Combining the 'why' and 'how' of teaching sustainability:

The case of marketing academics

Abstract

Faculty are key to bringing about 'bottom-up' change for sustainability education. Yet, research is still needed on the backgrounds and experiences of change agents in universities and the challenges they face. This study focuses on the marketing discipline, a field fraught with epistemological tensions in seeking to integrate sustainability, mainly revolving around profit maximisation and continuous consumption while living on a planet with finite resources. Semi-structured interviews were conducted with sustainability marketing academics in Australasia, Europe and North America. The contribution of this paper lies in the development of a sustainability educator typology linking *why* and *how* integration occurs. The sustainability 'transformer' wishes to engage in transformational learning, changing student mindsets, the 'thinker' wants to encourage critical thinking to bring about the discussion of worldviews, while the 'actioner' hopes 'learning by doing' (community projects) will provide an appreciation for sustainability. We discuss implications for those disciplines which struggle with philosophical tensions and colleague resistance to the integration of sustainability in the form of suggestions for professional development (i.e. creation of positive nature experiences) and pedagogical approaches (critical, transformative and community-service learning).

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Introduction

Universities that have integrated sustainability into their organisation, culture and curriculum show a large involvement from change agents. Change agents or 'champions' are usually at the forefront of new ideas for Education for Sustainability (EfS) (Lozano 2006; Wood et al. 2016; Ferrer-Balas et al. 2008). Specifically, faculty members have been shown to be catalysts for the change process in more than half of the institutions who were interested or engaged in the implementation of sustainability initiatives (McNamara 2010). However, only one study has previously discussed the experiences and roles of academic change agents in higher education for sustainability (Wood et al. 2016).

Research is needed on the backgrounds, experiences and challenges of change agents in universities to bring about 'bottom-up' change, especially in curriculum innovation (Cotton et al. 2007; Wood et al. 2016). Educators largely have the ability and freedom to integrate (or not) sustainability; albeit dependent upon many barriers such as time constraints, curriculum space, and so on (e.g. Beusch 2014; Doh and Tashman 2014; Thomas 2004). Thus, there is a need to better understand sustainability champions' backgrounds, the specific reasons why they are passionate about sustainability, and experiences, such as the tensions that might arise in their workplace (Cotton et al. 2007; Wood et al. 2016). These academic reflections can suggest avenues to create similar experiences in other faculty members (i.e. through professional development), and provide experiences and support for future champions.

Specifically, research into academic identities within non-traditional EfS disciplines, such as business and marketing, as well as the relationship between disciplines and pedagogical styles, is advocated (Christie et al. 2013, 2015; von der Heidt and Lamberton 2014). This is especially important in the business school, where underlying tensions between epistemologies and faculty perspectives are present in sustainability integration (Doh and Tashman 2014; Painter-Morland 2015; Springett 2005; Stubbs and Cocklin 2008). The dominant industrial worldview which adheres to profit above 'all else', grounded in marketisation and neoliberalism, interferes with the ability to effectively integrate sustainability in education and research (Toubiana 2014; Painter-Morland 2015; Andersson and Öhman 2016). This is especially true in the subject of marketing, which is portrayed as the anti-thesis of sustainability (Varey 2011, 2012).

There is a diverse range of studies that show both the successful and unsuccessful integration of sustainability within business, and specifically marketing studies (e.g. Christensen et al. 2007; Springett 2005; Wu et al. 2010; Rundle-Thiele and Wymer 2010). However, the level of integration is not only related to if sustainability is included in business courses, but how. As such, many reasons for engaging with sustainability are present, such as for business reputation or profit, regulation prevention or ethical reasons (Andersson and Öhman 2016). For example, Landrum and Ohsowski (2017) found that the majority of top readings assigned in sustainability business courses in the United States advocate a weak sustainability paradigm, following a 'business-case' for sustainability. Thus, why and how marketing academics integrate sustainability amongst epistemological tensions and resistance is crucial to advance understanding of sustainability champions in the business school.

This study aims to address this knowledge gap about why sustainability is integrated within the marketing curriculum; a topic area which has been shown to have epistemological

and faculty tensions with sustainability (Painter-Morland 2015; Springett 2010). In addition, this research explores how marketing educators prefer to engage with sustainability. Specifically, focusing on the barriers encountered as well as which pedagogical approaches are used. To offer new insight we undertake a qualitative approach across various universities in Australasia, North America, and Western Europe, as many studies have used a case study method approach to examine sustainability and EfS (Corcoran, Walker, and Wals 2004). Building on the sustainability teaching typology by Wood et al. (2016), the contribution of this paper lies in exploring both why and how integration occurs, and to understand how these reflections are interlinked.

Education for sustainability

The complexity of EfS lies in the multiple discourses of sustainability and sustainable development. The United Nations Decade of Education for Sustainable Development started in 2005, and outlined the three 'pillars' (environmental, social, and economic) of sustainable development (UNESCO 2004). However, the Australian Government's Australian Learning and Teaching Council (2010) went further, offering five 'levels' about conceptual sustainability skills. The five levels range from interpreting sustainability as keeping business 'going' to the three dimensions (environmental, social, economic) to understanding sustainability as a complex process requiring systems and critical thinking.

However, years of research into sustainability education suggests that there are differences in preferred learning styles and discourses. Most notably, Sterling's (2004) theoretical framework for sustainability education describes three 'levels' of sustainability learning. 'Education about Sustainability' is about 'doing things better', a content-oriented, 'bolt on' learning approach that occurs within the dominant paradigm (Sterling 2004, 2011). 'Education for Sustainability' attempts to integrate sustainability more comprehensively,

including values, and recognises that there are limits to the dominant paradigm and aims to modify the educational paradigm (Sterling 2004). The strongest view is 'Education as Sustainability' which focuses on 'seeing things differently' (Sterling 2011), 'continually' exploring and negotiating sustainability, and aiming for paradigmatic change (Sterling 2004). Each level is associated with different content and pedagogies, suggesting there are multiple avenues by which sustainability can be addressed in curriculum.

The critical components of EfS are attitude, skills (i.e. communication, negotiation, and critical analysis) and knowledge (i.e. ecological concepts, environmental management systems and practices) (Hesselbarth and Schaltegger 2014; Stubbs 2013; Thomas 2004). As recommended by UNESCO (2004, 22), EfS should 'emphasize experiential, inquiry-based, problem-solving, interdisciplinary systems approaches and critical thinking.' EfS commonly has emancipatory values that enable the creation of empowered, engaged and competent citizens (Wals 2011; Wals and Jickling 2002). Rather than an instrumental perspective which focuses on behaviour change, the emancipatory perspective focuses on capacity building and critical thinking which allows individuals to 'understand what is going on in society, to ask critical questions and to determine for themselves what needs to be done' (Wals 2011, 179). Other forms of learning have also been discussed in conjunction with EfS: transdisciplinary; transformative; anticipatory; experiential; participatory; collaborative; and social learning (Wals 2009, 2011). As will now be discussed, these diverse perspectives are also seen in the business school.

Education for sustainability in business schools

Despite the various and varying dimensions of sustainability, faculty as well as students usually limit their understanding to the environmental domain, especially in the business school (e.g. Cotton et al. 2007; Reid and Petocz 2006; Reid, Petocz, and Taylor 2009; Wright and Horst

2013). Thus, stronger sustainability perspectives in business curricula are still in their infancy. When sustainability has been integrated within business studies it usually follows the 'weak' sustainability paradigm, focusing on minor behavioural change, a more 'business as usual' approach, and an emphasis on business and product efficiency and effectiveness (Kemper, Hall, and Ballantine 2019; Landrum and Ohsowski 2017; Springett 2005; Varey 2011, 2012). In marketing, sustainability incorporates many aspects including sustainable product design, pricing which encapsulates externalities, sustainable distribution methods, communication of company sustainability efforts, and social marketing campaigns for sustainable behaviour change (i.e. energy efficiency campaigns) (Gordon, Carrigan, and Hastings 2011; Kemper and Ballantine 2019; Peattie 2001). However, much debate exists about what sustainability means for and in marketing (Kemper and Ballantine 2019; McDonagh and Prothero 2014).

Scholars suggest that success in teaching and researching sustainability in higher education requires a change in universities' thinking, curriculum and structure (Bosselmann 2001). This argument is also highlighted in the case of business schools (Sidiropoulos 2014; Springett 2005). Several scholars suggest that sustainability issues cannot be addressed in the marketing discipline, especially education, without a change in the dominant industrial worldview in business schools (Kilbourne and Carlson 2008; Varey 2011, 2012). Painter-Morland (2015, 69) contends that 'the ontological and epistemological assumptions… undermine the kind of orientation that is necessary to engage with sustainability and ethics-related issues'. In particular, the dominant industrial worldview espoused by business schools promotes economic growth and material development as notions of progress at the macro level (Kilbourne and Carlson 2008; Springett 2005). This worldview is seen as a key source of environmental and social problems; including current planetary unsustainability (Beddoe et al. 2009; Varey 2011, 2012). While there is divergence about what sustainability content to teach, how to teach sustainability in business schools is equally important.

Previous research in sustainability marketing education has tried to address the sustainability knowledge gap through educators' own experiences (e.g. Borin and Metcalf 2010; Rountree and Koernig 2015; Wilhelm 2008), as well as theoretical suggestions for integration (e.g. Bridges and Wilhelm 2008). Educators have suggested approaches to integration which focus on getting students to acknowledge, understand and possibly transform their industrial worldview. These specific approaches include critical management perspectives (e.g. Redding and Scott Cato 2011), critical thinking or a critical theory perspective (e.g. Redding and Scott Cato 2011; Springett 2005; Stubbs and Cocklin 2008), systems thinking, and reflexive learning (e.g. Stubbs 2013). Nevertheless, deciding what and how to teach sustainability relies heavily on the individual academic.

Identities, roles, and experiences in sustainability integration

Our identity is in a constant state of flux; it is an ongoing project emerging from our experiences and context (Billot 2010; Geijsel and Meijers 2005). Identity emerges from the real and imagined and has 'strong connections with the known and the valued, is influenced and modified by the unforeseen and disruptive and is transformed by external social pressures at both the micro and macro levels' (Billot 2010, 712). Thus, in the context of any organisation, individuals continually work on their identity through 'organizationally based discursive regimes' (Clarke, Brown, and Hailey 2009, 325). Professional identity relates to the beliefs, values, motives and experiences which characterise individuals in the same role (Ibarra 1999). How academics make sense of their identity impacts on how they make sense of their workplace and roles (Billot 2010). With managerialism sweeping the university, there has been particular interest in reconciling academic imagined identity (related to past, present and future constructions) with that of reality (Billot 2010; Winter 2009).

However, the notions of academic identity in relation to sustainability integration is also related to discipline or subject identity, expectations and values (Ibarra 1999). In regards to this, academics, like any individual, prefer to have a sense of belonging (Billot 2010), which may be through the identification with specific disciplines (Kassel, Rimanoczy, and Mitchell 2016) or sub-cultures (Trice 1993). Therefore, while this study involves marketing academics, it is likely to be applicable to other disciplines as they also struggle with the integration of sustainability in their dominant worldviews, such as accounting (Joseph 2012), tourism (Boyle 2015), and engineering (Segalàs et al. 2009). As such, disciplines which struggle with philosophical tensions and colleague resistance to the integration of sustainability can also potentially benefit from the findings presented here.

We found three studies which have delved into why and how sustainability is integrated within their job requirements, but they have done so from different angles (Barlett 2008; Visser and Crane 2010; Wood et al. 2016). Visser and Crane (2010) explore the 'why,' Wood et al. (2016) investigate the 'how,' while Barlett (2008) undertook an informal approach to understand formative life experiences in sustainability appreciation. In the corporate setting, Visser and Crane (2010) sought to understand the drivers of individuals to be sustainability managers, what the effects of the job were on individuals, and what individuals sought (on a personal level) from their actions. Through conducting and analysing interviews, they created a typology of four different types of change agents. 'Experts' are motivated to engage in sustainability through projects and to give expert input. 'Catalysts' are motivated in sustainability through their enjoyment of initiating change (e.g. through policy), influencing leadership, and observing the improved performance of the organisation. 'Facilitators' derive meaning and motivation from imparting knowledge and skills, empowering individuals, changing attitudes and/or perceptions of individuals, and team building. Lastly, 'Activists' are more aware of broader social and environmental issues, and their motivation is associated with

community, fighting for a cause they believe in, leaving a legacy of improved conditions, and overall, associated with self-transcendence.

Wood et al. (2016) mapped three sustainability champions' identities regarding approaches to sustainability as educators in various disciplines. Sustainability 'saviours' are change agents who have didactic and transmissive pedagogies and more positivist views of sustainability, while sustainability 'nurturers' are sustainability educators for increased knowledge and social action using critical and reflective thinking, debating and discussion of (one's) worldviews. The sustainability 'struggler' holds similar characteristics to 'saviours' and 'nurturers', but instead include narratives of struggle ('going against the tide') and being subjected to colleagues' (mis)interpretations of sustainability.

While previous research has so far failed to understand why sustainability champions in higher education engage with sustainability, Barlett (2008) interviewed pioneer faculty and sustainability officers to understand the paths to their current careers. These pioneers received professional development funding to develop or integrate sustainability into their course(s). Four major formative life experiences were identified: scientific and intellectual interests in solving challenging (environmental) issues; deep sensory attachment to nature; attachment to social justice and (ethical) economic development issues; and the influence of mentors.

Since Barlett (2008) only interviewed sustainability integrators who received professional development training, further research is needed to understand the reasons why tertiary educators become interested in sustainability. Moreover, Wood et al. (2016) called for future research to examine the pedagogical approaches of educators in a variety of disciplines, especially in business studies, where the 'strugglers' drew 'their identities from beyond their academic traditions' (p. 357). Consequently, given the conflicting and underlying tensions with marketing and sustainability integration in education and pedagogy (Kemper, Hall, and

Ballantine 2019; Springett 2010; Varey 2011, 2012), this study explores two research questions, (1) why sustainability is integrated within the marketing curriculum, and (2) how sustainability is integrated within marketing academics' teaching. We utilise previous research to inform the research direction and findings. Specifically, the typologies of Wood et al. (2016) and Visser and Crane (2010) are drawn upon in the discussion to expand, contextualise and situate the findings. Furthermore, priori codes included broad themes that were identified by the research aims and themes derived from previous research findings, which included pedagogical approaches and perceived barriers towards integration.

Method

The research employed semi-structured interviews as they are particularly suited for studies that seek to explore perceptions and opinions, especially regarding complex issues, such as sustainability. Interviews allow a greater focus on narrative data, which is critical to understanding the personal perceptions of interview participants (Butt, More, and Avery 2013). This study follows Toubiana's (2014) suggestion that the 'personal is political,' suggesting that personal stories, and personal reflections and experiences, are usually linked to larger social constructs.

The sampling procedure is dependent upon several dimensions including time, cost, and accuracy (Sontakki 2009). The use of purposeful sampling was employed to select cases that would be able to provide an in-depth reflection on the topic (Palinkas et al. 2015; Toubiana 2014), as well as two instances when snowball sampling was used. Interviewees were selected and invited through identifying the authors of sustainability marketing papers and online search, specifically looking for sustainability marketing courses and/or academics with a listed interested in sustainability marketing. An equal selection was sought for three main regions (Australasia, Europe, and North America), and a good representation of both genders (ten

females, eight males). Snowballing was also employed without solicitation when one participant suggested a possible interviewee. To retain confidentiality, neither participant was informed about the involvement of the other. Also, one participant was suggested by one of the co-authors, based upon their work in sustainability and accreditation. As confidentiality was an aim of this study, snowball sampling was not seen as ideal. However, snowball sampling was considered appropriate given the relatively small number of experienced academics in the field. While the sample size of this study was also constrained by the small size of the sample population, once no new codes were developed in the codebook saturation was reached (Francis et al. 2010); this was at eighteen interviews. This sample size falls between several recommendations (e.g. Creswell 2007).

Face-to-face, telephone and Skype interviews were all employed to conduct the interviews, with the latter used most frequently. The interviews lasted from 35 min to 2 h 20 min, and lasted on average just over an hour. The design of the interview guide was aided by previous studies (e.g. Green 2015; Reid and Petocz 2006; Toubiana 2014) and driven by the research objectives. Six broad topics served as the focus of discussions with interviewees, starting with broad topics to ease conversation and build rapport. The topics of the interview were participants' description of sustainability, their views on the (non-) conflicts with marketing and sustainability, what sustainability looks like in the marketing curriculum, the current integration of sustainability within the marketing curriculum and scholarship (including barriers and opportunities), pressures and logics of the business school, and active change/resistance. All interviews were transcribed with permission and reviewed by the interviewees.

The style of thematic analysis employed in this research is template analysis. Template analysis is a qualitative approach which seeks to define, organise and structure themes within

data (Brooks et al. 2015). An iterative process is used where themes are modified or created throughout the analytical process (King 2012). Specifically, King's (2012, 2014) template analysis technique was used to analyse the interview data. Firstly, interviews were transcribed and read through to familiarise oneself with the research. Secondly, priori themes were identified through the research objectives and prior research. Priori codes included broad themes that were identified by the research aims, this included coding around how to integrate sustainability and marketing through teaching philosophy (i.e. these were identified as community-service learning, critical thinking and transformative learning); and themes derived from previous research findings, specifically, perceptions of sustainability and profit-driven ideology (and the interaction between the two), and other perceived barriers towards integration. The initial coding template was created through analysing a subset of the data (first six interviews) which is then applied to the rest of the data or another subset of the data (in this case the first twelve interviews) and the template is revised, and then reapplied to the data (King 2012). In the revision stage, if no relevant theme fits the identified section, either an existing theme was modified or a new theme was created. When no large sections of un-coded data remained, especially sections that were relevant to the research questions, the analysis was considered complete (Brooks et al. 2015). This is also the point at which data saturation was reached (Guest, Bunce, and Johnson 2006).

To understand the data further, particularly in regards to a typology, a within-case analysis method was used. It is through coding and sorting that data becomes decontextualised as data becomes separated from individual cases (Ayres, Kavanaugh and Knafl, 2003). Then, data is recontextualised when it is reintegrated into themes (Ayres et al., 2003). Consequently, the origin of data is less important than its membership in a theme. As such, coding usually captures the commonalities across cases but does not highlight the individual uniqueness of

cases themselves. Instead, in within case analysis we are able to look more closely at individual cases and the structure of beliefs and actions.

Throughout the analysis process, quality and reflexivity checks were continually made to ensure the analysis was not biased by preconceptions and assumptions. An audit trial was kept which outlines the progression of the coding process; specifically, the initial and subsequent coding templates.

The interview findings are presented by providing an overview of participants' relationships and views of sustainability in their professional lives. Next, we discuss the reasons why participants had an interest in sustainability and the institutional barriers they encountered, followed by pedagogical approaches they used and/or advocated. Lastly, by combining both 'why' academics were interested in sustainability and 'how' they taught (pedagogical approaches) a typology is presented to categorise sustainability educators.

The 'why': exploring the interest in sustainability

Interviewees 'cared deeply' about sustainability and sustainable education, putting in time beyond their normal workload; this has been seen in previous research as well (Barber et al. 2014). Consequently, six interviewees specifically saw their professional and personal lives merging into one. Past research has hinted at the potential effect academic staff could have as a starting point for change for sustainability in higher education (Barth and Rieckmann 2012), and these findings add extra weight behind these claims.

Yeah if I didn't believe in it, I couldn't teach it, and if I didn't do it, I couldn't believe in it… and if I believe in it, then I must also do it. I can't sit on my hands. (Patricia)

Three interviewees further commented that the endeavour to pursue sustainability as a marketing academic was rewarding but that there was a need to 'fight' for their research. As such, they saw sustainability in marketing as a struggle for their professional life.

I don't know, I think I'm getting exhausted, I think I'm going to retire in four years, I'm tired of you know trying to make a change, but I tell you it's really rewarding (Rachel)

Consequently, interviewees reflected that a sustainability marketing specialisation was rarely valued or a 'smart move' for marketing academics that wanted to succeed (i.e. high chance of promotion and publication). The 'publish or perish' mentality very much existed in the minds of interviewees. For example, seven interviewees found it harder to publish on sustainability topics than other marketing topics.

I made the decision that that is what I want to do as opposed to getting into journals. (Rosie)

It all takes having two identities and working in separate areas, and that means, of course, you've got to work harder 'cause you're splitting your time and effort. So you can choose to, you know, follow the money or you can try to figure out how to do both. (Christine)

The interviews revealed a personal passion for sustainability, and a willingness to 'sacrifice' career advancement for this passion. This passion also translated into sustainable lifestyles; all but one of the interviewees strongly related their sustainability beliefs to their behaviour and lifestyle. Most interviewees identified if they did not have a sustainable lifestyle they would not be 'practicing what they preach.' Sustainable lifestyles included cycling to work, not owning a car, and reduced conference trips.

I try to consume at a lower impact certainly. I recycle everything that can be recycled. I used to have two cars, we've gone down to one car… Certainly I've got smart meters now in water

and in energy. I can monitor and reduce my consumption along those lines. I avoid companies that I know that their practices are not appropriate. (Nick)

However, many admitted they were doing 'the best that I can' given current consumer culture and academic requirements (e.g. attendance at conferences). Indeed, current socio-technical institutions can prohibit the adoption of more sustainable behaviours.

I try to. Like most academics, there's always tensions between what I do. Travelling to conferences for example… Typically, jars against some of the things that you know, I believe in. (Louise)

The transition towards becoming the sustainability advocate they are today differed between interviewees.

The defining moments

Interviewees reflected when and why sustainability became an important topic both personally and professionally. Understanding the formation of a sustainability worldview is an important topic of interest as it reflects on possible ways sustainability interest can be triggered in others. Most interviewees had trouble pinpointing exactly why they became interested in sustainability. Three interviewees said that it was a gradual and multifaceted experience, being unable to reflect on specific 'turning points' in their lives regarding sustainability.

Through, you know, your socialisation experience, through your education, through your personal interests and your personality, and through your family and peer influence and friends… So, I think yeah it's really a combination of those things. (Ben)

However, after some reflection, most interviewees professed to certain experiences in their life as having a great impact on their sustainability beliefs. Most importantly, a few interviewees

reflected that more than one specific experience changed their sustainability view. There were multiple avenues by which sustainability interests were triggered. These situations included: (1) upbringing, including parents and friends, (2) work, and (3) education, including presentations, books and writing theses.

Upbringing

The influence of certain people in their lives affected interviewees understanding and importance of sustainability. For six interviewees, this included frugal parents or grandparents and specific experiences with close friends.

My parents led very frugal lives. And I suppose that was something that affected me, in that I would prefer to put off buying something and make it last a bit longer rather than going out and buying something new. Even in today's modern technology, I prefer my laptop to die of natural causes. (Nick)

Four interviewees reflected that their upbringing and experiences in their life had a profound effect on their sustainability beliefs. Such experiences included illness, strong personal connection with an academic supervisor, and friends.

I became ill….and I had to take some time off work. And all I could do was lie on the sofa and read, so I thought I'd use that time usefully. And I'd always wanted to find the way of combining my environmental knowledge with marketing and strategy. So suddenly I had the opportunity to do some reading, and I read a few books. (Maya)

My dissertation chair was a huge influence on me; if I hadn't had her as a chair, my life would be so different. My whole life would be so different. My personal life, my professional… I'm crying because it's like, if she, if I hadn't found her, I don't really know where I'd be right

now… And she also got pushed back, in the field, so… She really was my hero, you know, at the time. She still is. (Claire)

Five interviewees identified that they grew up in a 'climate' of environmentalism. These interviewees were near retirement and stated that their upbringing was during the release of The Limits to Growth (Meadows et al. 1972) and there was an overall social climate of environmentalism.

In the 50s, when I was a child, that was more or less the cultural value, you didn't waste things. Especially if your parents were raised in the depression and the wartime years. (Patricia)

A few interviewees suggested that sustainability was just a 'part' of them. These interviewees felt they could not identify specific events or people which influenced them and instead reflected that they had always had a strong connection to nature and/or sustainability.

And I guess possibly it's just personal and being an empathetic person and quite egalitarian in their approach and…making sure things are fair, I hate when things happen and I think that's really not fair how that was done and that really bothers me. (Diana)

Other interviewees identified that work experiences, not upbringing or personal interest alone, sparked their sustainability interest.

Work

Three interviewees identified that their work influenced and changed their perception of sustainability. Through engagement in work, specifically working with companies engaged in sustainability and/or researching companies and employees involved in sustainability practices, interviewees experienced a shift in their attitudes.

Really, I was kind of asked to teach this course on sustainability marketing, and develop it from scratch. And so, doing that, you know, I just became more interested in doing research on it as well. I'd always had some general interest in the pro-social domain, but not considering like environmental aspects necessarily. So, I think the teaching of the course shifted to more of an interest in an environmental, more sustainable aspect. (Ruby)

Specifically, Ruby had to teach a sustainability marketing course, which shifted her research interest into the environmental and sustainability domain. Another participant was involved with working with companies interested in sustainability which was a turning point for him as further education allowed him to expand on his newfound interest. Consequently, unlike upbringing and education, reflection on sustainability may be achieved through more 'endorsed' means.

Education

Some interviewees felt their sustainability beliefs were heavily influenced by their education. Specifically, five interviewees explained that courses and other types of presentations (i.e. academic speakers, book presentations) had a very prominent effect.

Heard a guy talk from Sydney University that engaged me, I bought his book, changed my perceptions of sustainability significantly. (Stewart)

I'd say it's more through my education, I've always been interested in environmental issues, but it took me awhile to figure that out. It definitely wasn't from my parents. (Toni)

Additionally, three interviewees expanded that reading a book, attending a class and presentation did facilitate an 'aha' moment; such a moment is quite rare in worldview transformation (Dunbar, Fugelsang, and Stein 2007). Like growing up in a 'climate' of environmentalism, many interviewees brought up that the reading of books, such as Silent

Spring (Carson, 1962), Gaia (Lovelock, 1979), and Limits to Growth (Meadows et al. 1972) influenced their beliefs. While not all reflected that these had specific effects on their sustainability beliefs, three interviewees did reflect on this direct impact.

I always learn from books so Sachs book on sustainable development, Naomi Klein Capitalism vs. the Climate…really showed me how, what was going on and how we needed to change education systems to teach our students how to make a difference in the world for good. (Rachel)

Lastly, two interviewees reflected that their PhD research substantially impacted their perception of sustainability.

What really helped me, or changed me, were my respondents in my dissertation, they were so devoted to nature and they lived their entire lives so differently than I had ever seen before in my life, and they really inspired me to change my life. (Claire)

Whether upbringing, work or education sparked an interest in sustainability, this interest was a personal awakening that was able to be translated into a professional sphere. However, translating this interest into action meant barriers needed to be overcome.

The 'how': the barriers to change

The research findings indicate that there are internal (i.e. personal beliefs), managerial (i.e. support), external (i.e. industry and student pressure) and epistemological barriers which are experienced by academics integrating sustainability. This finding demonstrates a movement from the micro (individual) to the meso (managerial and external support) and the macro level (larger societal) pressure.

Beginning at the micro level, this study's findings suggest that a large barrier persists in the marketing academic community with a preference for the status quo and a perceived ignorance or apathy towards social and environmental problems.

Is a lack of knowledge by other academics, and dare I say – I'd go so far as to say an ignorance. (Maya)

I really think it's just lack of awareness, lack of knowledge, whatever they're reading or getting exposed to when they do their professional reading like JM [Journal of Marketing] or JMR [Journal of Marketing Research] or whatever they're just not getting exposed to it. (Rachel)

This lack of knowledge may also explain why interviewees felt sustainability was merely an 'add-on' in marketing research as well as education, and even when it was included, it was not considered 'true' sustainability (i.e. usually referring to 'green washing'). Instead, current teaching and research usually involves instrumental logic about how business could benefit from social and environmental problems (Gao and Bansal 2013).

First of all, sustainability is not what they're doing, it's green marketing. Which is a step in the right direction, but a lot of – this is what's disturbing to me – if you study this, particularly if you study critical theory and ideology, they're in the process of commandeering the word 'sustainability.' (Paul)

Most interviewees believed that sustainability had yet to truly be integrated in marketing curriculum and classroom practices, beyond mere formal course objectives. Overall, the culture of the marketing department fails to see sustainability as important to the discipline resulting in a lack of support for research and teaching in this area.

I think there's a long way to go, but of course one of the issues is, at what point does it become about popping extra subjects on the curriculum or at what point do you change the mainstream of what you teach to incorporate this? (Bob)

This inertia and lack of knowledge resulted in many interviewees feeling dependent upon integrating sustainability into their courses or creating entirely new courses. Similar feelings were shared in connection with department colleagues where sometimes tensions arise about sustainability issues and importance. At best, colleagues had an understanding of sustainability, but no significant level of support was offered (i.e. availability of co-author, helpful discussions).

I could fight the fight and get involved, and that's the way a lot of professors in the business schools that teach sustainability sometimes feel, that they're an outlier… I know a lot of places, a lot of business schools, the sustainability people are the sore thumbs. (Toni)

As such, change agents are often isolated and vulnerable to university restructuring (Lozano 2006; Wood et al. 2016). The support of the business school dean provides the necessary leadership for change in the view of most interviewees. Previous research has also shown the need for strong leadership to support and implement strategies for EfS (Barber et al. 2014; McNamara 2010; Wright and Horst 2013). Without such explicit institutional support, several interviewees felt vulnerable to the elimination of their sustainability marketing course.

I always feel my position is vulnerable. By that I mean, that because I'm the only person that teaches the program, they could wipe the whole program and me with it at any stage. (Stewart)

However, many interviewees felt that institutional pressures within the business school, such as organisational mission and direction from the dean could heavily influence the integration of sustainability

Again, it's one hell of a reflection of the dean of the school and some deans tend to drive this more than others and it's no different than to a chair of a panel. (John)

Outside the academic community, the business community was seen by most interviewees as not demanding sustainability literate students, and many saw this lack of pressure for sustainability on the business school as a key barrier to sustainability marketing education.

I think it's less from industry…their motivations are different. Can we save money, can we reduce costs, can we comply with legislation? (Nick)

Conversely, a few interviewees did identify industry as a key pressure on the business school for sustainability literate students. Interviewees also had mixed perspectives of student demand for sustainability education, with some seeing positive feedback and commitment to sustainability as well as those who saw students as inhibiting EfS with a lack of interest and knowledge.

Yes, I think it's the students who are pushing this, it's the students who are saying we want more of this. (Rachel)

But I'm finding the students are not all that interested. I keep waiting, they say oh yes, Generation E, environment, is coming soon! It's been almost forty years and they're not here yet. (Patricia)

Most interviewees saw the dominant industrial worldview affecting mindsets and preventing colleagues, students, colleges and industry from seeing the importance or real meaning of sustainability.

And I actually think these are very real tensions and incompatibility between these ideas and sustainability. Most businesses and corporations for example tend to be focused around growth

– growing markets, growing consumptions, growing profits and we know that the world has got limited resources, so it's not possible to always have growing productivity and growing consumption. Eventually, all the resources are going to reach a crisis point. (Ben)

Thus, interviewees believed that marketing faculty did not have the knowledge or desire to change (i.e. to gain knowledge or change research focus), and that the dominant industrial worldview prevented them from believing in the importance of sustainability marketing.

The parameters, the worldview, whatever you want to call it, the epistemology, the ontology has to change. Fundamentally change, if we're to get anywhere towards sustainability. (Maya)

The dominant industrial worldview was also seen to affect external pressures, with industry seen as believing in this worldview and not seeing businesses obligation towards environmental and social issues as significant (Bowles 2014). The same can be said for student mindsets (Kilbourne and Carlson 2008). Consequently, this resulted in a lack of perceived demand for sustainability education and research. Lastly, there was a need for institutional support in advancing sustainability integration in marketing academia. However, with the dominant industrial worldview ingrained across all levels of the business school, this was seen as a large institutional and powerful barrier towards sustainability integration. Indeed, participants discussed further the very confronting nature of sustainability to more 'mainstream' or commercial marketing academics. The acknowledgment that marketing has contributed to current environmental and social issues also remains difficult for some academics.

Putting up the mirror of sustainability to marketing professionals and theorists is suggesting that we are all somehow implicated in where we are right now in the state of the planet, and we are, and nobody wants to be implicated, nobody wants to say I was part of something that you know was devastating or could be devastating. So, it's an uphill battle, it's like talking to, you know…misogynist about feminism, they don't want to hear it. (Christine)

However, as interviewees felt most in control of their courses, particularly their pedagogy, we focus on education philosophy next.

The 'how': exploring the education philosophy

The challenge of implementing forms of pedagogy that match the complex nature of sustainability, especially in marketing, proves to be another barrier to the successful integration of sustainability within the higher education curriculum (Wood et al. 2016). The research presented here found pedagogical innovation with interviewees' pedagogies revolving around: (1) community-service learning, (2) critical thinking, and (3) transformational learning. The vast majority of participants did not explicitly describe their teaching as following specific philosophies or pedagogy, instead these are implied in their explanations about their teaching.

Community service-learning

Four sustainability academics openly wanted their students to be active citizens and participate in sustainability initiatives on campus and in their community. Community participation was usually achieved through assessments that required campus and community involvement in sustainability activities. Mostly, these interviewees wanted to actively encourage behaviour change in their students through a 'hands on' approach. Community service-learning and problem-based learning both include aspects of experiential learning, usually within the community to solve real-world problems (Shephard 2008; Sipos, Battisti, and Grimm 2008). Specifically, community service-learning engages students with problems in their local community, while problem-based learning is 'learning by doing.'

The motto for our course is 'think globally, act locally.' And the first thing I have them do the first week is measure their own carbon footprint so that they're using either greendex or earth

day footprint, carbon footprint calculator…it makes it clear to them that it adds up. And that we're all responsible. (Patricia)

Furthermore, such co-curricular activities are strongly related to service-learning projects, where they can be 'reinforcing curricular sustainability education and allowing students an additional venue for application and experiential learning' (Rusinko 2010, 512). Interviewees also articulated their desire to engage their students in critical thinking, especially about underlying business assumptions.

Critical thinking

Many interviewees reflected that their teaching was about encouraging critical thinking, and therefore, getting students to think and question fundamental (marketing and consumption) concepts.

I think what's more difficult to do is to get students to sort of self-analyse their own worldviews. And be self-aware of them. And I think requires a lot more… That's just a more difficult task. (Claire)

While quite a few interviewees pointed to the idea of critical thinking for sustainable education, especially in marketing, some acknowledged that they did not necessarily want students to adopt their viewpoints. Instead, interviewees wished for students to think for themselves.

I think my job is to, yes it's to teach some content but I want people think, I want them sit and debate facts and come to their own conclusions, I don't want anybody to leave my courses thinking that everything I say or they read is the definitive on anything, I want them to know that all knowledge is created. (Rosie)

Beyond critical thinking and examining worldviews, some interviewees were more insistent on wanting to change student sustainability worldviews, leading to a more transformative educational experience.

Transformative education

Some interviewees openly expressed their desire to 'transform' or 'convert' students. As can be seen in the quote below, some interviewees use the language of 'planting the seed' and adhered to a transformational learning approach (although not always explicitly stated). Transformative learning is to change the frame of reference, or in other words, transform worldviews through critical reflection (Mezirow 1997).

My teaching goal and my philosophical goal is if I can change one student every semester, that's a successful semester. (Paul)

Because I'm trying to convert and educate people about sustainability…. it's like planting little seeds… I'm hoping that what I'm doing is at least making some contribution to creating these little seeds that will bear fruit in future. (Stewart)

We're missing an opportunity for them to have a transformative moment in their lives, at least in their school lives…to be more reflexive I guess about the nature of business or the nature of reality or things, things around poverty and around sustainability, and around materialism. Or whatever the social problem may be. (Claire)

Two interviewees specifically pointed out that they were un-teaching some key marketing and business concepts. Painter-Morland (2015), Springett (2010) and Varey (2011, 2012) discussed the 'ideological struggle' (epistemological tension) between the worldviews of neo-classical economics (dominant in all business studies) and sustainability.

Everything I teach in the class contradicts everything my students have studied in the business school, there are no consistencies whatsoever. It firmly contradicts everything they've been taught; and they have a hard time with it (Paul).

It is only through encouraging students to have a questioning attitude that such assumptions can be examined (Marshall et al. 2010).

The value of sustainability education and its possible transformative experience was seen beyond the students' professional life. In order words, sustainability knowledge was seen as an important personal trait. Some interviewees stated that the focus of job attainment (especially in the business school) was a great weakness and barrier to EfS. As such, a few interviewees suggested a more liberal type of education and a need for broader subject areas; this was usually in response to the critique of business school education creating unethical and profit-driven individuals.

Because they are so focused on getting students career or job ready…I think a fourth year of general education is really broadening for students…so we do a year of general education where students can take things like anthropology and philosophy and biology, and so it fosters a broader perspective and the fact, three years is really short. (Diana)

In contrast, a few other interviewees stated that sustainability knowledge was especially important for the workforce. While interviewees did not necessarily explicitly state that the purpose for EfS was for the workforce only, these interviewees did comment that industry feedback and getting students work 'ready' were important aspects of EfS.

So, I say to my students, you have an advantage because this is not a mainstream course in most marketing programmes. (Stewart)

Most interviewees expressed a holistic and liberal sustainability and education perspective, with only a few advocating from an economic or vocational paradigm.

An extended typology of sustainability educators: integrating the 'why' and the 'how'

A within-case analysis was conducted to explore the association between pedagogy and sustainability interest. The analysis reveals that interviewees who themselves had transformational experiences in education sought the same outcomes for their students as well as critical thinking, while those whose sustainability interests occurred during their upbringing preferred critical thinking and experiential learning. This association between pedagogy and sustainability interest can be seen in Table 1. Interestingly, the few participants which had experienced sustainability interest via work did not espouse explicitly or implicitly specific pedagogical approaches.

< Table 1.>

Consequently, based on the exploratory findings, specifically the differences between participant's experiences and their recommendation for EfS, we create a typology of sustainability marketing educators as can be seen in Table 2. Wood et al. (2016) recommended that future studies examine the preferred pedagogies of EfS academics and how these may follow disciplinary associations or personal identities. Our typology sheds light on personal identities and, more specifically, how academics became interested in sustainability, which may be related to preferred pedagogies for EfS.

< Table 2. >

The sustainability 'transformer' wishes to engage in transformational learning. Transformational learning may be for example through critical thinking or through discussing differing sustainability worldviews. Their preference for this type of education may be due to

their own transformational experiences. The sustainability 'thinker' wants to encourage critical thinking, especially to bring about the assumptions and contradictions of differing worldviews regarding their discipline and sustainability. These academics have usually experienced an appreciation for sustainability from their upbringing or relate sustainability passion and interest as part of their key personality. The difference between the 'transformer' and the 'thinker' is communicated through the chosen typology names – the 'transformer' actively aims to transform a student's worldview, subscribing to the belief that the current business worldview is dangerous to students and society, while the 'thinkers' intention is not to prescribe a new worldview to the student, but instead to give students the tools (i.e. critical thinking) to engage with possible worldview transformation. However, both want to confront the epistemological tensions within their discipline. Lastly, the sustainability 'actioner' is an individual who has experienced an appreciation for sustainability from their upbringing or had a transformational experience and they wish to get students to interact with their community and hope 'learning by doing' will provide an appreciation for sustainability.

This typology adds to Wood et al.'s (2016) work, who sought further exploration into their classification of the identities of sustainability champions in higher education. Our research demonstrates that the presence of 'nurturers' and 'strugglers' are present in other sustainability champions. This can be seen in Figure 1, displaying the merging of Wood et al.'s (2016) work and the present study. Interviewees in this study were 'strugglers' wishing to be an educator for transformative change, who experienced power and (mis)interpretation issues within their institutions and the academy. Most were also 'nurturers', as interviewees' wanted students to engage in critical thinking, and increase knowledge in sustainability and social action in the student and academic body. However, the 'saviour' did not seem to be exhibited in this research, but this identity may be further expanded to include those who see the purpose

of EfS as beneficial to individuals and companies rather than personal (and societal) development, exhibiting more instrumental reasoning for EfS.

< Figure 1. >

Similarly, relating this to Visser and Crane's (2010) typology, the 'transformer' has elements of all of the typologies, while the 'thinker' and 'actioner' resemble only one type. Specifically, the 'transformer' is similar to the 'experts', as they are motivated by giving their expert opinion on the need for a worldview transformation and also parallels 'catalysts' as they are motivated by their enjoyment of initiating and observing change; in this case not the organisation but in the student. The 'transformer' also resembles 'facilitators' as they aim to change attitudes/perceptions of students and mirror the 'activist' as the overarching belief behind their teaching is that they are fighting for a cause they believe in (sustainability), leaving a legacy of improved conditions and achieving student self-transcendence (changing student worldviews and in turn, actions). Conversely, 'thinkers' and 'actioners' seem to resemble part of 'facilitators' and 'activists', respectively. 'Thinkers' derive the meaning of being an educator in imparting knowledge and skills, and empowering individuals, while 'Actioners' in part are motivated is associating students with community action.

While Wood et al. (2016) created quite distinct categories (i.e. academics falling into only one identity), relating 'nurturers' and 'strugglers' to our findings may demonstrate that such a classification is too simplistic. As such, academics may exhibit more than one identity or display elements of all identities (Bristow, Robinson, and Ratle 2017), as was suggested by Visser and Crane (2010) in their sustainability managers typology. The tensions between different identities is related to the concept of subject positions, i.e. the effect of ideology on how individuals feel about themselves and the world around (Edley 2001). Here, different subject positions comprising identities pull in different directions by different worldviews or

discourses (i.e. profit maximisation and sustainability). For example, Davies and Thomas (2003) demonstrate the two conflicting professional subject positions of policing, one based on professional-ethical subjectivity, the other on policing subjectivity.

Discussion

Understanding how educators teach sustainability has gained some attention in the literature, in the tertiary (Christie et al. 2013), secondary (Sund 2016) and primary education setting (Green and Somerville 2015). However, there is little research on understanding why educators choose to integrate sustainability into their teaching, specifically focusing on their personal histories with sustainability. This research sought to understand why and how marketing academics integrate sustainability into their teaching. The study found linkages between interviewees' formation of interest in sustainability and instrumentally, how sustainability was addressed in the curriculum.

The research found a personal, as well as professional commitment, displayed by all interviewees. Many interviewees reflected that their sustainability focus was a much more personal endeavour than a professional one. EfS, as well as sustainability research, is heavily dependent on faculty themselves, their interpretation of sustainability, and their passion to incorporate sustainability (Barber et al. 2014; Boyle 2015; von der Heidt and Lamberton 2014). Similar to Christie et al. (2015), interviewees believed that other marketing and business academics view EfS as an additional or add-on topic, rather than an overarching or integrating theme. This finding demonstrates that sustainability in business is seen through different lenses (Andersson and Öhman 2016; Kemper, Hall, and Ballantine 2019). However, the implications of such a personal passion for sustainability has repercussions for professional lives. This resonates with the struggle for management and environmental scholars in the Organizations and the Natural Environment Division of the Academy of Management (ONE) in the 1990s,

‘many untenured professors and doctoral students in ONE were advised that they might be putting their academic futures at risk by pursuing their passion for nature too openly in their work’ (Stead and Stead 2010, 490).

This research explored how sustainability marketing academic participants became interested in sustainability and found that some participants had a continued lifelong passion, usually because of upbringing, while other participants’ worldviews had been influenced by their work and educational activities. Memories of childhood experiences, especially those with nature, have been found to influence academic staff’s interest, research and teaching in sustainability (Barlett 2008), as well corporate sustainability leaders (Rimanoczy 2014; Schein 2015). Specifically, Barlett (2008) found that sustainability interests were formed in integrators through their wonderment and enjoyment of nature. However, such a reflection was uncommon for interviewees in the present study. Overall, this study demonstrates that sustainability integration is rarely an institutionalised initiative; only in very few cases can interest be sparked through industry work or having to teach a specific course. More importantly, it seems that such an initiative may have an effect on their beliefs but not their pedagogical practices. However, engaging in curriculum reform and innovation has been suggested to result in faculty, as well as student learning (Barber et al. 2014; Dobers, Linderstrom, and Mobjork 2008). Consequently, more research is needed in this area.

Conversely, a number of participants experienced significant changes in their perception of sustainability through their tertiary education and teachings/learners presented in the form of books and presentations. Previous research has only shown short-term impacts of sustainability education (e.g. Kuo and Jackson 2014; Woodworth, Steen-Adams, and Mittal 2011), and thus, our findings suggest the ability for education to lead to long-term changes in beliefs and values. Furthermore, the aim of the ‘transformer’ is to utilise transformational

learning and change student worldviews. While interviewees were not as specific about the methods they used for such a transformative experience, we may learn from scholars such as Wals and Sterling who advocate for transformative learning. Indeed, transformative learning seems to be an umbrella term for student cognitive transformations, but how to achieve this may involve various techniques and theories. Lotz-Sisitka, Wals, Kronlid and McGarry (2015) suggest different theories for this very purpose of transformation: reflexive social learning and capabilities theory; critical phenomenology; socio-cultural and cultural historical activity theory; and new social movement, postcolonial and decolonisation theory. In practice, for example, Wals (2010) describes an opportunity for students to critically analyse everyday events and product purchases and learn from each other through a social learning perspective.

Previous research has shown that fear can provoke sustainability awareness and concern (O'Neill and Nicholson-Cole 2009). However, Barlett (2008) and the findings presented here suggest that it is the positive experiences which shape interests in sustainability. Barlett (2008) proposed the power of professional development emerges from re-enchantment, connecting past experiences (i.e. childhood experiences, moral principles, personal ethics and religious commitments) with those experienced in the course. Future research should focus more deeply on the components of professional development courses. While content is important, so equally is how knowledge and experiences are shared and created. Here, research may benefit from utilising such a change in mature-age adults through the lens of identity change (Martin and Chen 2016).

These findings extend previous research on sustainability integration beyond sustainability managers in firms (e.g. Mitra and Buzzanell 2017) towards academics in universities (e.g. Wood et al. 2016), especially in disciplines such as business and marketing studies which have conflicting epistemologies (Springett 2010). The avenues, examples, and

implications of these sustainability interests or worldview formations can be seen in Table 3. The typology and the research findings may be of interest to managers and head of departments when hiring staff (Wood et al. 2016) to understand pedagogical approaches and fit within the culture of the department and/or school. Further, the findings have implications for professional development as well as support and incentivisation of sustainability curriculum innovation.

< Table 3. >

The research also revealed several internal, external, managerial and epistemological barriers. In their departments, interviewees felt that there was a lack of knowledge and inertia was seen as another main barrier in faculty; this is consistent with the literature examining EfS (e.g. Beusch 2014; Doherty, Meehan, and Richards 2015; Thomas 2004). Outside of academia, the business community was seen as not demanding sustainability literate students, and this lack of pressure for sustainability on the business school was seen as a key barrier to sustainability marketing education (see also Doherty, Meehan, and Richards 2015). Second, students were more likely to be seen as a key driver for sustainability integration, with some participants reflecting on the positive experiences they have encountered with students, while other interviewees believed the contrary. Previous research also shows the importance of student demand (Beusch 2014), and students have been shown to be influential in initiating EfS (McNamara 2010). Nevertheless, the dominant industrial worldview present in business schools, departments and faculty mindsets presented major ideological or philosophical barriers towards sustainability's integration within marketing. This mindset prevented colleagues from seeing the importance of social and environmental issues in business studies and the ability to address these issues in research and teaching. Thus, key here is the epistemological tensions between faculty and their colleagues.

Similarly, there was the challenge of implementing pedagogy that addresses the complex nature of sustainability (Wood et al. 2016). Interviewees showed a preference for encouraging critical thinking and a questioning attitude among students, transformational learning, and active engagement in the community. The findings provide evidence to support the ability for education to bring about changes in student worldviews through examination and questioning of worldviews (Sterling 2011; Stubbs and Cocklin 2008). For some 'the aim is to shift the mindset of the students to appreciate other values and worldviews' (Stubbs 2013, 33). Here, paradigm change can be encouraged by educators (Sterling, 2005) and transformative learning may be used in this regard (Moore 2005). Critical thinking and the use of critical theory provide business and marketing studies the opportunity to reflect on some key business assumptions (epistemological tensions), such as the self-interested individual, the rational consumer, and the responsibility of business operators and marketers (Painter-Morland 2015; Varey 2011; Springett 2005). Here, research suggests many different avenues to address the tension between instrumental and emancipatory educational objectives (Andersson 2018; Stubbs and Cocklin 2008). In addition, some participants wanted their students to experience real life community projects which involve hands-on learning (Kricsfalusy, George, and Reed 2018; Seider, Gillmor, and Rabinowicz 2011); which could also have transformational elements. Indeed, sustainability projects in the community have previously been shown to affect views on poverty (Seider, Gillmor, and Rabinowicz 2011). Such initiatives may be extremely relevant for business studies as forms of internships and real-life consultancy projects are highly demanded by industry. Here, educators can choose what types of projects and organizations to be involved with (i.e. social enterprises, charities, community projects).

Reflections about why and how sustainability marketing academics engaged with EfS, demonstrates that there are various avenues and reasons why possible change agents act in certain ways. Consequently, this suggests that there may be patterns emerging which help to

understand the identities, experiences and opportunities for change agents in universities. While Wood et al. (2016) explored pedagogical strategies only, the linkages found in this study between strategies and sustainability interest/background demonstrates that pedagogical approaches to EfS may not be as discipline-specific as first theorised (Reid and Petocz 2006). Instead, the pedagogical approaches may depend upon how academics own sustainability interest was formed, and academics interpretation about what EfS is for (i.e. personal development, professional development, societal impact or business relevance). Nevertheless, discipline culture, history, ideology and philosophy have a large impact on the ability, willingness, and understanding of how and reasons why to integrate sustainability. Thus, future research should examine the identities and experiences of academics interested in sustainability in different disciplines and also between disciplines.

Future research

While more research is needed to understand how such experiences and projects can be implemented fully, this study provides evidence to suggest that professional development and work projects can aid in the understanding and appreciation of sustainability. The content of such initiatives should be examined in future research, including the examination of pedagogy and duration. Similarly, questions remain about how faculty may respond to more 'top-down' sustainability initiatives if personal interest in sustainability is not present. Here, there remains unanswered questions about possibly a fourth aspect of the typology which is a non-change agent.

Future research could investigate professional development courses for sustainability which are compulsory for faculty. Particularly, the professional development experiences from faculty with no interest in sustainability need to be researched. For example, past student research has shown that education can affect environmental attitudes and ecological awareness.

However, effects have only been examined in the short-term (e.g. Kuo and Jackson 2014; Woodworth, Steen-Adams, and Mittal 2011) and thus, there is much room for longitudinal research for both faculty and students.

In regards to theoretical perspectives, the research findings suggest that future research utilising a discourse framework may benefit from a greater focus on subject positions (Edley 2001). Finally, the examination of epistemological tensions in practice as well as from the perspective of other business disciplines such as accounting, or disciplines such as engineering, may be of interest.

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Table 1. Pedagogy and experience

Participant	Pedagogy			Experience	
	Critical	Transform	Community-service	Upbringing	Education
Rosie	✓			✓	Degree
Bob	✓			✓	Degree
Diana	✓			✓	
Ben	✓			✓	
Ron	✓			✓	
Claire	✓	✓		✓	✓
Maya		✓		✓	Degree
Paul	✓	✓			✓
Stewart		✓			✓
Patricia	✓	✓	✓	✓	✓
Louise			✓		Degree
Rachel			✓	✓	
Nick	✓		✓	✓	

Table 2. Sustainability educator typology

Identity	Pedagogical Approach	Advocated by
The sustainability "transformer"	Sustainability educator for student transformation, specifically wanting to induce a worldview shift in the student	Usually advocated by those who have experienced their own transformation experience
The sustainability "thinker"	Sustainability educator who encourages critical thinking and a questioning attitude	Usually advocated by those who have attributed their interest in sustainability from their upbringing
The sustainability "actioner"	Sustainability educator who believes getting students involved in the community and sustainability projects will help incite change in individuals	Usually advocated by both those who have experienced their own transformation experience and /or who have attributed their interest in sustainability from their upbringing

Table 3. Sustainability interest/worldview formation

Sustainability Interest	Examples	Implications	Found in previous studies
Upbringing	Parents, family, and friends Personality	Socialisation processes	Barlett (2008); Rimanoczy (2014); Schein, (2015)
Education	Presentations, tertiary education, literature works	Transformation education and learning	Barlett (2008); Schein (2015)
Work	Projects, Teaching sustainability	Community-service learning, experiential learning, and volunteering	N/A

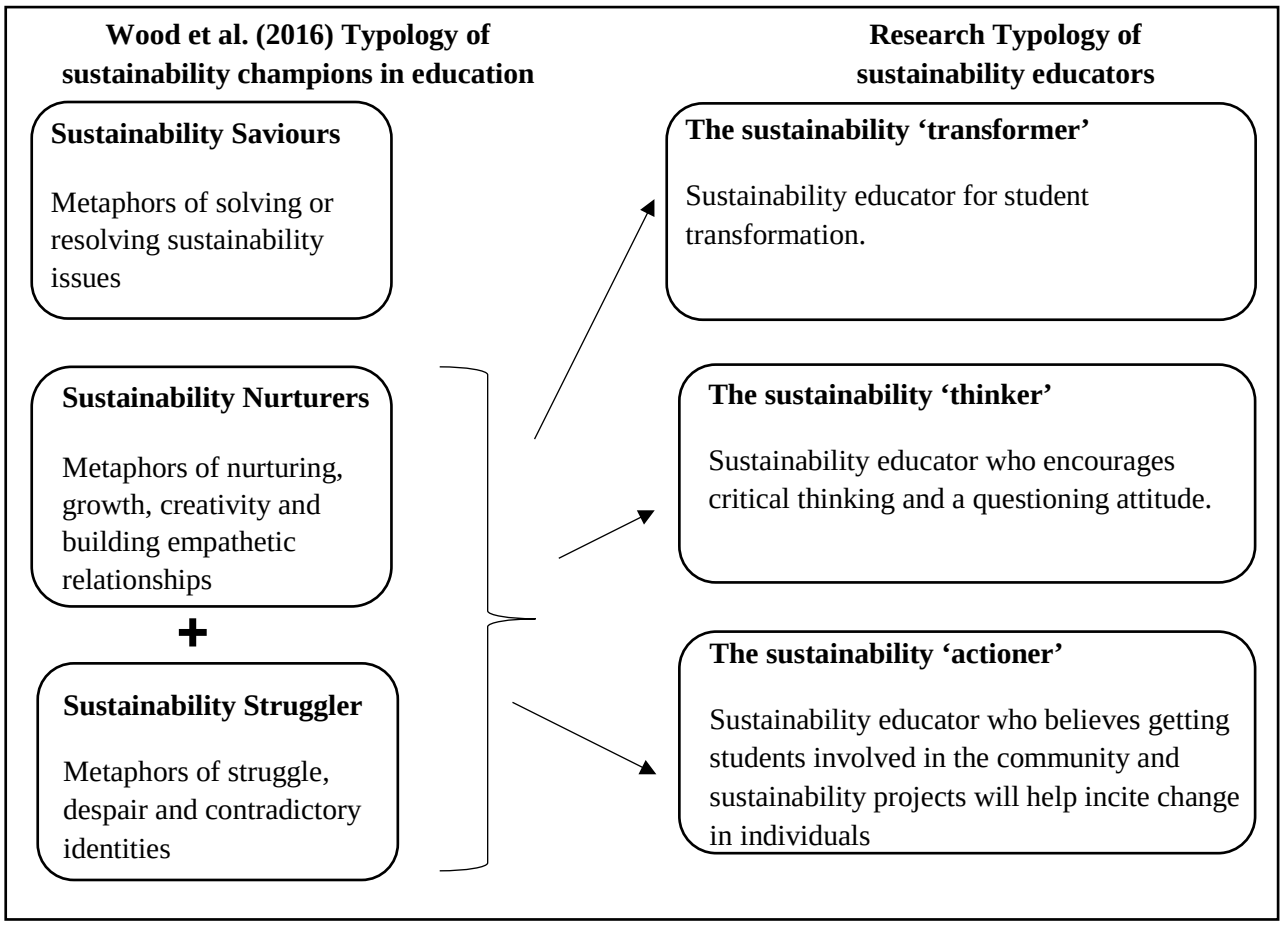

Figure 1. Research versus Wood et al. (2016) typology of sustainability educators