Marketing education for sustainable development

Chiara Hübscher
University of Twente, Enschede, The Netherlands and
Hamburg School of Business Administration, Hamburg, Germany

Susanne Hensel-Börner
Hamburg School of Business Administration,
Hamburg, Germany, and

Jörg Henseler
University of Twente, Enschede, The Netherlands and
NOVA Information Management School, Universidade Nova de Lisboa, Lisbon, Portugal

Abstract

Purpose – Given the pressing global challenges underpinning the United Nations' Sustainable Development Goals, marketing managers can no longer focus only on purely economic outcomes but must simultaneously respond to social and environmental concerns. This requires the teaching of new competencies in marketing education, as also reflected in today's accreditation requirements for business schools. Therefore, this paper aims to explore how current research into marketing education incorporates sustainable development.

Design/methodology/approach – Through a bibliometric literature review – examining 71 publications using the bibliographic coupling method – the current research front in marketing education is analysed.

Findings – This paper identifies seven trending topics in marketing education research that both highlight a currently prevalent sustainability gap in marketing education research and – when combined into a framework – help marketing education researchers and educators to address this gap.

Originality/value – This paper extends the already established concept of education for sustainable development to include the concept of marketing education for sustainable development (MESD) for the first time. The MESD framework combines its raison d'être with guidance on how sustainable development should be taught and what the learning objectives should be for future marketing managers.

Keywords Marketing education, Sustainable development, SDGs, Competencies, Bibliometrics

Paper type Literature review

Educación en marketing para el desarrollo sostenible

Resumen

Propósito – Dados los apremiantes retos mundiales que sustentan los Objetivos de Desarrollo Sostenible (ODS) de las Naciones Unidas, los directores de marketing ya no pueden centrarse únicamente en los resultados puramente económicos, sino que deben responder simultáneamente a las preocupaciones sociales y medioambientales. Esto requiere la enseñanza de nuevas competencias en la educación de marketing, como también se refleja en los requisitos de acreditación actuales para las escuelas de negocios. Por lo tanto, este documento explorará cómo la investigación actual sobre la educación en marketing incorpora el desarrollo sostenible.

Metodología – A través de una revisión bibliométrica de la literatura -examinando 71 publicaciones mediante el método de acoplamiento bibliográfico- se analiza el frente actual de la investigación en educación en marketing.

Resultados – En este artículo se identifican siete temas de tendencia en la investigación sobre educación en marketing que ponen de manifiesto una laguna en materia de sostenibilidad que prevalece actualmente en la investigación sobre educación en marketing y que, combinados en un marco, ayudan a los investigadores y educadores en educación en marketing a abordar esta laguna.

Originalidad – Este artículo amplía el concepto ya establecido de Educación para el Desarrollo Sostenible (EDS) para incluir por primera vez el concepto de Educación en Marketing para el Desarrollo Sostenible (EMDS). El marco EMDS combina su razón de ser con orientaciones sobre cómo debe enseñarse el desarrollo sostenible y cuáles deben ser los objetivos de aprendizaje para los futuros directores de marketing.

Palabras clave Educación en marketing, Desarrollo sostenible, ODS, Competencias, Bibliometría

Tipo de artículo Revisión de literatura

促进可持续发展的营销教育

摘要

目的 – 鉴于联合国可持续发展目标（SDG）所依据的紧迫的全球挑战, 营销经理不能再只关注纯粹的经济成果, 而必须同时应对社会和环境问题。这就要求在营销教育中教授新的能力, 这也反映在当今商学院的认证要求中。因此, 本文将探讨目前对市场营销教育的研究是如何纳入可持续发展的。

方法 – 通过文献计量学文献综述–使用文献耦合法对71份出版物进行研究–分析了当前市场营销教育的研究前沿。

研究结果 – 本文确定了营销教育研究中的七个趋势性课题, 这些课题既突出了当前营销教育研究中普遍存在的可持续发展差距, 又–当结合成一个框架–帮助营销教育研究者和教育者解决这一差距。

原创性 – 本文扩展了已经建立的可持续发展教育（ESD）的概念, 首次将可持续发展的营销教育（MESD）的概念纳入其中。MESD框架将其存在的理由与指导如何教授可持续发展以及未来营销经理的学习目标相结合。

关键词 营销教育, 可持续发展, SDGs, 能力, 文献计量学。

文章类型 研究型论文

1. Introduction

Overcoming sustainability challenges is essential to protect our planet and safeguard livelihoods while meeting the needs of the world's current and future populations [United Nations Department of Economic and Social Affairs (UNDESA), 2021; United Nations General Assembly (UN), 1987]. Consequently, accrediting bodies for higher education require that business schools "respond to the business world's changing needs by providing relevant knowledge and skills" (AACSB Business Accreditation Standards, 2020) and "to be actively engaged in promoting business ideas and solutions to sustainability challenges" (EQUIS Standards and Criteria, 2021). In the context of business education, marketing has a critical role to play because it has a direct impact on social and environmental conditions – far more than some other business disciplines (Kemper and Ballantine, 2019). Based on its ability to influence behaviour, marketing is well positioned to help reduce unsustainable

practices and promote sustainable development in both businesses and society more generally (Gordon *et al.*, 2011). Not integrating sustainability into marketing degree programmes risks making the discipline increasingly irrelevant in today's world (Radford *et al.*, 2015) and wasting its potential to contribute to the forging of a sustainable world (Chandy *et al.*, 2021).

This study examines whether current research supports the *raison d'être* of sustainability in marketing education and to what extent it provides guidance for the practical implementation of integrating sustainability into marketing education. Using a bibliometric approach, we explore the following research questions. In terms of sustainability and according to research, what is taught in marketing education and how is it being taught?

This study's contribution lies in the identification of seven trending topics in marketing education research that – while recognising sustainable development as a force shaping marketing – highlight a currently prevalent sustainability gap. The paper thus introduces the concept of marketing education for sustainable development (MESD) and presents a framework for bridging that gap. The MESD framework recommends that marketing degree programmes – using the United Nations' Sustainable Development Goals (SDGs) as guiding principles and applying experiential learning as well as internet-based and online education – provide students with key competencies for sustainable development.

The remainder of this paper is organised as follows. Firstly, the theoretical background on sustainability and sustainable development, education and marketing – plus their interrelationships – is presented in detail. This is followed by an elaboration on the applied methodology and the results of the bibliometric literature analysis. Lastly, the MESD framework is presented, theoretical and educational implications are discussed, including possible limitations, and suggestions for future research opportunities are made.

2. Theoretical background

2.1 Sustainability and sustainable development

The concept of sustainability usually describes the balance between the three dimensions of economic, social and environmental [United Nations Department of Economic and Social Affairs (UNDESA), 2021]. In this study, sustainability is defined as the state in which this balance is achieved. Sustainable development is understood as processes that pursue this balance while meeting "the needs of the present without limiting the ability of future generations to meet their own needs" [United Nations General Assembly (UN), 1987, p. 43]. Although the concepts of sustainability and sustainable development are not new, they have steadily gained importance in politics, society and science over recent decades, especially in the light of increasingly drastic climate predictions and the already apparent consequences of climate change (Leal Filho *et al.*, 2018). In 2015, the United Nations operationalised sustainable development into 17 goals to be achieved by 2030. These SGDs (see Appendix – Table A1) are also known as the 2030 Agenda. The SGDs are a shared expression of the needs of stakeholders at the global level and can serve as both an indication and a measure for progress towards the overarching objective of sustainability (Fonseca and Carvalho, 2019; Fonseca *et al.*, 2020; Giangrande *et al.*, 2019).

While knowledge and research about sustainable development is increasingly available, this has not stopped humanity from pushing the limits of exploiting natural resources. This brings on urgency to the debate in sustainable development research, with a particular focus on the SDGs (Leal Filho *et al.*, 2018).

2.2 Education for sustainable development

Education plays a vital role in achieving the SDGs. SDG 4 particularly targets the promotion of Education for Sustainable Development (ESD), which involves the acquisition of knowledge,

skills and abilities that enable learners to make informed choices and act responsibly to help achieve a sustainable environment, economic sustainability and a more just society (Giangrande *et al.*, 2019). SDG 4 also links the other goals of the 2030 Agenda because education trains change agents that help develop and implement ideas to address the problems underlying the SDGs [Redman and Wiek, 2021; United Nations Educational, Scientific and Cultural Organization (UNESCO), 2017; Hübscher *et al.*, 2021]. Many of these problems will be easier to address once more effective knowledge-based infrastructures are in place (Boeren, 2019), and education contributes to the creation of such infrastructures (Voola *et al.*, 2022). This view is supported by Fonseca *et al.* (2020) who found that SDG 4 is a goal that shows strong positive correlation with most of the other SDGs.

 In line with the aim of SDG 4 to promote ESD, Redman and Wiek (2021; see also Wiek *et al.*, 2011) developed a framework to guide ESD and proposed a set of eight key competencies for sustainable development (hereinafter referred to as "SD competencies"):

(1) systems-thinking competence to allow the understanding of complex social-ecological systems and their dynamics;

(2) futures-thinking competence to allow envisioning the future;

(3) values-thinking competence to allow the evaluation of whether a current or future state of a system is sustainable, and to take into account concepts of justice, integrity and ethics;

(4) strategies-thinking competence to allow the construction of action plans to help achieve greater sustainability;

(5) implementation competence to allow plans to be put into action and to adapt them as necessary;

(6) interpersonal competence to allow collaboration with others and to involve them in advancing action plans;

(7) intrapersonal competence to allow caring for oneself while advancing sustainability; and

(8) integration competence to facilitate the integration of planning competencies with collaboration and self-caring competencies to successfully implement action plans.

Moreover, the framework by Redman and Wiek (2021) includes complementary competencies (disciplinary competencies; general competencies, such as critical thinking and creativity; and professional competencies, such as communication) that are already widely applied.

 Redman and Wiek (2021) argue that their framework "links science, education, and society in the joint effort of broadening and accelerating transformations towards the Sustainable Development Goals" and serves as a base "from which to build off and specify learning objectives" for educating change agents in disciplines with relevance to sustainability.

2.3 The role of marketing in sustainable development
The relevance of the marketing discipline to sustainability can be traced back to the 1970s – when the broader scope of marketing was recognised and the impact that marketing can have on social and environmental conditions was first highlighted (Kelley, 1971). Within research, there are usually two perspectives on the impact of marketing on sustainability. On the one hand, marketing is seen as contradictory to sustainable development. This reflects a view of marketing based on purely economic outcomes, e.g. ever-increasing

consumption through exploiting natural resources (Kemper and Ballantine, 2019). On the other hand, by promoting the development of sustainable products and behaviours, marketing can bring about desirable changes in individual consumers, businesses and society towards sustainable development (Chandy et al., 2021; de Ruyter et al., 2022). Such a broader scope of marketing beyond economic outcomes is also reflected in the latest definition of marketing used by the American Marketing Association, which states that marketing should also create value for society as a whole [American Marketing Association (AMA), 2017].

Throughout this paper, we take the stance that marketing has great potential to create positive impacts on sustainable development and thus on the SDGs. Although marketing scholars have begun to focus on this potential to contribute to sustainability (de Ruyter et al., 2022; Voola et al., 2022), we aim to explore whether marketing education research is also moving beyond the belief that marketing's purpose is solely to create economic value (Radford et al., 2015). Thus, the following sections present a thorough bibliometric review of the marketing education literature.

3. Methodology
3.1 Research design and strategy
To shed light on current marketing education research and, more importantly, to identify how it incorporates sustainable development, the literature review method was chosen. Literature reviews are especially useful when the amount of literature within a field is rapidly growing while remaining fragmented and/or interdisciplinary (Snyder, 2019). According to Ferrell and Ferrell (2020), marketing is such a fragmented field with many different areas of research interest such as consumer behaviour, digital marketing and macro-marketing approaches. Systematic literature reviews help to gain and systematise collective knowledge about research fields and, through a theoretical synthesis, uncover new trends as well as suggesting important topics for future study to inspire further development of the field. To be considered systematic, the review of the literature must follow predefined steps and rules to be reproducible and to minimise both bias and error (Tranfield et al., 2003; Wawak et al., 2020). One type of systematic review is the bibliometric literature review. That applies quantitative methods to bibliometric data to rigorously map the intellectual structure and evolutionary nuances of well-established research fields (Donthu et al., 2021). For this study, we followed the steps for a bibliometric review as proposed by Donthu et al. (2021).

3.2 Sampling
Ideally, the data collected for this study should create a picture of marketing education research that is as complete as possible, but also of high quality. To find all relevant publications, the search process was informed by the PRISMA guidelines (Moher et al., 2009).

3.2.1 Identification. The final keyword search conducted in November 2021 considered the following search string: TITLE-ABS-KEY ("marketing higher education" OR "marketing education" OR "educat* marketers" OR "educat* marketing manager*" OR "Marketing Curriculum" OR "Marketing Course*" OR "Marketing Pedagogy"). This resulted in 1,273 records in the Scopus database and 577 records in the Web of Science (WoS) database, which are both major sources for citation (Mongeon and Paul-Hus, 2016). The search was refined by limiting records to English-language publications and papers from journals of the first and second quartiles in either marketing or education according to the *Scimago Journal*

Ranking (Scimago, 2021), which led to 760 records in Scopus and 230 records in WoS making it to the screening stage.

3.2.2 Screening. The abstracts and – if the abstract was not sufficiently informative – full texts of the retrieved records were screened manually to remove duplicate papers and those that did not address the education of marketers, but instead examined, for example, the administrative marketing departments of higher education institutions. The records were further refined by limiting the time range from when the 2030 Agenda (and so the SDGs) were adopted in 2015 to the end of 2021 (when the analysis was conducted). Lastly, records from Scopus were preferred over those from WoS because more individual titles were found in Scopus, although there was still a large overlap between the two databases, leaving 186 records. Such overlap has also previously been observed in many other studies (Mongeon and Paul-Hus, 2016).

3.2.3 Inclusion. To make sure that only trending and impactful topics were revealed, only papers that had received at least five citations were considered for analysis. The sample size was thus reduced to 76 papers. An initial analysis using the bibliographic coupling method revealed that five of these 76 papers had no references in common with the rest of the sample and were therefore excluded. This led to 71 key papers forming the final sample (see Appendix – Table A2).

3.3 Analysis

To uncover trends in marketing education research and to address the question of what is taught in terms of sustainability and how it is being taught, a combination of: performance and network analyses and content analysis is applied.

Performance analysis is a common practice in bibliometric reviews. Although descriptive, it underscores the importance of the various components of a research field (such as authors, journals or papers) by providing a proxy for productivity, impact and influence. As part of the performance analysis, the top authors, journals and papers were identified based on metrics such as the number of papers that one author or journal produced as well as the number of citations that the papers received (Donthu *et al.*, 2021). Network analysis was carried out using bibliographic coupling. That identifies research clusters based on the similarity of publications as measured by the number of references that such publications share. The resulting clusters present the latest developments within a field, in the form of trending themes (Aria and Cuccurullo, 2017; Donthu *et al.*, 2021).

The identified clusters were further investigated using content analysis that used the TCCM model as a structure – referring to theory (T), context (C), characteristics (C) and methodology (M) (Paul and Rosado-Serrano, 2019). In addition, each cluster was assessed in terms of its contribution to the SDGs as an indication and measure for sustainable development and to the SD competencies as an indication for the integration of ESD (Sustainable development evaluation).

The Bibliometrix package in RStudio version 2021.09.1, the VOSviewer version 1.6.17 and Microsoft Excel were used for data analysis and visualisation of the results.

4. Results

The 71 papers included in the analysis were written by 170 authors and published in 19 journals between 2015 and 2021. Performance analysis revealed that the authors with the highest number of publications in the sample almost all represent affiliations in English-speaking countries such as the USA. Unsurprisingly, the *Journal of Marketing Education* published by far the most papers on the topic of marketing education. This journal also provided all ten of the most cited papers included in this study, most of which have a focus

on digital topics, such as the integration of social media in the marketing curriculum (Crittenden and Crittenden, 2015). Among the journals with more than one publication in the sample, only one journal makes an explicit reference to the SDGs in the description of its aims and scope. Some journals at least invite submissions that deal with the interrelation of marketing and society, such as the discipline's changing role in the face of resource limitations and society's responsibility to future generations.

Applying bibliographic coupling to the sample of this study resulted in seven research clusters (see Figure 1). The clusters' names were chosen on the basis of terms frequently used in titles, abstracts and keywords of papers within the cluster. The results of the content analysis are presented per cluster.

4.1 Cluster 1: forces shaping marketing

The first cluster includes publications ($n = 17$) that deal with the various forces that potentially shape the marketing discipline and therefore are also likely to have an impact on marketing education. These forces include technological advances, socioeconomic change and geopolitical change (Rust, 2020).

4.1.1 Theory. Learning theories (such as social constructivism, social cognitive theory, experiential learning theories) and marketing theories (such as product lifecycle theory, service-dominant logic) were commonly used to inform research in this cluster.

4.1.2 Context. Most research in this cluster took place in English-speaking countries. Forces driving change in marketing education are core to the context of the first cluster. These include digital transformation, above all; the extended responsibility of businesses; and students' and educators' roles in marketing. Some of the authors specifically chose to examine sustainability aspects within marketing education (Perera and Hewege, 2016; Markley Rountree and Koernig, 2015).

4.1.3 Characteristics. Factors that have been investigated by studies in this cluster included students' awareness and perception regarding the changes in the marketing environment and measures of students' academic performance and learning outcomes.
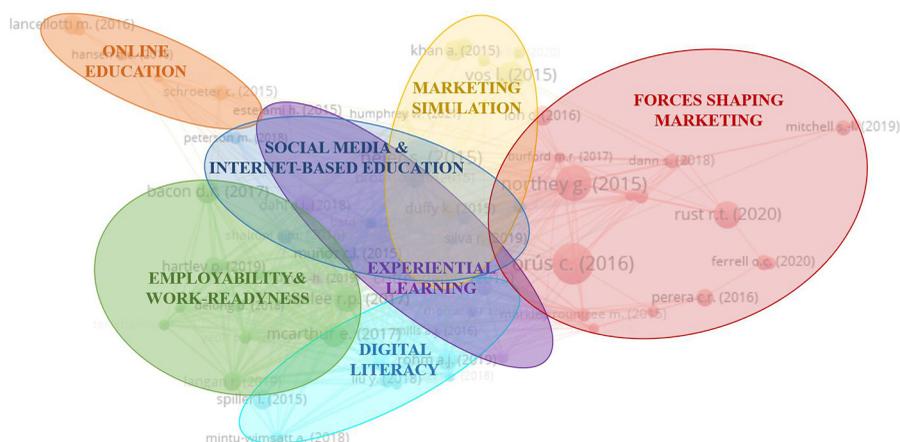

Figure 1.
The marketing education research front by clusters (2015–2021)

Source: Authors' own work

4.1.4 Methodology. Many of the researchers representing this cluster applied quasi-experimental designs and cases to identify how marketing courses respond to the changing marketing environment (Markley Rountree and Koernig, 2015). Others used mixed methods based on interview and survey data. Quantitative analyses were also reported that had been carried out on the basis of course syllabi or students' essays and journals (Perera and Hewege, 2016).

4.1.5 Sustainable development evaluation. In Cluster 1, some publications present possible ways of contributing to the achievement of SDG 4 – target 4.7, which is to mainstream ESD, for example through modified curricula. The contributions of Grier (2020) – in terms of improving understanding of diversity – could be linked to SDGs 5 and 10 and Rust (2020) – in terms of identified research opportunities – could be linked to SDGs 10, 12 and 13. Perera and Hewege (2016) explicitly mention the SDGs in their introduction, but do not elaborate on the goals towards the end of their paper. Regarding the SD competencies, their findings could be understood as a call for systems-thinking ("undergraduates find it difficult to view the social function of international business firms from a holistic point of view"), values-thinking ["(undergraduates find it difficult to) critically assess sustainable marketing practices"], strategies and futures-thinking ["(undergraduates find it difficult to) articulate futuristic views on sustainable marketing practice"].

4.2 Cluster 2: employability and work-readiness
Research in the second cluster ($n = 13$) is concerned with what employers seek in marketing graduates and how marketing graduates can best serve their employers.

4.2.1 Theory. Research in this cluster was embedded in extensive literature reviews. Bacon (2017), for example, used human capital theory to inform his research, while Anderson and Lees (2016) applied social practice theory. Various regression models were used to underpin the results in this cluster.

4.2.2 Context. The discussion about the economic value of marketing education provided the context for this cluster. In many publications, the relevance was underlined by the digital and technological changes in marketing practice. Studies were carried out using mainly US-based samples. The Australian and British higher education landscape provided the context for two studies. In contrast to the context of developed countries, the study by Teklehaimanot *et al.* (2017) was embedded in the discussion of the skills needed in Ethiopia.

4.2.3 Characteristics. The value of marketing education was measured through, for example, income and students' career satisfaction (Bacon, 2017), the importance of skills to practitioners (Yeoh, 2019) and the perceived and actual value of skill change throughout university marketing degree programmes (Hartley *et al.*, 2019).

4.2.4 Methodology. Methodological approaches included qualitative (e.g. case studies) as well as quantitative techniques (e.g. multiple regression analyses). Quantitative methods based on survey data were used most frequently.

4.2.5 Sustainable development evaluation. Questions of employability are closely related to SDG 8, though this SDG was not specifically mentioned in any of the papers. The second cluster makes an explicit reference to the digital skills required in those marketing jobs (Langan *et al.*, 2019) that involve disciplinary competence. Other scholars in this cluster focus on employers' need for more general and professional competencies, such as collaboration, communication and both critical and creative thinking skills (Daellenbach, 2018; DeLong and Elbeck, 2017).

4.3 Cluster 3: experiential learning
The study of various pedagogical approaches that involve active learning, such as role-playing and games, is the focus of this cluster ($n = 9$).

4.3.1 Theory. Experiential learning theory (Kolb and Kolb, 2005) is the common theme of papers in this cluster. The only paper that proposes another theory as its core is by Dahl *et al.* (2018) who apply critical thinking theory. Yet, their results are again set in relation to experiential learning because experiential learning as a pedagogical approach is widely believed to foster critical thinking skills (Dahl *et al.*, 2018).

4.3.2 Context. Various marketing courses at mainly US-based institutions are studied in the context of the increasing linkage between marketing and information technology. For example, while information technology can advance pedagogical approaches that involve experiential learning (such as games), it has also spurred new teaching content (such as search engine optimisation), making it difficult for teachers to achieve the optimum breadth and depth of topics (Kim *et al.*, 2019).

4.3.3 Characteristics. Papers belonging to this cluster evaluate marketing pedagogies, for example, regarding their impact on students' motivation (Robson, 2019) or students' acquisition of discipline-specific knowledge (Kemp *et al.*, 2019; Mills and Treen, 2016) and critical thinking skills (Dahl *et al.*, 2018). Characteristics include perceived student learning (what students think they have learnt) and actual student learning (typically expressed in grades).

4.3.4 Methodology. Evaluations of pedagogical approaches are mainly based on surveys among students. The results are, in many cases, presented together with a detailed description of the respective exercise or learning activity, often even including a step-by-step "how to" guide for teachers who aim to include such exercises or activities in their own courses.

4.3.5 Sustainable development evaluation. In Cluster 3, Radford *et al.* (2015) address SDG 4 – target 4.7 on ESD implementation by calling on marketing educators to use experiential learning to specifically teach systems thinking – one of the SD competencies – to foster an understanding of marketing's broader societal role. Other papers in the cluster provide evidence for the positive effect of experiential learning on general competencies such as critical thinking. Kemp *et al.* (2019) findings relate to strategies thinking competence, but not in a sustainability context.

4.4 Cluster 4: marketing simulation
In terms of content, this cluster ($n = 9$) is closely related to Cluster 3. Like experiential learning, simulations within marketing courses add a practical, real-world element to a course.

4.4.1 Theory. Some studies were based on situated learning theory and social constructivist theory. Others incorporated flow theory. However, not all studies were informed by any particular theory, though they did all include comprehensive literature reviews.

4.4.2 Context. The samples used in the studies represent a more diverse background in terms of the countries from which they were drawn (such as Portugal), although they are still predominantly from English-speaking countries. The papers' content is driven by ideas of how to alter the delivery of content and improve student performance, as well as by the various means of maintaining student engagement and motivation, both based on the shift from "teaching as instruction" to "student-centred learning".

4.4.3 Characteristics. Student course performance and/or task mastery orientation – together with factors such as enjoyment, motivation, transfer of knowledge and real-world applicability, among others – are the characteristics common in this cluster.

4.4.4 Methodology. Papers in this cluster make use of both qualitative and quantitative analyses of courses that implemented a marketing simulation. In some cases, experimental groups were compared with control groups not exposed to simulation. Data was collected from interviews, surveys and students' project reports. Duffy and Ney (2015) and Vos (2015) collected data from educators and marketing practitioners, thereby adding another valuable perspective.

4.4.5 Sustainable development evaluation. If at all, studies' findings in the fourth cluster can be seen as contributing to knowledge about how to tackle challenges underlying target 4a of SDG4, namely, to build and upgrade education facilities to improve learning environments. Farrell (2020) argues that letting students engage with the real world lets them experience its complexities, and hence fosters systems thinking competence. Woodham (2017) and Humphrey *et al.* (2021) propose a notion of learning that is perceived as a general competence. Duffy and Ney (2015) associate the acquisition of general and professional competencies, such as critical thinking and communication skills, with the integration of simulation activities into marketing education. Several other authors also emphasise the need for teamwork in simulation and game-based education, thereby indirectly dealing with interpersonal competence.

4.5 Cluster 5: social media and internet-based education

Cluster 5 ($n = 10$) is primarily concerned with digital interfaces that are intended to facilitate teamwork and communication.

4.5.1 Theory. Two studies applied the technology acceptance model (TAM) to frame their investigations into using a technology tool as an alternative or complementary means of instruction. However, the other studies did not mention a specific theory.

4.5.2 Context. The publications in this cluster mainly deal with US samples. However, three studies include samples from outside the USA (reflections of students from the UK, Barn, 2016; business schools across the globe, Shaltoni, 2016; and instructors from around the world, Muñoz and Wood, 2015). Driven by the opportunities presented by digital transformation, many of the scholars aim to challenge the limitations of a formal curriculum or classroom and extend the context to more informal learning environments (Barn, 2016). Brocato *et al.* (2015), among others, highlight how the internet has transformed the marketing landscape and what the resulting implications are for marketing education. Research in this cluster centres around questions of how social media can best be integrated into course content (Muñoz and Wood, 2015) or be used as a pedagogical tool (Abney *et al.*, 2019).

4.5.3 Characteristics. For the application of technological tools (including social media) as a medium of instruction, perceived usefulness and perceived ease of use were the measures applied. Researchers also investigated the engagement of students towards the class, group or instructor, as well as perceived student learning outcomes.

4.5.4 Methodology. Methodologies applied in this cluster were mainly qualitative analyses of student reflections and/or quantitative analyses based on survey data. Only Shaltoni (2016) analysed the content of e-marketing textbooks and titles of e-marketing programmes offered at business schools.

4.5.5 Sustainable development evaluation. Studies in the fifth cluster that use (for example) social media to extend course settings beyond the fixed classroom contribute to an understanding of how to build and upgrade education facilities to improve learning

environments (SDG4 – target 4a). Due to the predominantly digital context of the studies, this cluster provides ideas about how to improve ICT skills (SDG 4 – target 4.4). Cluster 5 is mainly devoted to improving teamwork and communication through the application of alternative digital interfaces, thereby leading to the conclusion that professional (communication) and interpersonal (collaboration) competencies are fostered through internet-based education.

4.6 Cluster 6: digital literacy
According to the authors who published papers assigned to the sixth cluster (n = 8), the marketing discipline is encountering many digital challenges, such as the use of Big Data. Hence, the marketing curriculum should reflect the need for improved analytical skills (Rohm *et al.*, 2021).

4.6.1 Theory. Theoretical frameworks in this cluster were represented by learning theories and Foucault's classic power/knowledge construct. However, while claiming to be informed by previous research, many of the papers make no mention of theory.

4.6.2 Context. Again, samples within this cluster were mainly from within the USA, except for Snuggs and Jevons (2018) who concentrated on the Australian higher education sector. The internet, Big Data and other technological advances were all reported to influence the skill set required of marketing graduates and necessitate that curricula be adapted to meet today's digital challenges. There is also a particular focus on the gap between training and practice. One factor cited as leading to this gap is faculty who (having been educated before the advent of the internet) often lack sufficient expertise in the use of technologies and data and are therefore unable to adequately teach about their use.

4.6.3 Characteristics. Studies were carried out based on student learning outcomes related to technology "savviness" (such as comfort in the use of tools) and on course content and delivery (such as integrated vs standalone courses), as well as on supporting factors (such as faculty).

4.6.4 Methodology. Methodologies ranged from qualitative studies and mixed methods (surveys and focus groups) to descriptive cases.

4.6.5 Sustainable development evaluation. Studies in the sixth cluster have improved our understanding of ICT skills' improvement (SDG 4 – target 4.4). Although digital literacy, as considered in this cluster, is not directly linked with one of the SD competencies, it could be linked to the disciplinary competencies needed for marketing in general. To acquire improved digital literacy, Rohm *et al.* (2021) and Spiller and Tuten (2015) call on marketing courses to foster creativity, communication, critical thinking and collaborative skills. Particularly worth mentioning is the publication by Walker and Moran (2018) who suggest applying a social science lens to courses to deliver an understanding of ethics and social responsibility (relating to values thinking) as well as to how social problems affect individuals, communities and societies (relating to systems thinking). According to Liu and Levin (2018), forecasting (relating to futures thinking) is an essential competence in marketing when it comes to the handling and evaluation of data.

4.7 Cluster 7: online education
Four of five papers in the seventh cluster (n = 5) deal with teaching marketing online, such as using online videos as the means of instruction.

4.7.1 Theory. Most publications in this final cluster are not based on any specific theory. Indeed, the publication by Hansen (2015) is the only one that addresses a concrete model (input–process–output model of team behaviour) and frames the study in terms of social identity theory and self-categorisation theory.

4.7.2 Context. The focus of studies is on marketing courses offered mainly at universities in the USA. Here too, the context is driven by the opportunities brought about by digital transformation. In general, the application of online teaching methods is regarded positively, and Lancellotti *et al.* (2016) even ascribe superior performance in exams to it. However, other scholars (Rajamma and Sciandra, 2020; Makarem, 2015) suggest that faculty appear to be hesitant or concerned about using online teaching, whether for time, cost or technical reasons.

4.7.3 Characteristics. Rajamma and Sciandra (2020) identified the factors influencing the success of team teaching as contribution, planning and coordination and course implementation. Other papers used measures such as student performance, attitudes, satisfaction and group cohesion.

4.7.4 Methodology. Four publications used a quasi-experimental design comparing online or blended teaching methods with traditional face-to-face teaching for the same course. Rajamma and Sciandra (2020) performed qualitative research, interviewing five faculty members involved in the planning and delivery of an online team-taught marketing course.

4.7.5 Sustainable development evaluation. Two of the studies mentioned how the use of online teaching methods can reduce gender disparities, which reflects SDG 4 – target 4.5, and SDG 5. Rajamma and Sciandra (2020) offer a prescriptive example for marketing educators to overcome challenges in online team teaching, which can be indirectly seen as a contribution to SDG 4 – target 4c, namely, to increase the supply of qualified teachers in that it offers practical guidance for university faculty. This cluster can also be related to the improvement of ICT skills (SDG 4 – target 4.4). Hansen (2015) found that student projects that are conducted in an online environment improved the quality of communication and group cohesion. Where groups and communication are concerned, one can relate these findings to interpersonal competence and the complementary professional competencies. Therefore, online teaching – together with other methods of instruction – seems to have potential in fostering SD competencies.

5. Towards a framework for integrating sustainable development into marketing education

Summarising the results of the bibliometric analysis, this study finds that in current marketing education research, sustainability is recognised as a shaping force in marketing, while digital transformation dominates the discussion. Both trends provide a rationale for what should be taught in marketing education and how it should be taught. However, the SDGs and SD competencies are currently given little or no consideration in the marketing education literature. This study thus identifies a sustainability gap in marketing education research. The results of the content analysis help to address this gap as well as questions about teaching content and pedagogical tools. We synthesise the results into a guiding framework that combines the *raison d'être* (WHY) with guidance on how SD should be taught (HOW) and what the learning objectives should be for future marketing managers (WHAT; see Figure 2). The framework extends the already established concept of ESD to include the concept of MESD for the first time. By integrating the SDGs and the SD competencies, the framework has the potential to support marketing in contributing to the forging of a sustainable world and to respond to the demands of SDG 4 and accrediting bodies to provide knowledge and skills that provide ideas about and solutions to sustainability challenges.
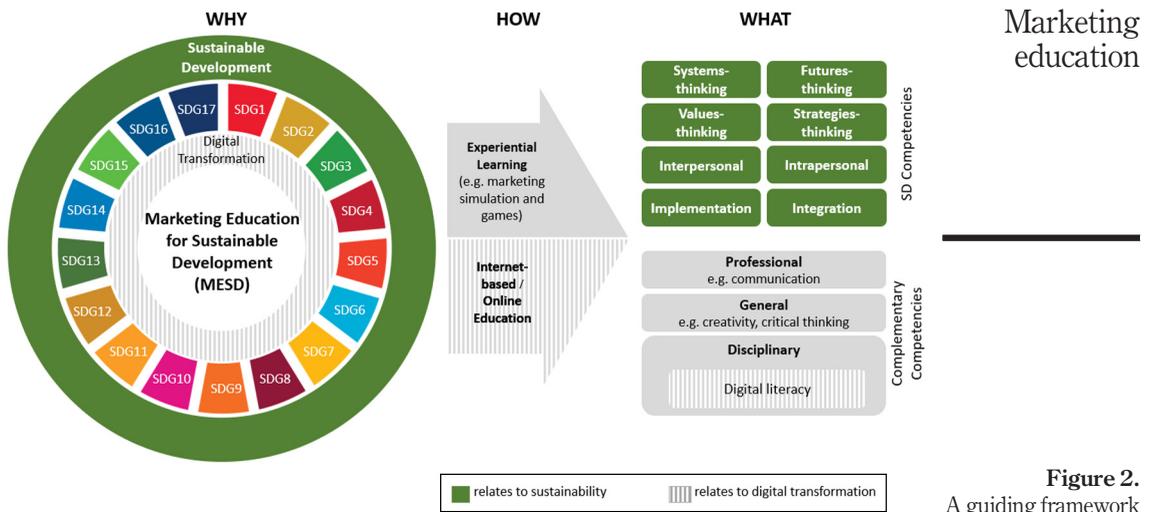
Source: Authors' own work

5.1 Why marketing education for sustainable development?

Based on the findings from Cluster 1, it is important that the framework acknowledges that digital transformation is not the only force shaping marketing. Although digital transformation can be associated with some SDGs (e.g. SDG 9), it represents only a small chunk of the SD spectrum (represented as the inner circle of the marketing education environment in the framework). The SDGs, as the operationalisation of SD (all-encompassing outer circle of the marketing education environment), are part of an international agreement and can thus offer a concrete purpose to students. The framework therefore includes the SDGs as guiding principles for what and how marketing students should be taught.

5.2 WHAT should be taught?

The SDGs provide guidance on the various sustainability topics about which students need knowledge. New course content should be created directly in the context of single or multiple SDGs, existing course content should be adapted accordingly. However, knowledge of the SDGs alone will not be enough for marketing students to promote and contribute to sustainable development. The SD competencies as proposed by Redman and Wiek (2021) must be included in the framework as learning objectives. The performance of marketing students should be measured in terms of these key competencies. Current marketing education research emphasises the importance of critical thinking, creativity and communication. These are vital complementary skills. Cluster 2 shows that digital skills are important for marketing graduates to stay relevant in the workplace. Clusters 5 and 6 support that finding. The framework therefore also includes digital literacy as a learning objective of MESD. How these competencies can be fostered is discussed below.

5.3 HOW should it be taught?

Experiential learning and marketing simulations are particularly promising when it comes to acquiring SD competencies and are thus included in the framework. Clusters 3 and 4

support this view and demonstrate that adding real-life experiences to marketing courses is particularly important. These pedagogical approaches should be embedded in a sustainability context. Digital transformation is part of facilitating sustainable development. Internet-based and online education should therefore not be neglected or discounted in marketing education. Such pedagogical approaches not only promote the acquisition of SD competencies and digital literacy, but also offer universities the opportunity to become more resource-efficient (e.g. through savings on campus costs) and thus contribute to university sustainability.

The MESD framework leads to several implications for marketing education theory and practice, which are presented below and conclude this study.

6. Conclusion

Given the pressing global challenges underpinning the SDGs, marketing managers can no longer only focus on purely economic outcomes but must simultaneously respond to social and environmental concerns. Marketing managers should therefore be equipped with SD competencies. This study explored whether current research supports the *raison d'être* of sustainability in marketing education and to what extent it provides guidance on the integration of sustainability into marketing education, addressing the following research questions. In terms of sustainability and according to research, what is taught in marketing education and how is it being taught?

Seven trending topics in marketing education research were identified that highlight a currently prevalent sustainability gap in marketing education research. However, when the results of these clusters are combined into a framework for MESD, they also provide the basis for marketing education researchers and educators to address this gap. The MESD framework recommends that marketing degree programmes – using the United Nations' SDGs as guiding principles and applying experiential learning as well as internet-based and online education – provide students with key competencies for sustainable development.

Several implications for marketing education researchers and educators were drawn and those are described below.

6.1 Theoretical implications

Previous research has shown that SD is a priority that the marketing discipline should not neglect. In this study, it was found that, context-wise, most current research in marketing education is dominated by digital transformation. Overall, it was expected that at least the more recent publications in the sample would have addressed the SDGs given the time that has already passed since the adoption of the 2030 Agenda. None of the publications examined claims to make a direct and concrete contribution to any of the SDGs. This now offers substantial opportunities for future research. The SDGs can help provide a sustainability context for future studies. For example, it might be worthwhile to investigate what specific contribution marketing education can make to one particular SDG. One way to encourage a reorientation of context towards SD within marketing education research could be to update the aims and scope of journals and to explicitly include topics such as the SDGs.

Even though the acquisition of some of the SD competencies has been indirectly researched, efforts should now be made to examine specifically the more transformative of the competencies (futures-, values- and strategies thinking), as these remain among the least discussed in marketing education research. Future marketing education research should further refine or even challenge the MESD framework. For example, the addition of other

competencies or the extent to which individual competencies of the framework are interdependent should be investigated.

Another avenue for future research must be the pedagogical approaches to promoting the SD competencies. We suggest building on previous research about experiential learning as well as internet-based and online education and specifically testing the pedagogies' effectiveness in sustainability contexts.

In terms of context, the studies looked at for this research were predominantly conducted in the USA or other developed countries. Mongeon and Paul-Hus (2016) found that English-language journals and publications are overrepresented within the Scopus database, so a concentration on contexts from English-speaking countries is inevitable but leads to a limitation in this study. Voola *et al.* (2022) remind us that the challenges presented by the SDGs are greatest in the least developed countries. Therefore, the context of future studies should be chosen accordingly.

Measures – as investigated under "Characteristics" – used in future research will depend on the aims of individual studies. However, where student learning is concerned, future research should find ways to measure actual student learning (as distinct from perceived student learning) to be able to provide more accurate information on, for example, learning's contribution to helping to achieve the SDGs.

Regarding methodology, future research should keep up with the selected methods' diversity and use mixed methods to empirically test outcomes, such as the effectiveness of marketing pedagogies in helping to promote sustainable development. Regarding the methodological approach applied in this paper, it must be mentioned that, while the bibliometric method is said to mitigate bias in literature reviews, it does not come without its limitations: the bibliometric method depends on the availability and correctness of the data provided in the database. For seven publications, full texts could not be retrieved. That could have had an impact on the results obtained from content analysis. Scholars have previously argued that bibliographic coupling cannot tell whether two papers citing a third one refer to the same information in the third paper or whether to contradictory information (Weinberg, 1974). However, we argue that this is mitigated by the extensive content analysis. Nevertheless, future research may support and challenge the findings of this study with other approaches and complement the results with findings from research published in conference proceedings, books and other media.

Lastly, scholars in the field of marketing education are strongly encouraged to embed their research in theories and then to test such theories. According to Lindgreen *et al.* (2021), challenging, contrasting and refuting theories is an opportunity to arrive at original and courageous research findings that further advance the field.

6.2 Educational implications
Regarding guidance for the practical implementation of integrating sustainability into marketing education, the MESD framework recommends that marketing degree programmes – using the SDGs as guiding principles and applying experiential learning as well as internet-based and online education – provide students with key competencies for sustainable development. The SD competencies should be adopted by marketing educators as learning objectives. Marketing educators can use this study's findings about pedagogical approaches to help design courses that deliver on these learning objectives. However, measures must be identified that can track student's performance regarding the acquisition of these SD competencies. Business schools can benefit from delivering marketing courses in a sustainability context. The SDGs point to several topics that can be addressed in addition to

traditional curriculum content. At the same time, the SDGs – as representing an international agreement – can also provide a purpose to students.

In conclusion, we encourage business schools, and marketing faculty in particular, to consider the above recommendations to help transform students into change agents who can contribute to marketing's huge potential for achieving a more sustainable future, thereby also meeting the demands of SDG4 and current accreditation standards. We call on marketing education researchers and marketing educators to build on our findings, to continuously develop the MESD framework and find ways to implement and test it in practice.

References

AACSB Business Accreditation Standards (2020), "2020 Guiding principles and standards For business accreditation", available at: www.aacsb.edu/-/media/documents/accreditation/2020-aacsb-business-accreditation-standards-july-2021.pdf?rev=80b0db4090ad4d6db60a34e975a73b1b&hash=D210346C64043CC2297E8658F676AF94 (accessed 4 January 2022).

Abney, A.K., Cook, L.A., Fox, A.K. and Stevens, J. (2019), "Intercollegiate social media education ecosystem", *Journal of Marketing Education*, Vol. 41 No. 3, pp. 254-269.

American Marketing Association (AMA) (2017), "Definitions of marketing", available at: www.ama.org/the-definition-of-marketing-what-is-marketing/ (accessed 11 November 2021).

Anderson, D. and Lees, R. (2016), "Marketing education and the employability challenge", *Journal of Strategic Marketing*, Vol. 25 No. 2, pp. 128-137.

Aria, M. and Cuccurullo, C. (2017), "Bibliometrix: an R-tool for comprehensive science mapping analysis", *Journal of Informetrics*, Vol. 11 No. 4, pp. 959-975.

Bacon, D.R. (2017), "Revisiting the relationship between marketing education and marketing career success", *Journal of Marketing Education*, Vol. 39 No. 2, pp. 109-123.

Barn, S.S. (2016), "Tweet dreams are made of this, who are we to disagree?' adventures in a #brave new world of #tweets, #twitter, #student engagement and #excitement with #learning", *Journal of Marketing Management*, Vol. 32 Nos 9/10, pp. 965-986.

Boeren, E. (2019), "Understanding sustainable development goal (SDG) 4 on 'quality education' from micro, meso and macro perspectives", *International Review of Education*, Vol. 65 No. 2, pp. 277-294.

Brocato, E.D., White, N.J., Bartkus, K. and Brocato, A.A. (2015), "Social media and marketing education: a review of current practices in curriculum development", *Journal of Marketing Education*, Vol. 37 No. 2, pp. 76-87.

Burford, M.R. and Chan, K. (2017), "Refining a strategic marketing course: is a 'flip' a good 'fit'?", *Journal of Strategic Marketing*, Vol. 25 No. 2, pp. 152-163.

Carrie, D.G., Mulla, P., Patterson, A., Kilkolly-Proffit, M., Brookes, R., Sima, H. and Agee, T. (2017), "Adding value to first-year undergraduate marketing education: team-based learning as a strategic response to changing modern educational environments", *Journal of Strategic Marketing*, Vol. 25 No. 2, pp. 138-151.

Celuch, K., Bačić, D., Chen, M.W., Maier-Lytle, J. and Smothers, J. (2018), "The potential of student co-creation in extracurricular experiences", *Marketing Education Review*, Vol. 28 No. 3, pp. 230-243.

Chandy, R.K., Johar, G.V., Moorman, C. and Roberts, J.H. (2021), "Better marketing for a better world", *Journal of Marketing*, Vol. 85 No. 3, pp. 1-9.

Chen, S., Benedicktus, R., Kim, Y. and Shih, E. (2018), "Teaching design thinking in marketing: linking product design and marketing strategy in a product development class", *Journal of Marketing Education*, Vol. 40 No. 3, pp. 176-187.

Crittenden, V. and Crittenden, W. (2015), "Digital and social media marketing in business education: implications for the marketing curriculum", *Journal of Marketing Education*, Vol. 37 No. 2, pp. 71-75.

Daellenbach, K. (2018), "On carrot cake and marketing education: a perspective on balancing skills for employability", *Australasian Marketing Journal*, Vol. 26 No. 2, pp. 172-179.

Dahl, A.J., Peltier, J.W. and Schibrowsky, J.A. (2018), "Critical thinking and reflective learning in the marketing education literature: a historical perspective and future research needs", *Journal of Marketing Education*, Vol. 40 No. 2, pp. 101-116.

Dann, S. (2018), "Facilitating co-creation experience in the classroom with lego serious play", *Australasian Marketing Journal*, Vol. 26 No. 2, pp. 121-131.

de Ruyter, K., Keeling, D.I., Plangger, K., Montecchi, M., Scott, M.L. and Dahl, D.W. (2022), "Reimagining marketing strategy: driving the debate on grand challenges", *Journal of the Academy of Marketing Science*, Vol. 50 No. 1, pp. 13-21.

DeLong, D. and Elbeck, M. (2017), "An exploratory study of the influence of soft and hard skills on entry level marketing position interviews", *Marketing Education Review*, Vol. 28 No. 3, pp. 159-169.

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N. and Lim, W.M. (2021), "How to conduct a bibliometric analysis: an overview and guidelines", *Journal of Business Research*, Vol. 133, pp. 285-296.

Duffy, K. and Ney, J. (2015), "Exploring the divides Among students, educators, and practitioners in the use of digital media as a pedagogical tool", *Journal of Marketing Education*, Vol. 37 No. 2, pp. 104-113.

EQUIS Standards and Criteria (2021), "EFMD accreditation for international business schools: 2021 equis standards and criteria", available at: www.efmdglobal.org/wp-content/uploads/2021_EQUIS_Standards_and_Criteria-1.pdf (accessed 4 January 2022).

Estelami, H. (2015), "The effects of survey timing on student evaluation of teaching measures obtained using online surveys", *Journal of Marketing Education*, Vol. 37 No. 1, pp. 54-64.

Farrell, C. (2020), "Do international marketing simulations provide an authentic assessment of learning? A student perspective", *The International Journal of Management Education*, Vol. 18 No. 1, p. 100362.

Ferrell, O.C. and Ferrell, L. (2020), "Technology challenges and opportunities facing marketing education", *Marketing Education Review*, Vol. 30 No. 1, pp. 3-14.

Fonseca, L.M. and Carvalho, F. (2019), "The reporting of SDGs by quality, environmental, and occupational health and Safety-Certified organizations", *Sustainability*, Vol. 11 No. 20, p. 5797.

Fonseca, L.M., Domingues, J.P. and Dima, A.M. (2020), "Mapping the sustainable development goals relationships", *Sustainability*, Vol. 12 No. 8, p. 3359.

Giangrande, N., White, R.M., East, M., Jackson, R., Clarke, T., Saloff Coste, M. and Penha-Lopes, G. (2019), "A competency framework to assess and activate education for sustainable development: addressing the UN sustainable development goals 4.7 challenge", *Sustainability*, Vol. 11 No. 10, p. 2832.

Gordon, R., Carrigan, M. and Hastings, G. (2011), "A framework for sustainable marketing", *Marketing Theory*, Vol. 11 No. 2, pp. 143-163.

Grier, S.A. (2020), "Marketing inclusion: a social justice project for diversity education", *Journal of Marketing Education*, Vol. 42 No. 1, pp. 59-75.

Hansen, D.E. (2015), "Cohesion in online student teams Versus traditional teams", *Journal of Marketing Education*, Vol. 38 No. 1, pp. 37-46.

Hartley, P., Routon, P.W. and Torres, L. (2019), "The skills marketing majors believe they acquire: evidence From a national survey", *Journal of Marketing Education*, Vol. 41 No. 3, pp. 202-214.

Honea, H., Castro, I.A. and Peter, P. (2017), "Evidence items as signals of marketing competencies and workplace readiness: a practitioner perspective", *Journal of Marketing Education*, Vol. 39 No. 3, pp. 145-161.

Hübscher, C., Hensel-Börner, S. and Henseler, J. (2021), "Social marketing and higher education: partnering to achieve sustainable development goals", *Journal of Social Marketing*, Vol. 12 No. 1, pp. 76-104.

Humphrey, W., Laverie, D. and Shields, A. (2021), "Exploring the effects of encouraging student performance With text assignment reminders", *Journal of Marketing Education*, Vol. 43 No. 1, pp. 91-102.

Jones, B. and Tadajewski, M. (2015), "Origins of marketing thought in Britain", *European Journal of Marketing*, Vol. 49 Nos 7/8, pp. 1016-1039.

Kelley, E.S. (1971), "Marketing's changing social/environmental role", *Journal of Marketing*, Vol. 35 No. 3, pp. 1-2.

Kemp, A., Randon McDougal, E. and Syrdal, H. (2019), "The matchmaking activity: an experiential learning exercise on influencer marketing for the digital marketing classroom", *Journal of Marketing Education*, Vol. 41 No. 2, pp. 141-153.

Kemper, J.A. and Ballantine, P.W. (2019), "What do we mean by sustainability marketing?", *Journal of Marketing Management*, Vol. 35 Nos 3/4, pp. 277-309.

Khan, A. and Pearce, G. (2015), "A study into the effects of a board game on flow in undergraduate business students", *The International Journal of Management Education*, Vol. 13 No. 3, pp. 193-201.

Kim, D.-H., Hettche, M. and Spiller, L. (2019), "Incorporating third-party online certifications into a marketing course: the effect of learning style on student responses", *Marketing Education Review*, Vol. 29 No. 3, pp. 193-206.

Kolb, A.Y. and Kolb, D.A. (2005), "Learning styles and learning spaces: enhancing experiential learning in higher education", *Academy of Management Learning and Education*, Vol. 4 No. 2, pp. 193-212.

Lancellotti, M., Thomas, S. and Kohli, C. (2016), "Online video modules for improvement in student learning", *Journal of Education for Business*, Vol. 91 No. 1, pp. 19-22.

Langan, R., Cowley, S. and Nguyen, C. (2019), "The state of digital marketing in academia: an examination of marketing curriculum's response to digital disruption", *Journal of Marketing Education*, Vol. 41 No. 1, pp. 32-46.

Leal Filho, W., Azeiteiro, U., Alves, F., Pace, P., Mifsud, M., Brandli, L., Caeiro, S.S. and Disterheft, A. (2018), "Reinvigorating the sustainable development research agenda: the role of the sustainable development goals (SDG)", *International Journal of Sustainable Development and World Ecology*, Vol. 25 No. 2, pp. 131-142.

Lindgreen, A., Di Benedetto, C.A. and Kock, F. (2021), "How to develop original, courageous ideas in business marketing research", *Industrial Marketing Management*, Vol. 95, pp. A1-A4.

Liu, Y. and Levin, M.A. (2018), "A progressive approach To teaching analytics In The marketing curriculum", *Marketing Education Review*, Vol. 28 No. 1, pp. 14-27.

Loh, C., Wong, D.H., Quazi, A. and Kingshott, R.P. (2016), "Re-examining students' perception of e-learning: an Australian perspective", *International Journal of Educational Management*, Vol. 30 No. 1, pp. 129-139.

McArthur, E., Kubacki, K., Pang, B. and Alcaraz, C. (2017), "The employers' view of 'work-ready' graduates: a study of advertisements for marketing jobs in Australia", *Journal of Marketing Education*, Vol. 39 No. 2, pp. 82-93.

Makarem, S.C. (2015), "Using online video lectures to enrich traditional face-to-Face courses", *International Journal of Instruction*, Vol. 8 No. 2, pp. 155-164.

Markley Rountree, M. and Koernig, S.K. (2015), "Values-Based education for sustainability marketers: two approaches for enhancing student social consciousness", *Journal of Marketing Education*, Vol. 37 No. 1, pp. 5-24.

Mendini, M. and Peter, P.C. (2019), "Research note: the role of smart versus traditional classrooms on students' engagement", *Marketing Education Review*, Vol. 29 No. 1, pp. 17-23.

Mills, A.J. and Treen, E. (2016), "Operation valuation: teaching pricing concepts in an experiential environment", *Journal of Marketing Education*, Vol. 38 No. 2, pp. 73-82.

Mintu-Wimsatt, A. and Lozada, H.R. (2018), "Business analytics in the marketing curriculum: a call for integration", *Marketing Education Review*, Vol. 28 No. 1, pp. 1-5.

Mishra, K.E., Wilder, K. and Mishra, A. K. (2017), "Digital literacy in the marketing curriculum: are female college students prepared for digital jobs?", *Industry and Higher Education*, Vol. 31 No. 3, pp. 204-211.

Mitchell, S.L. and Clark, M. (2019), "Reconceptualising product life-cycle theory as stakeholder engagement with non-profit organisations", *Journal of Marketing Management*, Vol. 35 Nos 1/2, pp. 13-39.

Moher, D., Liberati, A., Tetzlaff, J. and Altman, D.G. (2009), "Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement", *BMJ*, Vol. 339 No. jul21 1, p. b2535.

Mongeon, P. and Paul-Hus, A. (2016), "The journal coverage of web of science and Scopus: a comparative analysis", *Scientometrics*, Vol. 106 No. 1, pp. 213-228.

Muñoz, C.L. and Wood, N.T. (2015), "Update status: the state of social media marketing curriculum", *Journal of Marketing Education*, Vol. 37 No. 2, pp. 88-103.

Neier, S. and Zayer, L.T. (2015), "Students' perceptions and experiences of social media in higher education", *Journal of Marketing Education*, Vol. 37 No. 3, pp. 133-143.

Northey, G., Bucic, T., Chylinski, M. and Govind, R. (2015), "Increasing student engagement using asynchronous learning", *Journal of Marketing Education*, Vol. 37 No. 3, pp. 171-180.

Orús, C., José Barlés, M., Belanche, D., Casaló, L., Fraj, E. and Gurrea, R. (2016), "The effects of learner-generated videos for YouTube on learning outcomes and satisfaction", *Computers & Education*, Vol. 95, pp. 254-269.

Paul, J. and Rosado-Serrano, A. (2019), "Gradual internationalization vs born-Global/international new venture models: a review and research agenda", *International Marketing Review*, Vol. 36 No. 6, pp. 830-858.

Perera, C.R. and Hewege, C.R. (2016), "Integrating sustainability education into international marketing curricula", *International Journal of Sustainability in Higher Education*, Vol. 17 No. 1, pp. 123-148.

Peterson, M. (2018), "Experiential learning in the age of web 2.0: the rap video project", *Marketing Education Review*, Vol. 28 No. 2, pp. 109-114.

Radford, S.K., Hunt, D.M. and Andrus, D. (2015), "Experiential learning projects: a pedagogical path to macromarketing education", *Journal of Macromarketing*, Vol. 35 No. 4, pp. 466-472.

Rajamma, R.K. and Sciandra, M.R. (2020), "Planning and implementing a graduate online team-taught marketing course", *Journal of Marketing Education*, Vol. 42 No. 2, pp. 108-122.

Redman, A. and Wiek, A. (2021), "Competencies for advancing transformations towards sustainability", *Frontiers in Education*, Vol. 6, p. 785163.

Robson, K. (2019), "Motivating professional student behavior through a gamified personal branding assignment", *Journal of Marketing Education*, Vol. 41 No. 2, pp. 154-164.

Rohm, A.J., Stefl, M. and Ward, N. (2021), "Future proof and real-world ready: the role of live project-based learning in students' skill development", *Journal of Marketing Education*, Vol. 43 No. 2, pp. 204-215.

Ross, S.M. (2019), "Slack it to me: complementing LMS with student-centric communications for the millennial/post-millennial student", *Journal of Marketing Education*, Vol. 41 No. 2, pp. 91-108.

Rust, R.T. (2020), "The future of marketing", *International Journal of Research in Marketing*, Vol. 37 No. 1, pp. 15-26.

Schlee, R.P. and Karns, G.L. (2017), "Job requirements for marketing graduates: are there differences in the knowledge, skills, and personal attributes needed for different salary levels?", *Journal of Marketing Education*, Vol. 39 No. 2, pp. 69-81.

Schroeter, C. and Higgins, L.M. (2015), "The impact of guided vs self-directed instruction on students' information literacy skills", *Journal for Advancement of Marketing Education*, Vol. 23 No. 1, pp. 1-10.

Scimago (2021), "Journal rankings", available at: www.scimagojr.com/journalrank.php (accessed 11 November 2021).

Shaltoni, A.M. (2016), "E-marketing education in transition: an analysis of international courses and programs", *The International Journal of Management Education*, Vol. 14 No. 2, pp. 212-218.

Silva, R., Rodrigues, R. and Leal, C. (2019), "Play it again: how game-based learning improves flow in accounting and marketing education", *Accounting Education*, Vol. 28 No. 5, pp. 484-507.

Sim, M. and Plewa, C. (2017), "Customer engagement with a service provider and context: an empirical examination", *Journal of Service Theory and Practice*, Vol. 27 No. 4, pp. 854-876.

Snuggs, E. and Jevons, C. (2018), "Reconceptualising the scholarship of marketing education–some futurescapes", *Australasian Marketing Journal*, Vol. 26 No. 2, pp. 180-186.

Snyder, H. (2019), "Literature review as a research methodology: an overview and guidelines", *Journal of Business Research*, Vol. 104, pp. 333-339.

Spais, G.S. and Beheshti, H.M. (2016), "The evolution of social marketing and social entrepreneurship education in business and management schools: conceptions, misconceptions and trends", *European Journal of International Management*, Vol. 10 No. 4, pp. 422-454.

Spiller, L. and Tuten, T. (2015), "Integrating metrics across the marketing curriculum: the digital and social media opportunity", *Journal of Marketing Education*, Vol. 37 No. 2, pp. 114-126.

Teklehaimanot, M.L., P.T.M., Ingenbleek, W.K., Tessema, H.C. and M., van Trijp. (2017), "Moving toward new horizons for marketing education: designing a marketing training for the poor in developing and emerging markets", *Journal of Marketing Education*, Vol. 39 No. 1, pp. 47-60.

Thomas, V.L., Magnotta, S.R., Chang, H. and Steffes, E. (2018), "Role-playing in a consumption context: an experiential learning activity focused on the consumer decision-making process", *Marketing Education Review*, Vol. 28 No. 2, pp. 89-97.

Tranfield, D., Denyer, D. and Smart, P. (2003), "Towards a methodology for developing evidence-Informed management knowledge by means of systematic review", *British Journal of Management*, Vol. 14 No. 3, pp. 207-222.

Treen, E., Atanasova, C., Pitt, L. and Johnson, M. (2016), "Evidence from a large sample on the effects of group size and decision-making time on performance in a marketing simulation game", *Journal of Marketing Education*, Vol. 38 No. 2, pp. 130-137.

United Nations Department of Economic and Social Affairs (UNDESA) (2021), "Transforming our world: the 2030 agenda for sustainable development", available at: https://sdgs.un.org/2030agenda (accessed 20 December 2021).

United Nations Educational, Scientific and Cultural Organization (UNESCO) (2017), *Education for Sustainable Development Goals: Learning Objectives*, UNESCO, Paris, France.

United Nations General Assembly (UN) (1987), "Report of the world commission on environment and development: our common future", United Nations General Assembly, Development and International Co-operation: Environment, Oslo, Norway.

Vinuales, G., Magnotta, S.R., Steffes, E. and Kulkarni, G. (2019), "Description and evaluation of an innovative segmentation, targeting, and positioning activity using student perceived learning and actual student learning", *Marketing Education Review*, Vol. 29 No. 1, pp. 24-36.

Voola, R., Carlson, J., Azmat, F., Viet Ngo, L., Porter, K. and Sinha, A. (2022), "Re-imagining marketing scholarship in the era of the UN sustainable development goals", *Australasian Marketing Journal*, Vol. 30 No. 2, pp. 97-106.

Vos, L. (2015), "Simulation games in business and marketing education: how educators assess student learning from simulations", *The International Journal of Management Education*, Vol. 13 No. 1, pp. 57-74.

Walker, K.L. and Moran, N. (2018), "Consumer information for data-driven decision making: teaching socially responsible use of data", *Journal of Marketing Education*, Vol. 41 No. 2, pp. 109-126.

Wawak, S., Rogala, P. and Dahlgaard-Park, S.M. (2020), "Research trends in quality management in years 2000-2019", *International Journal of Quality and Service Sciences*, Vol. 12 No. 4, pp. 417-433.

Weathers, D. and Aragón, O. (2019), "Integrating analytics into marketing curricula: challenges and effective practices for developing six critical competencies", *Marketing Education Review*, Vol. 29 No. 4, pp. 266-282.

Weinberg, B.H. (1974), "Bibliographic coupling: a review", *Information Storage and Retrieval*, Vol. 10 Nos 5/6, pp. 189-196.

Weinstein, A.T. and McFarlane, D.A. (2017), "Case study – how a business school blog can build stakeholder relationships and create added value in an MBA marketing program", *Journal of Strategic Marketing*, Vol. 25 No. 2, pp. 101-113.

Wiek, A., Withycombe, L. and Redman, C.L. (2011), "Key competencies in sustainability: a reference framework for academic program development", *Sustainability Science*, Vol. 6 No. 2, pp. 203-218.

Woodham, O.P. (2017), "Testing the effectiveness of a marketing simulation to improve course performance", *Marketing Education Review*, Vol. 28 No. 3, pp. 203-216.

Ye, C., Van Os, J., Chapman, D. and Jacobson, D. (2017), "An online project-based competency education approach to marketing education", *Journal of Marketing Education*, Vol. 39 No. 3, pp. 162-175.

Yeoh, P.-L. (2019), "A critical assessment of skills and knowledge for entry-level marketing jobs: a Delphi study", *Marketing Education Review*, Vol. 29 No. 4, pp. 242-265.

Zahay, D., Altounian, D., Pollitte, W. and James, J. (2019), "Effective resource deployment in digital marketing education", *Marketing Education Review*, Vol. 29 No. 3, pp. 182-192.

Appendix

SDG	Objective
#1 No Poverty	To end poverty in all its forms everywhere
#2 Zero Hunger	To end hunger, achieve food security and improved nutrition and promote sustainable agriculture
#3 Good Health and Well-Being	To ensure healthy lives and promote well-being for all at all ages
#4 Quality Education	To ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
#5 Gender Equality	To achieve gender equality and empower all women and girls
#6 Clean Water and Sanitation	To ensure availability and sustainable management of water and sanitation for all
#7 Affordable and Clean Energy	To ensure access to affordable, reliable, sustainable and modern energy for all
#8 Decent Work and Economic Growth	To promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
#9 Industry, Innovation and Infrastructure	To build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation
#10 Reduced Inequalities	To reduce inequality within and among countries
#11 Sustainable Cities and Communities	To make cities and human settlements inclusive, safe, resilient and sustainable
#12 Responsible Consumption and Production	To ensure sustainable consumption and production patterns
#13 Climate Action	To take urgent action to combat climate change and its impacts
#14 Life below Water	To conserve and sustainably use the oceans, seas and marine resources for sustainable development
#15 Life on Land	To protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss
#16 Peace, Justice and Strong Institutions	To promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
#17 Partnership for the Goals	To strengthen the means of implementation and revitalise the global partnership for sustainable development

Source: Authors' own work

Table A1.
Overview of the SDGs and their objectives [United Nations Department of Economic and Social Affairs (UNDESA), 2021]

Cluster	Author(s), year	DOI
#1 Forces shaping marketing	Orús *et al.* (2016)	10.1016/j.compedu.2016.01.007
	Northey *et al.* (2015)	10.1177/0273475315589814
	Rust (2020)	10.1016/j.ijresmar.2019.08.002
	Loh *et al.* (2016)	10.1108/IJEM-08-2014-0114
	Perera and Hewege (2016)	10.1108/IJSHE-03–2014-0041
	Mitchell and Clark (2019)	10.1080/0267257X.2018.1562487
	Ferrell and Ferrell (2020)	10.1080/10528008.2020.1718510
	Dann (2018)	10.1016/j.ausmj.2018.05.013
	Sim and Plewa (2017)	10.1108/JSTP-03–2016-0057
	Markley Rountree and Koernig (2015)	10.1177/0273475314559513
	Grier (2020)	10.1177/0273475319878829
	Jones and Tadajewski (2015)	10.1108/EJM-07–2014-0407
	Carrie *et al.* (2017)	10.1080/0965254X.2016.1182577
	Spais and Beheshti (2016)	10.1504/EJIM.2016.077423
	Burford and Chan (2017)	10.1080/0965254X.2016.1182578
	Weinstein and McFarlane (2017)	10.1080/0965254X.2016.1182574
	Celuch *et al.* (2018)	10.1080/10528008.2017.1419432
#2 Employability and work-readiness	Schlee and Karns (2017)	10.1177/0273475317712765
	McArthur *et al.* (2017)	10.1177/0273475317712766
	Bacon (2017)	10.1177/0273475317710061
	Hartley *et al.* (2019)	10.1177/0273475318757282
	Langan *et al.* (2019)	10.1177/0273475318823849
	Honea *et al.* (2017)	10.1177/0273475317724845
	DeLong and Elbeck (2017)	10.1080/10528008.2017.1349475
	Yeoh (2019)	10.1080/10528008.2019.1661258
	Teklehaimanot *et al.* (2017)	10.1177/0273475316688318
	Ye *et al.* (2017)	10.1177/0273475317724843
	Anderson and Lees (2016)	10.1080/0965254X.2016.1182576
	Daellenbach (2018)	10.1016/j.ausmj.2018.04.005
	Weathers and Aragón (2019)	10.1080/10528008.2019.1673664
#3 Experiential learning	Dahl *et al.* (2018)	10.1177/0273475317752452
	Estelami (2015)	10.1177/0273475314552324
	Robson (2019)	10.1177/0273475318823847
	Kemp *et al.* (2019)	10.1177/0273475318803415
	Kim *et al.* (2019)	10.1080/10528008.2019.1617039
	Thomas *et al.* (2018)	10.1080/10528008.2018.1431051
	Radford *et al.* (2015)	10.1177/0276146715573834
	Vinuales *et al.* (2019)	10.1080/10528008.2018.1493932
	Mills and Treen (2016)	10.1177/0273475316649414
#4 Marketing simulation	Vos (2015)	10.1016/j.ijme.2015.01.001
	Crittenden and Crittenden (2015)	10.1177/0273475315588111
	Khan and Pearce (2015)	10.1016/j.ijme.2015.05.002
	Duffy and Ney (2015)	10.1177/0273475315585826
	Silva *et al.* (2019)	10.1080/09639284.2019.1647859
	Treen *et al.* (2016)	10.1177/0273475316653433
	Farrell (2020)	10.1016/j.ijme.2020.100362
	Woodham (2017)	10.1080/10528008.2017.1369356
	Humphrey *et al.* (2021)	10.1177/0273475319836271
#5 Social media and internet-based education	Neier and Zayer (2015)	10.1177/0273475315583748
	Brocato *et al.* (2015)	10.1177/0273475315588110
	Muñoz and Wood (2015)	10.1177/0273475315586596
	Shaltoni (2016)	10.1016/j.ijme.2016.04.004

(*continued*)

Cluster	Author(s), year	DOI
	Mendini and Peter (2019)	10.1080/10528008.2018.1532301
	Ross (2019)	10.1177/0273475319833113
	Barn (2016)	10.1080/0267257X.2016.1159598
	Peterson (2018)	10.1080/10528008.2018.1428107
	Chen *et al.* (2018)	10.1177/0273475317753678
	Abney *et al.* (2019)	10.1177/0273475318786026
#6 Digital literacy	Rohm *et al.* (2021)	10.1177/0273475318798086
	Spiller and Tuten (2015)	10.1177/0273475315587103
	Liu and Levin (2018)	10.1080/10528008.2017.1421048
	Mintu-Wimsatt and Lozada (2018)	10.1080/10528008.2018.1436974
	Snuggs and Jevons (2018)	10.1016/j.ausmj.2018.05.003
	Zahay *et al.* (2019)	10.1080/10528008.2018.1555000
	Mishra *et al.* (2017)	10.1177/0950422217697838
	Walker and Moran (2018)	10.1177/0273475318813176
#7 Online education	Lancellotti, Thomas and Kohli (2016)	10.1080/08832323.2015.1108281
	Schroeter and Higgins (2015)	N/a
	Hansen (2015)	10.1177/0273475315594463
	Makarem (2015)	10.12973/iji.2015.8212a
	Rajamma and Sciandra (2020)	10.1177/0273475318786336

Table A2. **Source:** Authors' own work

Corresponding author
Chiara Hübscher can be contacted at: c.j.hubscher@utwente.nl