit commitment in its teaching and learning strategy to embed environmental sustainability issues in the curriculum, and to ensure that all graduates have explored environmental sustainability

issues relevant to their field of study. The case study institution is a large business school comprising part of a post-1992 university located in south-east England.

Prior to undertaking the empirical phase of the project we collected and read the module guides for taught undergraduate modules that engage substantially with sustainability issues within the School. Subsequently, to investigate the beliefs and attitudes of students in connection with sustainability issues, a questionnaire was administered in class with the permission and assistance of several lecturers. The aims of the questionnaire were to explore student beliefs about how much they know and how they behave, and student attitudes towards, a range of sustainability issues. Hence, an exploratory and largely descriptive quantitative approach was adopted (Bell & Waters, 2014; Bradley, 2007). In addition, according to Buissink-Smith et al. (2011) the self-reported questionnaire is the most popular way to measure affective attributes. Since we also wanted to investigate whether there were any measurable differences in beliefs and attitudes between first and final year students, the questionnaire was administered in a range of different classroom situations, and to both first and final year students. First year students were approached in their first semester and final year students during their final semester. At this stage in their studies first year students had not yet engaged explicitly with sustainability issues in the university curriculum, while final year students had engaged with sustainability issues to the maximum extent possible within the School curriculum.

The questionnaire was designed based on scales used in previous studies (Kaplowitz & Levine, 2005; Lidgren, Rodhe, & Huisingh, 2006; Marcell, Agyeman, & Rappaport, 2004; Michalos, Creech, McDonald, & Kahlke, 2011; Shephard, Mann, Smith, & Deaker, 2009) which cover all the aspects of sustainability commonly cited in the literature. The first set of nine questions tested students' familiarity with sustainability areas (see Table 1). Students were asked whether they were familiar with different terms relevant to sustainability (response scale from 1 'not at all familiar' to 5 'very familiar').

The remaining questions focused on students' knowledge, attitudes, behaviours, normative influences, perceived self-efficacy, and optimism versus pessimism regarding the future (see Table 2). To capture their responses, a five-point Likert scale was used, with anchor points of 5 = strongly agree and 1 = strongly disagree.

A non-probability, convenience sample of 153 students was selected (McGivern, 2013) with the following characteristics: 47.6% male and 52.4% female; 50.3% first year and 49.7% final year students; 48.4% studying for a marketing major and 51.6% a non-marketing major (thus, 74 marketing students and 79 non-marketing students).

We ran descriptive statistics to investigate respondents' awareness, attitudes and behaviours and we compared means using independent samples t-test to identify the statistically significant differences between first and third year students at 5% significance level. The findings are presented in Tables 1, 2 and 3.

Findings

The preliminary reading of relevant module guides showed that all of the final year students would have been exposed to at least one module with substantial sustainability content during their time at university, in accordance with the university policy that all graduates should have explored environmental sustainability issues relevant to their field of study. For example, marketing students study 'Sustainability Marketing' which includes coverage of ethical marketing, sustainable marketing, social marketing, green marketing and corporate social

responsibility (CSR). The key sustainability issues addressed are sustainable development, sustainability marketing and eco-orientation. Other important issues such as environmental sustainability, social sustainability, conservation, climate change and energy conservation receive little or no coverage within the curriculum.

Findings from the questionnaire, for both first and final year undergraduate students, show superficial awareness of the impact of individual contributions to sustainability and environmental challenges (see Table 2). Participants believe that they have little personal control over important sustainability matters and count on others, mainly the government to solve these major issues (see Table 2). In addition, they do not really consider changing their lifestyle to protect the environment (see Table 2). We found very little differences between first and final year students despite their exposure to sustainability teaching during their University studies (see Table 1 & 2 for statistically significant differences marked with an asterisk *).

In terms of self-reported knowledge no significant differences were found between first and final year students (Table 1).

Table 1: Students' self-reported familiarity with terms and their meaning (n=153)

| Statement sets <i>* denotes significant difference between cohorts</i> | First Year | | Third year | |
|---|------------|----------|------------|----------|
| | Mean | Std. Dev | Mean | Std. Dev |
| Familiarity with the term: | | | | |
| T1 Economic Sustainability | 3.40 | 1.16 | 3.68 | 1.08 |
| T2 Environmental sustainability | 3.81 | 1.18 | 3.97 | .95 |
| T3 Social sustainability | 3.31 | .93 | 3.59 | 1.06 |
| T4 Sustainable development | 3.55 | 1.12 | 3.55 | .94 |
| T5 Conservation | 3.62 | 1.19 | 3.46 | 1.19 |
| T6 Climate change | 4.30 | 0.94 | 4.11 | 1.09 |
| T7 Climate change adaptation | 3.68 | 1.03 | 3.52 | 1.21 |
| T8 Environmental protection | 4.03 | 1.06 | 4.07 | 1.09 |
| T9 Energy conservation | 3.85 | 1.14 | 3.76 | 1.23 |

Table 2 shows that there is a significantly higher level of agreement for the third year cohort compared to first year students with statements S33 “I avoid buying from a company which shows no concern for the environment” (p=.003) and S9 “The government should take an active role in the global effort to curb the problem of rapid climate change” (p=.000). In addition, there is a statistically significant difference between the two year groups in self-reported knowledge on statement S6 “Carbon dioxide is the primary gas responsible for the greenhouse effect” (p=.013); perhaps alarmingly, the first year group seem to be better informed on this matter than the third year group.

There are very few statistically significant differences between the responses of the first and the third year students. One way of interpreting these findings is that the current curriculum has not been effective in altering the knowledge, attitudes, beliefs, perceived norms, current and future behaviours and optimism/pessimism of students at this business school. However, this is an exploratory study and the evidence is by no means conclusive. It is important to remember that the research design means that we are not comparing the responses of the same students before and after their engagement with the business school curriculum. Rather, we are comparing two different student cohorts, one very early in their studies, and the other at the end of their studies.

Table 2: Students self-reported knowledge, personal interest, perceived norms, current behaviour, responsibility for action and optimism versus pessimism regarding the future (n=153)

| Statement sets * denotes significant difference between cohorts | | First Year Mean Std. Dev | | Third Year Mean Std. Dev | |
|--|---|-----------------------------|------|-----------------------------|------|
| Knowledge (correct or incorrect) between cohorts | | | | | |
| S1 | Human induced climate change is occurring at some level | 4.15 | .79 | 4.25 | .77 |
| S2 | The greenhouse effect is caused by an ozone hole in the earth's atmosphere | 3.62 | .98 | 3.55 | 1.16 |
| S4 | Every time we use coal, oil or gas we contribute to climate change | 4.19 | .77 | 4.04 | .93 |
| S5 | My personal computer use contributes to climate change | 3.49 | 1.03 | 3.48 | 1.08 |
| S6 | Carbon dioxide is the primary gas responsible for the greenhouse effect * p=.013 | 3.69 | 1.02 | 3.27 | .98 |
| Personal interest and perceived norms | | | | | |
| S10 | Environmental issues are very important to me | 3.69 | 1.00 | 3.88 | .99 |
| S18 | I often look for signs of ecosystem deterioration | 2.44 | 1.07 | 2.58 | 1.24 |
| S8 | It is probably unrealistic to expect ... students to alter their behaviour to prevent global climate change | 3.20 | .93 | 3.10 | 1.27 |
| S12 | The average ... student is not at all concerned with the issue of climate change | 3.22 | .86 | 3.45 | .99 |
| Self-reported current behaviour | | | | | |
| S13 | I save water by taking a shower instead of a bath (in order to spare water). | 3.70 | 1.21 | 3.49 | 1.42 |
| S14 | I always switch the light off when I don't need it. | 4.08 | 1.20 | 3.95 | 1.40 |
| S15 | I walk or bike to places instead of going by car | 3.04 | 1.47 | 2.97 | 1.51 |
| S16 | At home I try to recycle as much as I can | 3.84 | 1.10 | 3.77 | 1.27 |
| S17 | I have changed to environmentally friendly light bulbs | 3.53 | 1.29 | 3.39 | 1.43 |
| S33 | I avoid buying from a company which shows no concern for the environment *p=.003 | 2.59 | 1.25 | 3.16 | 1.21 |
| Responsibility for Action | | | | | |
| S9 | The government should take an active role in the global effort to curb the problem of rapid climate change *p=.000 | 4.07 | .89 | 4.60 | .57 |
| S19 | We must set aside areas to protect endangered species | 3.92 | 1.09 | 4.08 | .96 |
| S20 | Economic development, social development and environmental protection are all necessary for sustainable development | 4.04 | .89 | 4.15 | .94 |
| S21 | Overuse of our natural resources is a serious threat to the health and welfare of future generations | 4.11 | .83 | 4.05 | .89 |
| S22 | Taxes on polluters should be increased to pay for damage to communities and the environment | 3.74 | .95 | 3.82 | 1.22 |
| S30 | We, as a society, should radically change our way of living to offset the danger of climate change | 3.48 | .99 | 3.75 | 1.00 |

Table 3: Responses of marketing students to selected statements (n=74)

| Domain | Statement | Net agree %* | Mean | Std. Dev. |
|----------------|---|--------------|------|-----------|
| Knowledge | The greenhouse effect is caused by an ozone hole in the earth's atmosphere | 43.2 | 3.57 | .87 |
| Knowledge | Carbon dioxide is the primary gas responsible for the greenhouse effect | 25.0 | 3.30 | 1.01 |
| Interest/norms | Environmental issues are very important to me | 62.1 | 3.94 | .89 |
| Interest/norms | It is probably unrealistic to expect ... students to alter their behaviour to prevent global climate change | 34.3 | 3.42 | .97 |
| Behaviour | I walk or bike to places instead of going by car | -5.7 | 3.00 | 1.49 |
| Behaviour | I avoid buying from a company which shows no concern for the environment | 13.8 | 3.22 | 1.19 |
| Responsibility | The government should take an active role in the global effort to curb the problem of rapid climate change | 91.7 | 4.54 | .60 |

*Note: The 'net agree' figure is the difference between the percentage who agree strongly or agree, and the percentage who disagree strongly or disagree.

Table 3 examines the responses of marketing students (only) to seven of the statements in the questionnaire. These seven statements have been selected in order to provide a succinct overview into the perspective on sustainability issues of the marketing students in our sample. For each statement, in addition to the mean and standard deviation, we have calculated a 'net agree' figure to give an impression of where the balance of opinion lies. For example, on the question "I walk or bike to places instead of going by car", 38% of respondents agreed or agreed strongly, 43.7% disagreed or disagreed strongly, giving a 'net agree' figure of -5.7%.

The story emerging from Table 3 is of a group of marketing students who have uncertain knowledge about sustainability issues. They are more convinced that the greenhouse effect is caused by an ozone hole (which is false) than they are that carbon dioxide is the main greenhouse gas (which is true). They say that environmental issues are very important to them, but they consider it unlikely that their fellow students will act to prevent climate change. Even though they think that environmental issues are important, they are reluctant to alter their own behaviour; there is no evidence of a shift away from using the car, and only limited evidence that their buying decisions are influenced by environmental issues. Strikingly, virtually all of the respondents attribute responsibility for tackling climate change to the government. We saw in the previous section that there are very few significant differences between 1st and 3rd year students in their responses, and this is equally true of this sub-sample of marketing students. In summary, it suggests that our marketing students have unreliable knowledge of sustainability issues, claim to be concerned about the environment but seem unwilling to act in accordance with their concerns, and are inclined to pass responsibility to the government rather than take responsibility themselves.

Conclusion, Limitations & Implications

In our review of the literature on sustainability education we found evidence from prior research of a learning-application gap, whereby knowledge acquisition does not reliably lead to behavioural change (Lozano & Young, 2013; Wu et al., 2010). Our own study is somewhat more pessimistic, showing not only a gap between attitudes and action, but also little knowledge development in the domain of sustainability during the course of a business or marketing undergraduate education. There is very little evidence of differences between first and final year students' knowledge, awareness, attitudes or behaviour in respect of sustainability issues. Yet this study was conducted in an institution that emphasises sustainability issues in its mission statement and insists that sustainability should be embedded in the curriculum. Nor were significant differences found between marketing students and business students studying for other majors. Nicholls et al (2013) found that sustainability is a relative recent addition to the marketing curriculum and still somewhat neglected in comparison with ethics and CSR. Similarly, our own study suggests that there is considerable work to be done if sustainability is to be genuinely *and effectively* embedded in the marketing curriculum.

An obvious limitation of this study is that it is a single-institution case study, so that attempts to generalise from the findings would be inadvisable. It would be valuable to replicate the study at other institutions, and discussions are underway to extend the study in this way. A further limitation is that, in terms of the analysis of differences between 1st and 3rd year students, this study looked at two different cohorts (i.e. those in their 1st and 3rd years in 2015/16 academic year), not at the same cohort. The aim is to repeat this study in future years so that the same cohort can be tracked over time, which will give a more accurate picture of the development of student knowledge, perceptions and attitudes during their time at university.

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Appendix: References to sustainability from business school accrediting bodies

The following quotations from the accreditation principles of three major business education accrediting bodies show that sustainability is regarded as an essential component of the business school curriculum, and is often associated closely with business ethics and corporate social responsibility.

AACSB (Association for the Advancement of Collegiate Schools of Business): *Core values and guiding principles* —“The school must demonstrate a commitment to address, engage, and respond to current and emerging corporate social responsibility issues (e.g., diversity, sustainable development, environmental sustainability, and globalization of economic activity across cultures) through its policies, procedures, curricula, research, and/or outreach activities” (AACSB, 2013, p6)

AMBA (Association of MBAs): *Curriculum breadth and depth*—“all programmes should demonstrate that students acquire a significant understanding of ... (xi) ... the impact of sustainability, ethics and risk management on business decisions and performance, and on society as a whole” (AMBA, 2016, p8)

EFMD (EPAS) (European Foundation for Management Development): *Programme delivery and operations*—“Ethics, responsibility and sustainability ... How is ERS incorporated into the programme in terms of: Programme objectives; Intended Learning Outcomes; Curriculum and course design; Pedagogy (e.g. project work supporting social causes); Assessment regime” (EFMD, 2016, p18).