

From Believers to Disbelievers: Understanding Student Diversity in Sustainability Education

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Abstract

Products with sustainable attributes cannot be marketed in the same way, just as sustainability education demands tailored pedagogical approaches. Sustainability education centers on promoting responsible choices and consumption in relations to Sustainable Development Goals (SDGs). Elements of sustainable education are being introduced to different tertiary curricula. While much of the current research discusses broad teaching and learning approaches, less attention is given to how individual differences among tertiary students receiving sustainability education affect their perceptions, learning processes, and real-world behaviors. Seeing tertiary students as consumers in their daily lives, this work expands the consumer model developed by Dalsace and Challagalla (2024), classifying students into three groups: true believers, agnostics and disbelievers of sustainability concepts. Drawing from our experience in implementing curriculum changes by explicitly incorporating environmental, social, and governance (ESG) concepts into various related marketing topics and refining the assessment items accordingly, we critically assess how different types of students learn and transfer the essential content of sustainability education in different assessment tasks. Our experiences reveal that different student types demonstrate significant differences in study strategies, perceived importance of learning materials and choices made in assessment. Our findings highlight the limitations of a mass approach to sustainability education, and provide practical insights in understanding the effective learning incentive to each student group and designing multiple assessments that fit the characteristics of different students.

Keywords: sustainability education, learning incentive, individual differences, tertiary education, curriculum change

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Introduction

Sustainability Education involves teaching individuals to make informed decisions to drive societal changes and protect our planet (Bodkin & Stevenson, 2007). Education for Sustainable Development is important in many business curricula, as it is seen as a prominent way to nurture future leaders to attain the Sustainable Development Goals (SDGs) (UNESCO, 2025). Not only is education itself named as one of the SDGs, but SDG number 12, “Ensure sustainable consumption and production patterns,” clearly states that by 2030, people everywhere shall “have the relevant information and awareness for sustainable development and lifestyles in harmony with nature,” which is expected to be accomplished through global citizenship education and education for sustainable development (United Nations, 2015). In Hong Kong, the local government has also set an agenda for universities to include global citizenship education in their curricula and to prepare students to address Hong Kong's international responsibilities (Skidmore, 2012).

Currently, ethical training is seen as an important part of marketing education (Bodkin & Stevenson, 2007). This covers a wide range of topics, including ethical decision making and specific areas such as inclusion and diversity, and sustainability. While much current marketing education utilises case studies (Bodkin & Stevenson, 2007) to train students as future business leaders, little research has been done on the influence of marketing ethics education on students as consumers (El-Sherbiny et al., 2023), which is of higher personal relevance to a larger population of students. While current curricula often treat sustainability education as a standalone topic, introducing students to the concept of recycling and responsible consumption, insufficient effort has been made to analyse students as consumers using the full range of consumer behaviour theories established by marketing scholars.

Our paper aims to bridge this gap by applying a relatively new consumer model developed by Dalsace and Challagalla (2024) and published in Harvard Business Review to investigate students' responses to a recent marketing curriculum change that incorporates sustainability education across different marketing topics as an integrated approach. In the current research, we adopt a case study approach, categorizing student responses according to Dalsace and Challagalla's (2024) framework. Specifically, our research is driven by the following question: To what extent, consumer theory related to sustainability could be applied in explaining students learning behaviour?

Literature Review

The Ethical Component in Marketing Education

Ethics is now an important part of many marketing curricula. It is widely agreed that marketing students' ethical values can be shaped by education (Bodkin & Stevenson, 2007). For example, business schools accredited by the American Assembly of Colleges and Schools of Business (AACSB), one of the major accreditors of top business schools, are required to offer ethical training to students, either as a full course or as part of other courses. Under this trend, many marketing courses are being restructured to include ethical training alongside traditional marketing education, which mainly focuses on understanding different marketing strategies, writing marketing plans, and designing marketing activities. As stated by El-Sherbiny et al. (2023), incorporating ethics into marketing education aims to nurture future marketing leaders who truly understand a broad range of sustainability practices and make ethical decisions.

Currently, different approaches are used in marketing ethics education (El-Sherbiny et al., 2023). While some institutions list ethics as a standalone topic within the marketing curriculum, others are pushing for a wider integration of ethics across different marketing topics. Uzorka et al. (2024) advocate for an integrated approach to marketing ethics education, as it develops personal relevance and connection. Accordingly, Bodkin and Stevenson (2007) further suggest that students' ethical perceptions are not simply developed by more class time. Such development needs to involve both active class time discussing marketing ethics and passive time for personal reflection on ethical dilemmas within a case study approach.

However, integrating ethical content into the marketing curriculum might not necessarily lead to the development of ethical values in students (El-Sherbiny et al., 2023). The current approach that trains marketing students to become future market leaders could be quite detached from the interests of many business students who take marketing as an elective subject and have less interest in pursuing a marketing career. Considering sustainability education as a specific area of ethical marketing education, Uzorka et al. (2024) argued that the efficacy of current ethical training in marketing education for fostering a true feeling of responsibility toward sustainability-related projects is questionable, given that much current sustainability education in the marketing field remains focused on building students' awareness, which is a rather preliminary stage in the education process.

To address this, a unique approach is to teach the current generation of students as future consumers (Babu et al., 2024). Unlike the conventional approach that positions ethical marketing education as an essential component for future leaders, seeing students as future consumers creates a stronger connection between ethical marketing education and students, as they are all likely to be shoppers every day in the near future, if not now. This approach is currently quite common in finance education. Financial literacy programs, which are considered an important part of financial education (Mancone et al., 2024), rather than training students to make financial decisions for a company, teach students topics such as budgeting, personal financial planning, and the use of different financial products, which are highly relevant. Although topics on sustainable consumption are also common in curricula, they are seldom linked to marketing education.

At such, many existing models developed by academics in the marketing field are rarely applied to describe students' consumer behaviour. Pandowo et al. (2021) once reported their findings on sustainability behaviour and students' personal characteristics, suggesting a complex relationship between a number of individual traits. While personality dimensions, such as openness and agreeableness, affected sustainable behaviour in college students, attitude might not be enough to drive sustainability behaviour. During the purchase decision making process, happiness and satisfaction were found also influential in driving sustainable behaviour. Babu et al. (2024) presented another study to investigate the relationship between environmentally conscious and sustainable consumption behaviour. With a majority of business college students as respondents, their study suggested that environmental consciousness generally predicted purchase behaviour for green products, yet economic considerations also played a role in the decision-making process.

Categories of Sustainability Consumption

Our current work aims to bridge the concept of sustainability education with more specific marketing research in describing consumer behaviour. Customers value sustainability

features differently when they consider a purchase. Dalsace and Challagalla (2024) in their seminal work grouped customers into three broad categories, namely the true believers, agnostics, and disbelievers, and used different colours to represent each category. In an education context, similar findings are reported by Pandowo et al. (2021), who found that college students' sustainability behaviour varies by personality and other individual characteristics.

True believers are green customers who place a high value on sustainability (Dalsace & Challagalla, 2024). When they make purchase decisions, they are keen on purchasing sustainable products, even if it means sacrificing product performance and incurring higher cost.

Agnostics, or blue customers, understand the importance of sustainability, yet they also value product performance. If they do not need to sacrifice much in terms of performance and price, they will prefer to purchase sustainable products. Overall, they place a moderate value on sustainability. For example, agnostic customers will not buy an electric car primarily to prevent climate change. Instead, they buy an electric car to fulfil their transportation needs; reducing carbon emissions is only an ancillary benefit. That means customers will consider sustainability features only as an additional value on top of traditional benefits like product performance, convenience, and price. As stated by Babu et al. (2024), economic considerations affect students' choices of green products, even when they are environmentally conscious.

Gray-category customers are disbelievers in sustainability concepts. They do not care about sustainability, and they even hesitate to prioritise it based on its cost and perceived necessity. Not only do they not see any positive reasons for sustainability, but they often question whether there are hidden costs for sustainability attributes that they should not bear. Promotion of sustainability-related attributes could therefore lead to negative effects on these customers.

As suggested by Dalsace and Challagalla (2024), there are different strategies based on the three categories of interactions between sustainability and traditional benefits. First, sustainability could be independent of traditional product benefits, meaning that the impact of sustainability measures does not transfer to product quality and durability. In such a case, sustainability elements could only be positioned as a temporary premium to true believers and agnostic customers. A dissonance relationship explains the situation in which the sustainability elements of a product reduce performance or increase cost. In such a case, only a limited number of green customers would be willing to accept this offering in exchange for a performance sacrifice. Resonance refers to a situation where sustainability enhances performance. It is assumed that all customers can be targeted with resonant sustainability features. Still, in some Asian countries, brands should also promote the economic benefits to trigger personal relevance to sustainability initiatives (Babu et al., 2024).

Methods

This research presents a case study of an introductory marketing course at a tertiary institution in Hong Kong. As suggested by Yin (2014), case study research is effective for education programme evaluators to consider and reflect on the usefulness and relevance of a curriculum change. Our previous research has identified four factors contributing to a student's learning approach during transition periods, based on factor analysis of previously

validated questionnaire inventories for learning style (Chow et al., 2024). In the current research, we present our observations and experiences based on the same factors: choice of subjects, study methods and contents, sense of competition, and perception of instruction strategies.

The Case Institution and the Course

Since 2022, the institution's business division has established a Research Centre for Green Business with government funding. Since then, the institution has been encouraging its members to conduct research on green practices in the areas of accounting, supply chain management, and consumer behaviour. Not only has the research centre hosted public seminars and driven research collaboration, but it also has advocated for many curriculum changes within the institution to transfer knowledge to its students and create a greater impact on the institution.

In 2024, a curriculum change was proposed to incorporate environmental, social, and governance (ESG) content into the introductory marketing subject outline. The course is offered to around 2000 students every year. The majority of students are first-year business students across different business disciplines, including marketing, accounting, finance, and human resources, as well as students from other disciplines choosing this subject as an elective.

Before the curriculum change, green marketing, as a concept that advocates for minimizing the negative impact of products on the environment, was covered exclusively in a particular lecture related to Ethics in Marketing and Social Responsibility. To better reflect the growing importance of sustainability concepts in marketing, the subject team aimed to incorporate additional related ideas across different topics explicitly. For example, the subject team integrated the concepts of “Environmentalism” and “Diversity, Equity, and Inclusion (DEI) in Marketing” within the marketing environment topic, discussed packaging and recycling in the marketing mix topic, explored “Natural Resources and Marketing” under the topic of international marketing issues, and addressed additional sustainability-related concepts in the topic of ethical issues. Apart from that, the subject team also added relevant suggested readings for students interested in gaining a deeper understanding of sustainability-related topics.

Discussion

Given a generally large student population and an increasing number of students from diverse backgrounds due to internationalisation (Skidmore, 2012), we observed that the student population includes true believers, agnostics, and disbelievers. In other words, the consumer theory proposed by Dalsace and Challagalla (2024) can explain certain aspects of student learning behaviour (Pandowo et al., 2021).

Based on our observation, agnostics comprise a majority of the population, and this group of students, in general, takes a pragmatic approach to sustainability education. They generally understand the importance of sustainability-related topics, and they also consider personal relevance, such as whether these concepts are going to be included in the assessment. It appears that they choose the course for other reasons, such as grading, instructor reputation, and suitability for their personal timetable.

From our teaching experience, we can identify true believers in sustainability-related topics. They may be personally engaged in non-credit-based sustainability initiatives outside of school, such as farm revitalisation projects, and are highly engaged with teaching content related to their sustainability interests. Although they do not represent a large percentage of the student population, some students consult related journal articles to supplement their points in assessments.

We also observed that there are disbelievers in sustainability education. There have been a few occasions when students voiced concerns about using class time for sustainability education in our marketing classes. Some students prefer that teachers cover marketing strategies, discuss more business cases, or spend time on exercises for tests and exams. Viewing content related to sustainability and marketing as separate areas of study, some students may tactically skip certain content in sustainability education. While Hong Kong's population is overwhelmingly Chinese, students may perceive some sustainability education topics, such as Diversity, Equity and Inclusion (DEI), as quite irrelevant, especially given a course focus on the Hong Kong market. This group of students would rather spend more time studying traditional marketing concepts.

Table 1

Summary of Student Characteristics in Sustainability Education

	True believers (greens)	Agnostics (blues)	Disbelievers (grays)
Choice of subjects	Seek additional learning experiences	Choose based on other subject attributes	View sustainability content as a waste of class time
Study methods and contents	Pursue additional content; seek opportunities to apply concepts	Study only content relevant to exams; use standard methods	Actively avoid sustainability-related content
Sense of competition	Indifferent; view it as personal interest/differentiation	Engage if it improves grades/career prospects	Tactically skip to focus on traditional marketing
Instruction strategies	Indifferent (prefer mix of Independence & Resonance)	Respond to a mix of Independence & Resonance	Respond best to Resonance

Relevant Instruction Strategies

Given the identified categories of students, instructional strategies could be developed based on Dalsace and Challagalla (2024). Of the three marketing strategies introduced, “Dissonance” is the least relevant in education and for marketing sustainable products. Adopting “Dissonance” in instructional strategies means presenting concepts as a “bitter pill” to swallow, despite low perceived personal relevance. A lack of personal relevance could lead to a failure to market education related to ethics (Uzorka et al., 2024).

A resonance approach rewards students for learning related content in sustainability education (Dalsace & Challagalla, 2024). Under this approach, teachers need to fully integrate the concepts and align elements of sustainability education with the learning objectives of the subject. This approach is similar to the integrated approach advocated by Uzorka et al. (2024). By viewing sustainability education as an important dimension, it is

pedagogically reasonable to include its elements in tests and exams as integral dimensions of subject content, rather than treating them as additional topics. This approach requires clear mention of sustainability-related concepts in the subject's intended learning outcomes, allowing students to expect that mastery of such concepts will lead to better results in the course.

The independence approach to sustainability education suggests that learning related content does not necessarily affect course outcomes. This includes providing additional learning resources that are explicitly stated to be excluded from assessments. Given that few students are true believers, the independence approach could stimulate further learning for students who are actively seeking personal meaning through sustainability education (Bodkin & Stevenson, 2007).

Conclusion

This study applied the consumer model of Dalsace and Challagalla (2024) to the context of sustainability education, demonstrating its utility in understanding diverse student responses within a tertiary marketing curriculum. By categorizing students as true believers, agnostics, or disbelievers based on their valuation of sustainability concepts, the analysis reveals significant differences in their learning behaviour's, study strategies, and engagement with assessment tasks. These findings underscore the limitation of a uniform, mass approach to teaching sustainability. Instead, they advocate for tailored pedagogical strategies, principally the resonance approach, which aligns sustainability learning with core course outcomes and assessments, and the independence approach, which provides supplementary resources for self-motivated learners. Ultimately, this paper contributes to the discourse on sustainability education by arguing for a more nuanced, student-centric framework that acknowledges and designs for learner diversity to enhance the effectiveness and personal relevance of ethical and sustainable development education in business programmes.

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