

**Perceptions of sustainability within the English Further
Education sector**

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The candidate confirms that the work submitted is his/her own and that appropriate credit has been given where reference has been made to the work of others.

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Abstract

This study investigates the relationship between college leader's perceptions of sustainability and sustainable development in the English Further Education (FE) sector, and the nature of its practice within individual colleges and the sector as a whole. Previous research investigating perceptions and practice of sustainability within education has almost exclusively focussed on Higher Education (HE) institutions, with much research also focussing on describing institutional progress without investigating the facilitating leadership conditions. This study makes a unique contribution to knowledge by investigating a previously unexplored sector through the use of the Transition Management Framework as the study's conceptual framework. A key outcome of this study is the adaptation of the Transition Management Framework that could be used by the sector and its leadership structure to facilitate a reassessment and reinvigoration of sustainability leadership within the sector.

The research design is based on a Grounded Theory methodology that used semi-structured interviews and focus groups as the primary method of data collection, with content analysis of significant sector stakeholders' websites and publications forming a secondary method of data collection. The first key finding of this research was that the relationship between how sustainability is conceptualised and how it is practised is weak, with perceptions often referring to two different interpretations, neither of which fully addresses the social, economic and environmental aspects of sustainable development. Indeed, whilst perceptions focus on the environment, it is to this that the sector appears least accountable. This power pointing and a lack of accountability held by all levels of management within FE toward the environment was the study's second key finding. Both of these findings are intrinsically linked to the third, which is that the Transition Management Framework's focus on incremental change may sufficiently be able to change practices at a niche level, but unless operating within a more sustainable economic paradigm, the reach of incremental action may always be limited.

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Publications related to this thesis

Weatherill, Georgiana. 2013. 'An exploration of leadership and sustainable development within UK Further Education colleges', in 'Making the number of options grow. Contribution to the Corporate Responsibility Research Conference 2013', edited by Baumgartner, R.J. Gelbmann, U. Rauter, R. 2014. 297-315. ISSN 2308-1767.

List of Abbreviations

AOC – Association of Colleges

ALS – Additional Learning Support

BEIS – Department of Business, Energy and Industrial Strategy

BIS – Department of Business, Innovation and Skills

BREEAM – Building Research Establishment Environmental Assessment Method

CSR – Corporate Social Responsibility

DFE – Department for Education

DIUS – Department for Innovation, Universities and Skills

EFA – Education Funding Agency

EMS – Environmental Management System

ERDF – European Regional Development Fund

ESOL – English for Speakers of Other Languages

ETF – Education and Training Foundation

FE – Further Education

FEC – Further Education College

GFE – General Further Education

GT – Grounded Theory

HE – Higher Education

HEFCE – Higher Education Funding Council for England

HESA – Higher Education Statistics Agency

HNC – Higher National Certificate

HND – Higher National Diploma

HOC – House of Commons

LEP – Local Enterprise Partnership

LSC – Learning and Skills Council

LSIS – Learning and Skills Improvement Service

MDG – Millennium Development Goals

MLP – Multi-level Perspective

NAO – National Audit Office

NEET – Not in Education Training or Employment

NGO – Non-Governmental Organisation

NIACE – National Institute of Adult Continuing Education

NVQ – National Vocational Qualification

QAA – Quality Assurance Agency

SD – Sustainable Development

SDG – Sustainable Development Goals

SFA – Skills Funding Agency

STEM – Science Technology Engineering Mathematics

TMF – Transition Management Framework

UN – United Nations

WCED – World Commission on Environment and Development

Chapter 1. Introduction and overview

1.1 Prelude and thesis structure

The motivation to carry out this study was inspired by the researcher's professional experience as a sustainability practitioner within the Further Education (FE) sector, and a desire to demonstrate to sustainability practitioners and academics within Higher Education (HE) that the unique characteristics and organisational conditions of FE colleges mean that sustainability is both perceived and practised differently than within HE. Though specific studies of sustainability generated *by HE about HE* have provided much inspiration and guidance in the production of this study, they, like the majority of studies within sustainability academia, omit or generalise FE as being part of 'Higher Education', and not as a sector in its own right.

This study therefore intends to highlight not only why FE is a sector worthy of specific attention within sustainability research, but also why it is demonstrably different to HE and therefore the research outputs and recommendations to emerge from studying HE institutions are not necessarily transferable to FE institutions. Whilst this may seem a pedantic motivation to carry out a study requiring years of dedication, the researcher believes that the issue is symbolic of a larger issue concerning the overlooking of or patronising of vocational education, even by the FE sector itself (through its pursuit of more lucrative, better respected and more widely understood HE provision). This at a macro scale is suggestive of education being perceived only to be valuable based on the employment and earning potential of graduates, and not the intrinsic value of a learner simply being taught how to read, write, or learn something new for its own sake – not for any other purpose.

As later chapters will explain, the overlooking of FE by much sustainability research may simply be representative of the fact that within their education, sustainability academics have not come across FE and its omission therefore is just circumstantial. After all, you cannot know what you do not know.

Nevertheless, this study seeks to paint a picture of FE that describes its unique characteristics, explore how the sector perceives sustainability, and if the two may be linked. Unfamiliarity therefore abounds, both on the area of scrutiny and the conceptual framework chosen to help navigate the research findings. Rather than taking the typical route of using frameworks that assess sustainability performance, this study uses a framework that has emerged from socio-technical innovation studies

and the development of an alternative governance approach that could lead to radical change through incremental action. The Transition Management Framework (referred to as the TMF hereafter) is a framework that has both descriptive and prescriptive elements that have been used within this study to map the existing management approach to sustainability by multiple levels of FE leadership, and to identify where an alternative governance approach for sustainable development may be best placed within the sector. This was felt a more useful research approach to take rather than to simply describe 'good' and 'bad' areas of sustainability practice within the sector.

The research objective based upon the contextual issues described above is therefore:

“To determine if there is a relationship between Further Education leaders’ perceptions of sustainable development, and the nature of its practice within FE colleges”

The study’s research questions, which are detailed in chapter 2.4.1, have been designed to explore perceptions of sustainability, perceptions of power and leadership for sustainability and how the sector perceives its contribution to Sustainable Development. The results of the study will be analysed against each research question’s theme to identify the prevailing management approach taken by multiple levels of leadership within the sector. Consequently, this will identify any differences in approach that can answer the study’s research objective, which is seeking to demonstrate the perceptions of sustainability held by the sector’s most powerful stakeholders (and not those with an already active or professional interest in the subject).

Sustainability is not just another initiative. The researcher’s professional experience led to the desire to carry out this study in order to demonstrate as much, and to try and understand what would be required for sustainability to become mainstreamed and not viewed as a niche interest.

As the study has progressed, it has become evident that while indeed the FE sector is different to HE, the management approach it takes at an institutional level is not substantially different to HE or the approach taken by society as a whole. What FE appears to lack however is the confidence to forge its own destiny because of the power dynamics its funding structure propagates. It is within this funding structure and higher leadership levels that arguably have the least accountability to sustainability as it has consistently suggested that the responsibility to demonstrate the economic

benefits of environmental management rests with individual colleges only. Combined with an increasing trend of using the term 'sustainability' in reference to keeping an organisation financially afloat, it is unsurprising that leaders at college level were found to have conflicting and confused notions of what sustainability means, and the sector's role in achieving it.

The story of FE told by this thesis is structured into six chapters. This first chapter provides an overview and introduction to the research area, key definitions and the study's contextual background. Chapter two provides a literature review of the key conceptual areas relevant to this study and also highlights the literature gap that this study seeks to begin to fill. Chapter three provides a detailed account of the research approach and design and the limitations to arise from each. A comprehensive account of the study's results is provided in chapter four, which are discussed and related back to the key conceptual areas where appropriate in chapter five. Answers to the research questions and objective are also discussed and distilled in chapter five, using key emergent themes as possible explanations for the results and to identify areas of future research. Areas for future study, the practical and policy implications presented by this study's research findings are discussed in chapter six, as well as the study's key theoretical contributions. The limitations of the study and final reflections conclude chapter six, and the thesis as a whole.

1.2 Key definitions

Though the complexities of a study examining perceptions of an already contested term are discussed in chapters 2.1 and 3.3, it is important to provide an initial explanation of the key definitions that explain the terminology used throughout this study for the reader's clarification.

Sustainability and Sustainable Development – As the study's title indicates, it is the purpose of this research to determine the perceptions of sustainability held by leaders of the FE sector. The ambiguities surrounding the terminology of sustainability are discussed within the literature review, research method and discussion chapters, however it is important to signpost here the definition intended for exploration. Sustainable Development is defined using the Brundtland definition that is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987: 43). Sustainable Development (which is often abbreviated to SD throughout this thesis) is therefore the

method by which sustainability is achieved, though as discussed in chapter 2, sustainability is arguably a process and not a destination (Shriberg, 2002) and if ever achieved, will happen over many generations, at different local, regional, national and global levels (Loorbach et al, 2009).

Holistic sustainability – throughout this thesis the term ‘holistic’ sustainability is referred to as a way of differentiating between the two interchangeably used interpretations of sustainability found to be used by the sector. Chapter 2.1 lists holistic sustainability as one of five ways in which sustainability has been defined by sustainability researchers, and is defined as “two dynamic and simultaneous equilibria: the first one amongst economic, environmental and social aspects, the second amongst the temporal aspects, i.e. short-, long- and longer-term perspectives” (Lozano, 2008:1840).

The use of the term in this study however is simply the researcher’s chosen method of differentiating between the interpretation that is in keeping with the WCED’s definition described above, which is different to the literal interpretation used simply to describe an organisation’s ability to continue and remain financially viable. Though this ‘holistic’ interpretation suggests a more systemic understanding of each of the facets that contribute to SD (i.e. environmental, social and financial sustainability), as this study will demonstrate, the term was only considered more holistic in its interpretation because of its reference mostly to environmental sustainability. Therefore while it is labelled as a more holistic understanding, this is only relative to the more common use of sustainability as a noun within business terminology.

1.3 Further Education in context: a description of the research area and the general trends of the sector.

This chapter will discuss the key characteristics of the Further Education (FE) sector including how it is funded, who its key stakeholders are, and the nature of its curriculum provision. This introduction is necessary to provide the overall context of the sector upon which this study focuses, and to illuminate the sector's unique characteristics that, in turn, will reinforce why sustainability research conducted within and for HE, cannot be assumed to also be applicable to FE. As will be subsequently discussed, the fact that FE colleges themselves are not research institutions, and at a national level are less familiar to those in positions of power or influence compared with universities, may have contributed to continuing trends of academic literature on sustainability within education not distinguishing FE from HE, but do make the distinction of primary and secondary schools. On the one hand the principles of this research could be assumed valid and transferable to FE, however this would be to discount FE's very different characteristics and dynamics, though there are many similarities between the two.

1.3.1 Characteristics of the Further Education sector

Further Education is a generic term for education and training that takes place most often but not exclusively in FE colleges (Scott and Gough, 2010), and is characterised by the teaching of basic skills (such as numeracy and literacy), A-Levels, National Vocational Qualifications (NVQs), foundation degrees, and diplomas, vocational education delivered through apprenticeships and work-based training, and personal and community learning (Finlay, 2009; 157 Group, 2010[a]; BIS, 2011). Higher Education on the other hand delivers courses above A'level and NVQ level 3, such as undergraduate and postgraduate degrees, Higher National Diplomas (HNDs) and Higher National Certificates (HNCs).

Though there is a perception that FE is positioned within the education hierarchy above schools and below universities, colleges do offer HE courses but are not research institutions. For example, 159,000 people study HE within a college, colleges deliver 85% of HNC's, 82% of HND's and 58% of foundation degrees (AoC, 2016).

There are 325 colleges in England and are made up of different categories as denoted in figure 2. Excluding the 90 sixth form colleges whose education provision is typically limited to A'level or NVQ level 3, the remaining 235 colleges teach foundation degrees,

undergraduate, and postgraduate level courses (AoC, 2016).

Moodie (2002) provides a useful summary of the distinction between FE and HE, however he also makes the point that it is not necessarily helpful to try and characterise FE as its purpose is to remain fluid according to the changes in society and the nature of skills it requires. He states, “technical education is more applied in nature, in contrast with university education, which by implication is more ‘pure’” (Moodie, 2002: 250). He goes on to say that, whereas the purpose of vocational education is to equip learners with practical skills or the know-how for a particular trade or vocation, HE is there to deepen a learner’s understanding of a subject through critical, adaptive and innovative processes. Put more simply, the difference is either the acquirement of skills or knowledge (Moodie, 2002).

Colleges are not unique to the UK; in North America, Continental Europe and Australasia they are generally known as ‘community colleges’ and perform a similar role to those in the UK. Treat and Hagedorn (2013:5) describes the role of community colleges “not as international education centres, but rather serving the needs of the local community and local employers, and by definition creating local economic development through the provision of a trained workforce”. Describing UK colleges specifically, Foster (2005:6) describes its three key roles as “1) labour market preparation for young people, 2) supporting employers in workplace learning, and 3) meeting the wider learning aspirations of the people and communities colleges serve”.

Colleges are the most significant component of the FE system, but work alongside its less numerous (but increasing in number) counterparts within local authorities, the voluntary sector and private training companies who provide often more informal adult and community based learning, and work based learning respectively (NIACE, 2011).

Whereas the student cohort of universities is typically 18 and older, college students in some circumstances can be as young as 14, however typically fall into two main cohorts – 16-19 year olds, and adult learners. How these cohorts are funded and organised as part of the overall sector structure of English FE is shown in figure 1.

Colleges work with some of society’s most disadvantaged such as young people not in employment, education or training (known as ‘NEETs’), or those with learning difficulties or disabilities, and assist in their social integration as well as teaching English to speakers of other languages, colloquially known as ‘ESOL’ (157 Group, 2010 [a]). 22%

of 16-18 year old students and 29% of adult learners are from an ethnic minority background (AoC, 2016). Colleges also provide a route to education for those with family or work commitments and who therefore want to study locally (NIACE, 2011). These roles colleges perform have the potential for lasting positive social and economic impacts as those students and their acquired skills are more likely to remain in the local community (157 Group, 2010[b]; NIACE, 2011).

Comparing FE with HE

Annually, UK colleges educate and train 2.9 million learners (AoC, 2016) made up of:

- 773,000 16 – 18 year olds
- 71,000 16-18 year olds apprenticeships
- 2 million adults
- 24,000 14-15 year olds (AoC, 2016).

As a comparison, in the 2014/15 academic year, 2.2 million part and full time students were enrolled onto courses within UK universities (HESA, 2016[a]). Since 2009-10, more full-time entrants to undergraduate courses other than first degrees have been studying in FE colleges than in HE institutions. This trend continued in 2013-14, where 26,000 were taught in FE colleges compared with 13,000 in HE institutions (HEFCE, 2015).

The size of an FE college is usually dependent on its curriculum offer; specialised colleges with a dedicated provision such as agriculture, art, or specialised needs are much smaller than those colleges offering general Further Education (sometimes also known as GFE colleges). These colleges have a much wider curriculum offer and consequently enrol many more students.

The income (from funding bodies, tuition fees, research grants and contracts, endowments and investments and other income sources), estate size, and the numbers of students (including full and part time 16-18 and 19+ students, additional learning support [ALS] students, HE students and apprenticeship students) for the 2014/15 financial year for each of the ten largest colleges (by income) in England are denoted in table 1.

Additionally, to illustrate how little income is received from research grants and contracts, the amount each college received from such sources is indicated within the

first column, which forms part of the total college income indicated in the second column. The composition of funding in the 2014/15 financial year for the FE and HE sectors is denoted in figures 3 and 4 respectively.

	Research grants & contracts income (£)	Total income (£)	Land and buildings (m ²)	Total number of students
Birmingham Metropolitan College	0	66,620,000	93882	69092
City Literary Institute	0	17,839,000	16129	91520
Cornwall college	5,251,000	69,574,000	94649	26487
Hull college	0	59,841,000	29424	43190
Leeds City College	1,830,000	79,549,000	97917	118234
Milton Keynes College	0	60,546,000	31028	22317
Newcastle College Group	0	182,458,000	181068	112258
The Manchester College	0	168,042,000	113247	73553
Vision West Nottinghamshire College	0	58,509,000	42065	110161
Workers' Education Association	0	30,737,000	1746	135790

Table 1 - Income, physical estate and student number figures for each of the ten largest colleges in England (SFA, 2016).

A number of these colleges are also members of The 157 Group, a consortium of colleges whose membership is made up of some of the largest and most successful colleges in the UK which collectively have a combined turnover of £1.5bn, 670,000 enrolled learners, 37,000 employees, engage with 31,000 employers, and contribute £15bn a year to their local economies (157 Group, 2014). The group works in partnership with other sector stakeholders, external stakeholders such as employers and government agencies to ensure that the FE sector is represented and therefore considered in the construction of relevant new policies. The group, whose membership is limited to approximately thirty colleges, was chosen as the data sample for this study as both the group's membership size and the collective representation of its members of the FE sector was felt to be achievable and representative of the sector as a whole. The advantages and disadvantages of this are discussed in detail in chapter's 3.2.1.1 and 3.2.3.2.

Changing leadership focuses

Since the 1980s, there have been six different government departments responsible for the HE and FE sectors with the most recent bureaucratic reorganisation taking place in 2009, where responsibility for both HE and FE was moved from the Department for Innovation, Universities and Skills (DIUS), to the Department for Business, Innovation and Skills (BIS) (Bessant et al, 2015). In July 2016 BIS merged with the Department of Energy and Climate Change (DECC) to form the Department for Business, Energy and Industrial Strategy (BEIS). As this merger took place two years after this study's research was conducted, the rest of this thesis will make reference to BIS only.

Regarding the leadership of FE specifically, having been previously 'owned' by their local authorities, colleges became independent not-for-profit organisations as a result of the Further and Higher Education Act 1992 (NAO, 2008; FE Week, 2013). This gave colleges autonomy over their physical assets, and greater autonomy over their curriculum offer, allowing them to become more responsive to local market forces and student needs (AoC, 2013; FE Week, 2013). However colleges currently receive on average 79% of their funding from the government as demonstrated in figure 3, allocated by two ministerial departments, the Department for Education (DfE), and BIS, who are each respectively responsible for the executive agencies of the Education Funding Agency (EFA), and Skills Funding Agency (SFA). The Higher Education Funding Council for England (HEFCE) is an additional organisation sponsored by BIS, which provides some funding to English FE colleges for HE provision, but is the principal government-funding provider for universities. Indeed, while market forces and customer demand govern both universities and colleges, universities are able to pursue lucrative research contracts (Cullingford, 2004[a]) and charge tuition fees, both of which supplement the funding received from funding bodies (see figure 4).

FE colleges are not research institutions and are almost entirely dependent on government funding, leaving them vulnerable to changes in how funding is allocated as well as funding reductions, both often influenced by changing political agendas (Foster, 2005). Added to this pressure and vulnerability is the issue of increasing competition within the FE market from other providers such as higher education institutions, sixth form colleges (often attached to schools), specialist colleges, local authorities, private companies and voluntary sector organisations (McCoshan and Otero, 2003; NAO, 2008). All of these risks have necessitated colleges to build resilience through diversifying their income streams by for example providing training within prisons,

workplaces, or community venues (Office of Fair Trading, 2010), growing higher education provision and attracting more international students thereby increasing their tuition fee income (157 Group, 2011). Diversification is therefore at the forefront of many college leaders' strategies to ensure the survival, or financial sustainability of their college and the sector, as indicated within the study's results. However though diversification enables colleges to be more responsive to local needs (NIACE, 2011), the funding criteria they must meet in order to receive government funding is often more reflective of national priorities (157 Group, 2010[a]; Office of Fair Trading, 2010), which therefore places colleges in a difficult position as these can often be at odds with more local demands from students and employers (Panchamia, 2012).

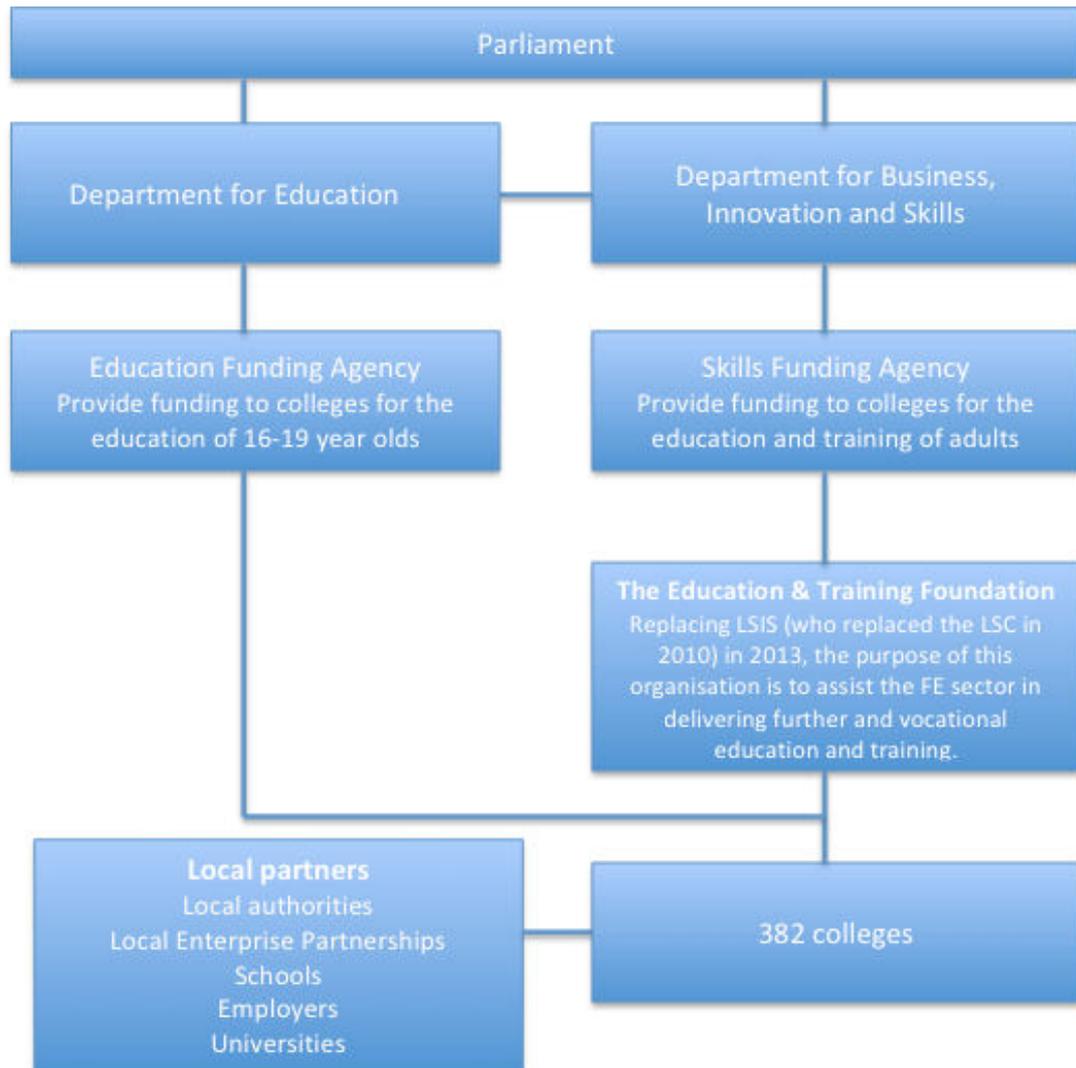


Figure 1 - Organisation of Further Education in England, 2015. (Information adapted and updated based on NAO, 2008: 10).

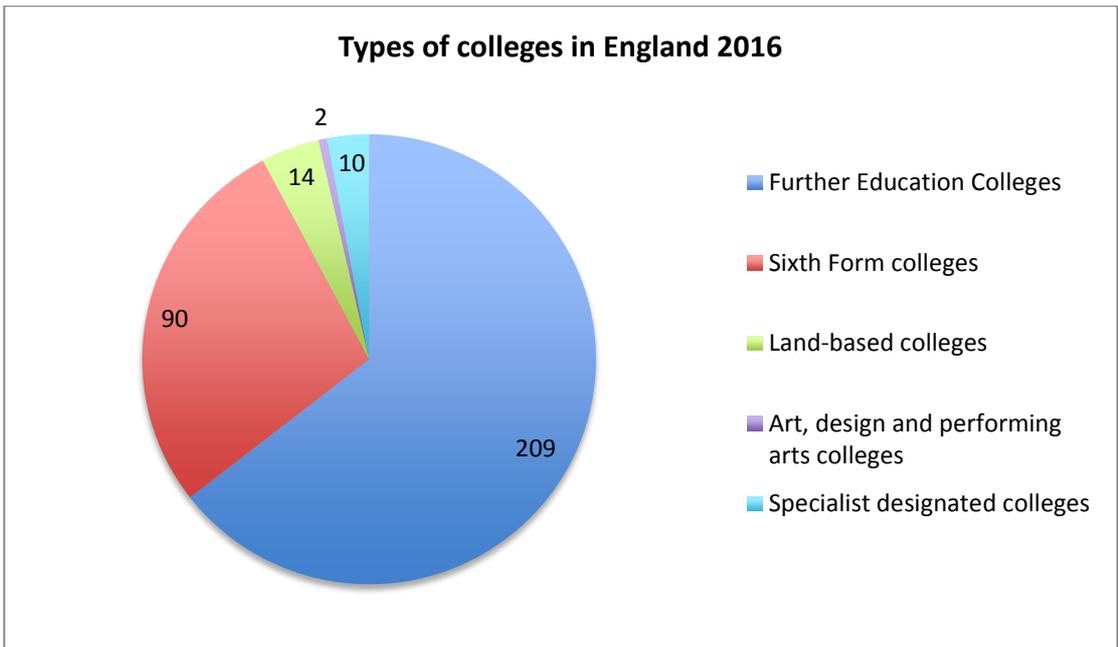


Figure 2 – The make-up of the 325 colleges in England, comprising 209 FECs, 90 sixth form colleges, 14 land-based colleges, 2 art, design and performing arts colleges, and 10 specialist designated colleges (AoC, 2016).

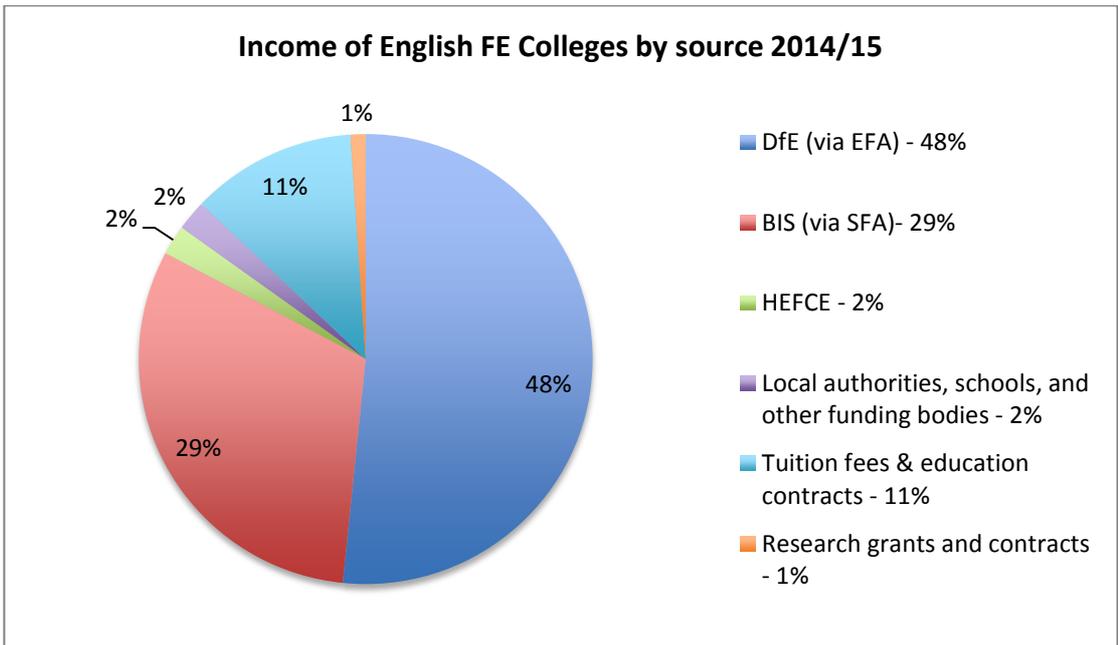


Figure 3 - Total sector income in England is £7.5bn (figure developed using information within AoC, 2015).

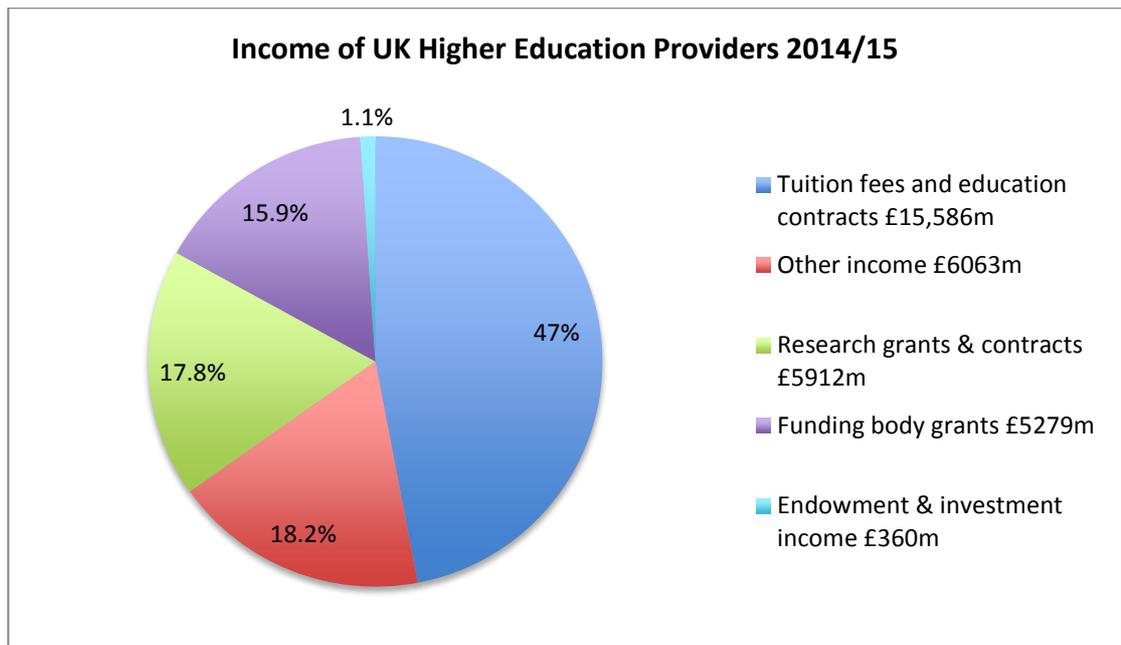


Figure 4 - Total sector income £33.2bn (figure developed using information from HESA, 2016[b]).

1.3.2 Perceptions of the Further Education sector

Nationally the perception of a school or university's purpose is clear, but while colleges have strong local brands, FE's national brand remains weak (NIACE, 2011) despite the sector's role in the provision of a skilled workforce (McCoshan and Otero, 2003; NAO, 2008). This weak brand and overall poor and/or confused perception of purpose are the result of legacy and continuing trends, such as being involved in too many initiatives, itself brought about by strategic confusion over its role (Foster, 2005).

Poor perceptions of the sector have heightened the need to diversify and be responsive to national and local demands, however this is only compounding public and media confusion of the identity and purpose of a college (Foster, 2005; Panchamia, 2012; FE Week, 2013) and has led to colleges often being defined by what they are not (i.e. a school or university) (NIACE, 2011). Similarly, the focus on skills, highlighted by Moodie's 2002 distinction, as well as the rhetoric found within many of the sector's own published material and that of its funding bodies, is a distinction that has contributed to poor perceptions, but is something that the sector must continue to promote in order to make its purpose and function understood by those in positions of power. For instance:

“...FE has a critical role to play in ensuring that the country has the skills we need to help build a stronger, evenly balanced and more vibrant economy. Skills are integral to accelerating economic prosperity; creating competitive business advantage in a challenging global environment and empowering individuals to change their own lives for the better” (SFA, 2011:2).

Confusion surrounding the role and purpose of colleges could also be associated to a legacy and continuing trend of where college students come from and go to. While 31% of students aged 19 or under entering HE come from FE colleges (AoC, 2015), students from more accomplished professional backgrounds typically take their route to university by attending sixth form colleges, rather than FE colleges (157 Group, 2010[a]). It seems therefore that the purpose of colleges, however construed, presents both the opportunity and the problem (Foster, 2005). The intended purpose of colleges is to produce graduates who enter the labour market on a more technical, vocational basis than those graduating from universities. However this furthers a perception that colleges cater for the less academically able or facilitates fewer opportunities than universities. Perceptions such as this are left unchallenged and the knowledge gap of FE grows rather than diminishes, as graduates from FE are not as likely to follow career paths that within their sphere of influence enable them to become its advocates. Over time, this may have played a role in the six major reforms experienced by the sector since its incorporation in 1999 (Panchamia, 2012), and the additional changes made to its qualifications and funding systems, much more numerous and frequent than changes experienced by schools and universities, leading to yet further confusion of the sector (157 Group, 2013). Indeed, as stated by Panchamia (2012: 1) – “The lack of consensus about the main goals of FE has translated into somewhat chaotic policy-making over the last two decades. The government has frequently shifted back and forth between centrally planning provision so that it reflects national skills priorities and devolving more choice to local employers and learners. Alongside this policy churn, a number of institutions, geographical tiers and arms-length bodies have been set up and abolished creating a complex and highly unstable system”.

The physical appearance of many of the buildings colleges still occupy does little to help combat less favourable perceptions. 40% of the current FE estate was constructed between 1960 and 1979, and is in poor condition and unfit for purpose as a result of funding constraints throughout the 1980's (NAO, 2008; Stone, 2011). Schools and universities did not experience equivalent funding constraints leading to the perception

that the FE sector suffers from a disadvantaged middle child syndrome (Foster, 2005), a pattern that is replicated in the U.S where community colleges receive the lowest state funding per full-time equivalent student of all levels of public education, and have been subject to cuts in the latest round of budget rollbacks (Eddy, 2005).

A capital programme 'Building Colleges for the Future' funded by the government was launched in 2001 mirroring a similar programme rolled out for schools, with the aim to rectify some of the neglect of the English FE estate. It funded 700 projects in 330 colleges and was widely regarded as a success, but due to mismanagement, the programme collapsed in 2009 (Foster, 2009). However, the 157 Group (2010[a]) identified that completed construction projects had a positive impact on student numbers and success rates, which itself has improved perceptions and visibility of the sector. As will be discussed in subsequent chapters, capital building projects are still therefore highly regarded by college leaders, many of whom see the condition of the college's physical infrastructure as essential for a positive public image, and therefore the survival of the college itself. This has been expressed as a priority for college leaders for the sustainability of colleges by improving reputations and becoming leaner through more eco-efficient estates, i.e. doing more with less (157 Group, 2011). The sector and its governance structure's approach to sustainability are discussed in greater detail in chapter 5 as part of the potential explanation behind the study's results outlined in chapter 4.

1.4 Summary

This chapter provided an overview of the study that is presented within this thesis including the objective of the research, the key definitions the reader should be aware of, and a synopsis of the research area the study is based upon. The review of literature presented by chapter 2 discusses in greater detail the conceptual areas pertinent to this study and highlights where appropriate key differences between HE and FE. The chapter clarifies the literature gap that this study seeks to begin filling by answering the research objective and research questions, which are also provided.

Chapter 2. Literature review

This literature review begins with an introduction of the key concepts concerning sustainability and sustainable development and their definitions, and key theories that describe the purpose of education. While semantics and perceptions of sustainability are inherently involved in achieving this study's objective, the purpose of this literature review is to provide the necessary contextual background of the study's main concepts - the role of education for sustainable development, how sustainability is assessed in Higher Education, and the application of transition management governance as the conceptual framework to validate the results of this study.

2.1 Defining sustainability

Sustainable Development (SD) as a definition was formally introduced as an international priority and an alternative to the dominant socio-economic paradigm within the 1987 Brundtland Report 'Our Common Future' (Lozano, 2008; Dade and Hassenzahl, 2013), which defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987: 43). Since then up to 80 alternative and often contradictory definitions of sustainable development have emerged (Williams and Millington, 2004) and continue to do so reflecting national, community and cultural contexts and their changing priorities (Marien, 1996; Glavic and Lukman, 2007). While contextual relevance and understanding different interpretations are important for steering action and improving communication so that SD may be achieved (Glavic and Lukman, 2007; Peti, 2012; Sterling, 2013), semantic arguments over the definition of sustainability or sustainable development are time consuming and continue to prevent meaningful action being made (Dunphy et al, 2007; Cook et al, 2010; Christen and Schmidt, 2012; Peti, 2012). Indeed, the proliferation of ambiguous and often contested terms has led to confusion, and the perception that it is simply a catch phrase, cliché, or fad (Cullingford, 2004[a]; Palmer, 2004; Lozano, 2006; Glavic and Lukman, 2007; Peti, 2012).

In most cases, definitions can be categorised against one of the four interconnected aspects of sustainability: environmental, social, cultural and economic (Lockley and Jarrath, 2013), or one of five categories as stated by Lozano (2008:1838):

1. "The conventional economists perspective
2. Non-environmental degradation perspective

3. Integrational perspective, i.e. encompassing the economic, environmental, and social aspects;
4. Inter-generational perspective;
5. Holistic perspective”.

It is either through the conventional economists’ perspective or non-environmental degradation perspective that many definitions from the developed world observe, whereby sustainability is perceived as either “no more than one element of a desirable development path” (Stavins et al, 2003: 340), or that it is an issue that concerns the natural environment only (Cullingford, 2004[a]; Lozano, 2006; Doppelt, 2008; Dade and Hassenzahl, 2013), both of which assume that current industrial and consumerist trajectories can continue alongside ecological considerations (Quilley, 2009).

Christie et al (2014:21) also identify that “sustainability has traditionally been used as a synonym for long-term, durable or systematic processes”, which is indeed one of the two most dominant interpretations held by participants of this study whereby it is used as a term to steer and justify action contrary to the true meaning of SD. Similarly, in Reid and Petocz’s study (2006), interviews with academics revealed an understanding of sustainability to mean ‘to keep something going’, arguably providing an alibi from having to consider the concept more widely (Christie et al, 2014). However, as stated by Cullingford (2004[a]:19) “the most important reason for the misuse of the term lies in its very significance”. In other words it is perhaps easier to believe that society simply does not understand the term, rather than the more implicating and disappointing explanation that inaction continues because the term and what is required is actually partially, or even fully understood.

Consequently, weak, contradictory and almost meaningless interpretations of sustainability remain centred on a human worldview, placing emphasis on ‘sustained’ or ‘successful’ growth as an indicator of economic development, both of which do nothing to discourage the continued demands of the Earth (Williams and Millington, 2004; Waas et al, 2011). It is also relevant to point out that un-sustainability is not just a human-earth problem; it is increasingly becoming a human–human problem as the inequality of power manifests and proliferates unsustainability (Cullingford, 2004[b]). Social equity is therefore a fundamental principle that should underpin all interpretations (Huby, 2004), however the continued divergence of what are essentially social science and natural science understandings, maintain difficulties

within the sustainability discourse (Christen and Schmidt, 2012). It is therefore important that interpretational limits are respected (Waas et al, 2011), and refer equally to economic, social and environmental sustainability. Some examples are as follows:

Sterling and Maxey (2013:2) describe sustainability as *“securing economic viability, social coherence and ecological integrity at local to global scales”*.

Glavic and Lukman (2007:1884) stated, *“Sustainable development could be introduced as a process or evolution, emphasising the evolution of human society from the responsible economic point of view, in accordance with environmental and natural processes”*.

And Waas et al (2011:1645) state that, *“sustainable development aims to meet human needs and aspirations, now and in the future, in an equitable way while protecting our environment, which we share with other living species on Earth”*.

In practice, environmental, economic and social dimensions of SD are often separated and simplified into their individual components which although can be useful and more manageable, can also be misleading as they are in fact inseparable and co-dependent (Scott and Gough, 2004; Sterling and Maxey, 2013). When discussing the application of the SD theory into the corporate world, Dunphy et al (2007) highlight the ‘major’ challenge felt by businesses when attempting to integrate each dimension into a holistic process. Organisations within all sectors tend to therefore focus on dimensions independently, particularly economic and environmental, however, this is not to say that businesses and their employees, or indeed any individual does not intuitively understand the broader principles of sustainability. It is perhaps more relevant to suggest that as a society, we have compounded interpretational limitations by insisting on defining sustainability, the parameters of which must then be adhered to.

What has perhaps been forgotten is that sustainability should be a non-prescriptive concept (Sterling, 2013), particularly so as what is considered to be sustainable, or what should be sustained, is subject to interpretation and will (or perhaps even should) change over time (Markard et al, 2012). Indeed, sustainability, if ever achieved, will happen over many generations, at different local, regional, national and global levels (Loorbach et al, 2009), essentially reflecting and *“paying attention to the long-term consequences of actions”* (Cullingford, 2004[a]:17). It is therefore important and

faithful to the morality and values of sustainability that definitions and their meaning are developed democratically, not objectively defined beforehand, in order to ensure that the values and interests of all societal actors are represented and balanced through debate and discussion (Palmer, 2004; Loorbach et al, 2009). Indeed, allowing for multiple definitions of sustainability has made possible its wider acceptance (Shriberg, 2002), however, this has and can lead to the development of contradictory meanings where sustainability is used interchangeably to suit different scientific, political or symbolic meanings (Wals and Jickling, 2002; Cullingford, 2004[a]), “legitimising some policies and practices, while discouraging and de-legitimising others” (Palmer, 2004:232). Indeed, because definitions and their application vary depending on who or what is implicated, it is therefore easy to see how “sustainability actors can easily talk past one another and may even perform contradictory and conflicting initiatives” (Garud and Gehman, 2012:980). As discussed subsequently, this is pertinent to education and how it currently addresses sustainability, compared with how it *should*.

2.2 The role of education

“Though conventional wisdom holds that all education is good, and the more one of it has the better, the truth is that without significant precautions, [it] can equip people merely to be more effective vandals of the Earth” (Orr, 1994: 5).

While universities, or indeed any educational institution are not the direct cause of many of the complex problems associated with an unsustainable society, the education system contributes to them through the production of knowledge which has been optimised to suit the purposes of industry (Batterham, 2003; Ferrer-Balas et al, 2010). Students are educated to compete and consume, rather than to care and conserve (Sterling, 2001; Quilley, 2009), therefore, as stated by Phillips (2009[a]:209): “the educational system is at the heart of our current unsustainable society, being both its product and its creator. From buildings, to staff selection and from catering to curriculum planning, are embodied values and assumptions that are in themselves, unsustainable”.

In response to the pandemic crises of climate change and capitalism, universities must play a profound role in creating a society capable of transformation, as it is through the actions and decisions of those in positions of authority, often educated to an

undergraduate or postgraduate level that have the most influence on the state of the world (Orr, 1992; Lidgren et al, 2006; Baker-Shelley et al, 2017).

Education's role in sustainability is not a recent phenomenon, and while it is increasingly recognised that higher education as a societal leader and future shaper has a critical role in being an exemplar of the values of sustainable development – namely “social justice, equity, environmental protection and ethical and democratic decision-making” (Bessant et al, 2015: 4), the education system and its component parts are largely part of the unsustainability problem it needs to address (Sterling, 2004).

This is demonstrated none more so than by the overlooking of well-grounded, substantive sustainability research when creating and reviewing policies at a governmental level (Kiraly et al, 2017) as well as at a university level, where it is “an intractable paradox” (Baker-Shelley et al, 2017: 263) that the future of the planet itself “hardly registers in most mainstream policy making and practice in higher education” (Sterling, 2013:17).

Whilst it is unsurprising and “self-evident that ‘action’ is unlikely to come from people whose training has been within the current unsustainable paradigm” (Phillips, 2009[a]:209), if societal change is a consequence of the interaction between organisations and institutions (Westley et al, 2011) and educational institutions as sub-systems of wider society are shaped and oriented by the norms and dominant beliefs of the social context they serve (Sterling, 2004; Stevenson, 2007), education as a sector has the opportunity to improve the understanding of and bridge the gap between governance and societal change (Stephens and Graham, 2010; Sedlacek, 2013).

Universities transmit powerful educational messages far beyond their specific teaching and research activities through their preparation and training of future leaders and decision makers (Ferrer-Balas et al, 2010; Lozano et al, 2013; Roos, 2017). Universities should therefore focus on studying the central issues of the time (Cullingford, 2004[a]; Stephens and Graham, 2010). However universities have instead “become disconnected from the context for such learning” (Bawden, 2004:22), and are constrained by short term cost cutting and productivity measures (Krizek et al, 2012), and ‘fire-fighting’ decision making in their “diurnal scramble to survive” (Cullingford, 2004[b]:249).

Both universities and colleges are threatened by the “progressive march of private sector logic, which if left unchecked, threatens to transform academic institutions into a special kind of business operation driven exclusively by the logic of markets” (Lawson, 2014:271). Much like the challenges faced by local government, where legislation rhetorically encourages local responsiveness and innovation, it in fact stifles it through performance monitoring, scrutiny panels and regulation (Burns, 2000). This leaves the role or perceived role of universities at odds, whereby simultaneously they are “encouraged to be entrepreneurial and independent, acting as a privatised company, and at the same time are held publicly accountable” (Cullingford, 2004[a]: 15). This trend has only grown over the last decade whereby the role of education remains as a provider of a skills base required for achieving economic growth (Gough and Scott, 2008; Wolf, 2011; CAVTL, 2013), and as a supplier and contributor to the needs of industry, consumerism, and an over-reliance on technical solutions (Batterham, 2003; Cullingford, 2004[a]; Leitch, 2006; Davies, 2009[a]; Waas et al, 2010; Lozano et al, 2013), a role which is firmly based upon antithetical neoliberalism (Bessant et al, 2015).

The reasons behind this are complex, but are partially attributed to the difficult position that universities and colleges have found themselves in. The ‘ivory tower’ mentality of universities for example has been rightly challenged because the responsibility of all education should be to address all the challenges felt by and facing society (Bessant et al, 2015). However, because of the particular focus given to economic prosperity above all else within our society and the increasing need for universities and colleges to make their money through independent means rather than relying upon government funding, arguably educational institutions have been left with no choice other than to do what they must to ensure their own organisational sustainability or survival within the current climate (Bessant et al, 2015). As recognised by Kumar (2009: 30) “money is a good invention as a means to an end, but now money itself has become an end...almost everything has become a commodity”.

Specific characteristics of universities and colleges have contributed to each of their slow responses to the growing challenges presented by sustainability (Stephens and Graham, 2010). Arguably though FE’s response has been the slowest and patchiest compared with universities and schools (Scott and Gough, 2010), largely due to the fact that the leadership structure for FE over the past decade has been so tumultuous. While Scott and Gough (2010) reference that the LSC’s leadership of sustainability was placed into the hands of the SFA as its successor in 2010 and LSIS as a separate

leadership service, the closure of LSIS in 2013 appears to have also signalled the end of any dedicated external sustainability leadership for the sector. Though the Association of Colleges (AoC) provides some sector led guidance, it is responsive to the sector's demands which are largely confined to estates and facilities issues. In other words, any external guidance and proactive leadership on sustainability has now gone. Consequently, the sector (as evidenced by this study) continues to refer to and depend on a small number of sustainability guidance documents published by the AoC, the latest of which was published in 2008.

This is problematic since sustainable development and institutional change require learning (Safarzynska et al, 2012; Sterling and Maxey, 2013); therefore universities and colleges are ideal potential candidates for inducing societal change (Stephens and Graham, 2010). However colleges and many universities appear to have stalled at a level of learning about sustainability that is resonant with Sterling's (2004) accommodative response (see table 4), which sees "a 'bolt-on' of sustainability ideas to the existing system, which itself remains largely unchanged. This is an adaptive, first order change or learning. Through this response, the dominant paradigm maintains its stability" (Sterling, 2004: 58).

Furthermore, college leaders within this study have indicated the universities are better equipped than colleges to be educational leaders of sustainability, but that colleges could learn and benefit from university leadership. This is resonant with Safarzynska et al (2012) and Lawson (2014) who state that social learning relies on imitation or copying from successful organisations and therefore prestigious universities have a particularly inspirational role to play. However, what this overlooks is that at a time when transformational change in education is needed the most, "it remains as elusive and remote as ever" (Sterling and Maxey, 2013:5). Furthermore, by waiting and placing responsibility onto universities to take the lead, it relieves colleges from having to identify their own leadership role and responsibility.

The structure and processes of university governance, whereby "governance is to define expectations, make decisions, grant power and allocate resources" (Roos, 2017: 118), should also provide an important framework through which commitment to sustainability can be demonstrated (Littledyke et al, 2013; Gomez et al, 2014). However, the hierarchical nature of power distribution within universities and colleges make the challenge and promotion of sustainability even more difficult (Sedlacek,

2013; Shiel, 2013). The afore mentioned ‘ivory tower’ mentality held by many universities perpetuates weak board governance, which is embedded as a result of tenured faculty where the focus remains on traditional disciplinary development (Doppelt, 2010; Adombent, 2013; Migliore, 2012; Posner and Stuart, 2013). This presents a formidable challenge to achieving many of the key characteristics of a sustainable university such as:

- “Promoting transformative rather than transmissive education by preparing students to address complex sustainability challenges
- Emphasise inter-and trans-disciplinary research and science
- Enhance problem-solving skills in education that are pertinent to the societal goals
- Establish networks that can tap into varied expertise around the campus to share resources efficiently and meaningfully
- Provide leadership and vision that promotes the needed change and guides to a long-term transformation of the university that is responsive to the changing needs of a society” (Waheed et al, 2011: 720).

2.2.1 Education’s relationship with sustainability

A university has direct and indirect impacts on the economy, society and the environment through the internal and external functions of its people (such as investment practices), its physical presence (what resources does a building consume), and through what it teaches as well as the research services it provides (Scott and Gough, 2004; Clarke and Kouri, 2009). There are several ways in which academics refer to these functions or processes, for example Littleddyke et al (2013) states that universities transact sustainability through their governance, infrastructure and curriculum, or as stated by Sterling (2004), through their campuses, curriculum and community. Hopkinson et al (2004) call them direct and indirect functions, relating to direct operational and campus based impacts, and indirect impacts as a result of research practices and student behaviours post-graduation. Similarly, Sedlacek (2013) also specifies three functions through which universities directly affect society, namely through their education, research and governance practices. Echoing most of these themes, Gomez et al (2014) also specify the interdependency of four dimensions; education, research, operations and community outreach and propose the inclusion of a fifth dimension of assessment and reporting, as suggested by Lozano (2006).

With the exception of research, colleges too are places of learning, business and are

noteworthy community stakeholders, and have the same direct and indirect, actual and potential for positive and negative impacts on society, the economy and the environment. Indeed, although discussing HE, this statement made by Adombent (2013: 22) has direct relevance to the functions and purposes of FE: “Externally, universities can contribute to regional sustainable development in their sphere of influence mainly by: bringing in their own institutional management practice (improvement of energy efficiency and introduction of EMS), serving as a source of technical expertise, accomplishing their cultural mission, reaching beyond skills development toward employability by promoting ideals and critical thinking skills, acting as leaders during their work with local authorities and other societal stakeholders when setting up and implementing regional sustainability plans”.

However, while the government’s low carbon skills agenda is increasing the profile of education for sustainable development, within FE, this has presented itself almost exclusively within the limited narrative of specific STEM (Science, Technology, Engineering and Mathematics) curriculum areas such as, engineering and construction, environmental/ renewable technologies and conservation/ land management (Kythreotis, 2011:5), reflected in the AoC 2011 study on headline findings of 16 – 19 enrolment which shows an increase in popularity of STEM courses as a general trend (AoC, 2011), but reinforces the perception that sustainable development is something that must be physically implemented or learned as an ‘extra’. Foster (2005:7) stated that “developing financial incentives to steer [FE] students onto courses valuable to the economy” is one way in which colleges of the future will meet the demands of the 21st century.

While Wals and Blewitt (2010) state that pathways to sustainability *will* require taking advantage of current trends such as the low carbon economy, colleges often fall victim to the cyclical and somewhat short-lived government funding priorities based on what is perceived to be of value to the economy. Take for instance, the UK photovoltaic market in 2011 where the government halved the financial reward on new installations and consequently reduced the monthly number of new installations from 27,000 to 12,000. Many of the 25,000 newly qualified employees who had trained at colleges lost their jobs and the financial incentive for colleges to offer such courses was instantly diminished (Hughes, 2011; Branson, 2013).

Furthermore, though this has not been empirically studied, it is likely that the

perceived vulnerability of such “new” environmentally themed courses may have negatively impacted on the confidence of colleges to offer similar courses in the future, perpetuating the notion that teaching sustainability is expensive and unreliable compared to traditionally offered courses. The increased emphasis of students as customers brought about by rising tuition fees means that even more, students are focussed on the best financial return on their money (Bessant et al, 2015). Consequently, poorer performing subjects that are not explicitly linked to typical graduate markets are at risk of closure. This is especially problematic for sustainability, which, in both HE and FE, is already perceived to be a subject of special disciplinary interest and is typically taught exclusively in environmental terms within “likely subjects” (Sterling, 2013: 35) such as environmental courses, or vocational areas such as land-based studies.

As identified by Ryan and Cotton (2013:152), “staff and students struggle to understand the conceptual range of the term ‘sustainability’, focusing first on its environmental dimensions and missing the integration of social and economic aspects”. This common perception precludes sustainability’s relevance to core business planning, viewing sustainability as the operational responsibility of campus management only, therefore excluding it from research and teaching practices where often no reference to sustainability competences, careers, or the paradigmatic change required of them in order to achieve sustainable development is made (Selby et al, 2009; Sterling, 2013). Consequently, typical approaches taken by universities often include the following activities (Hopkinson et al, 2004; Brinkhurst et al, 2011; Bessant et al, 2015), the characteristics of which and relevance to the Transition Management Framework (TMF) are discussed in detail in chapter 2.3.4:

- Education and teaching students about sustainability, which may also be reflected in some changes within academic curricula
- Sustainability-focused research
- Campus operations and environmental management which seeks to reduce the impact of the university’s activities
- Engaging with other businesses and the community on sustainability issues
- Policy and administrative based planning for sustainability.

This peculiar set of circumstances fails to acknowledge the irony that while ever the environmental facet of sustainability is being focussed on, it allows, even validates, the

continuation of more damaging economic and social norms, or the “modus operandi of instrumental rationality” (Sterling, 2004: 59).

The sustainability discourse itself can also be unhelpful; the word ‘initiative’ for example, commonly used by FE leaders and within academic sustainability literature is implicit of something that is transient or temporary. Additionally, people feel that sustainability does not apply to their area of responsibility (Littledyke et al, 2013), or that it is an inconvenience (Cullingford, 2004[b]), or an expensive distraction (Foster, 2009). Many more tend to perceive sustainability as someone else’s responsibility i.e. they ‘point at power’ (Moore, 2005; Bardati, 2006; Hoover and Harder, 2015). This perception can be seen to emerge for several reasons:

- “Disciplinary or departmental boundaries
- Distinct roles of responsibility within the institution
- A lack of energy, time, collaboration, common vision or ownership
- A lack of clarity over responsibility
- A lack of reflection on individual agency” (Hoover and Harder, 2015: 184).

As stated earlier, universities are though as much influenced by the norms and dominant beliefs of wider society; therefore it is likely that resistance to sustainability reflects a wider cultural resistance to, or suspicion of sustainability (Wals and Blewitt, 2010). Indeed, the opinion of sustainability being associated with personal inconvenience is prevalent across society (Cullingford, 2004[b]).

Within universities, sustainability is understood to mean doing more with less (Glavic and Lukman, 2007), and not as something that should (nor is able) to question a university’s purpose or paradigm (Sterling, 2013). ‘Eco-efficiency’ activities are therefore resonant only with “two of the three axes of sustainable development, environment and economics” (Ehrenfeld, 2005:6) and is defined as “the delivery of competitively priced goods and services that satisfy human needs and bring quality of life, while progressively reducing ecological impacts and resource intensity throughout the life cycle, to a level at least in line with the Earth’s carrying capacity” (Ehrenfeld, 2005:6). Eco-efficiency therefore does not concern social aspects of sustainability such as equality (Ehrenfeld, 2005) or indeed any of the themes represented by the SDG’s. However, because eco-efficiency has arisen as a term and strategy that allows business to refine its activities for its own economic gains whilst at the same time demonstrating

ecological corporate responsibility (Ehrenfeld, 2005), such activities are perceived to be enough of a response at a societal level in order to achieve more sustainable lifestyles (Gambini, 2006). This focus therefore refines existing practices and makes them 'better', rather than focussing efforts on seeking alternatives or 'doing better things' (Sterling, 2004). This issue may be compounded further as although the 'eco' element of eco-efficiency pledges recognition of the natural environment, it is only validated as part of an overall process of economic gain. An alternative that would lead to a quality of life less than what society (in developed countries) has become accustomed to would be perceived as economic or political suicide. As is demonstrated within the results of this study, "there is little sympathy, let alone admiration, for 'tree huggers'" (Gambini, 2006:264).

Terminology and conceptual understandings aside, many academics share values that underlie sustainability and sustainable education (Hoover and Harder, 2015) and leaders acknowledge that sustainability and education for sustainable development are of considerable importance (Beltran-Kadji et al, 2013). However embedding sustainability within higher education curriculum remains "the most difficult area of sustainability practice in which to gain traction" (Ryan and Cotton, 2013:151). This difficulty is perpetuated by the silo mentality of academics and sustainability practitioners alike, as stated by Scott and Gough (2004:237) "environmental managers don't deal with curriculum, and curriculum planners and academics don't have to think about environmental management". Present arrangements for managing non-academic sustainability in many universities and colleges delegate to, and rely upon the leadership of sustainability of a single 'expert' (Hoover and Harder, 2015), which in some UK FE colleges is often an 'environmental manager' or part of the remit of the Director for 'Physical resources/ Estates/ Facilities management'. Whether this is a result of the success of 'eco-efficiency' having assisted universities and colleges in meeting increasing government expectations of accountability and efficiency (Davison et al, 2014), or a reflection of leaders' perceptions and perhaps underestimations of how a university or college is able to contribute or articulate its contribution to sustainability is unclear. Christie et al (2014) believes that it is as a result of regulation pressure, the financial incentives and resultant 'visibility' of campus alterations and improvements that have accelerated campus greening over other sustainability initiatives.

The tendency to employ dedicated roles such as campus or environmental managers within one facet of the business replicates the hierarchical and disciplinary-boundary based structure of a university (Blewitt, 2004; Posner and Stuart, 2013), therefore contradicting the principle of sustainability that is “breaking down the distinction between ‘expert’ and ‘lay’ knowledge” (Hoover and Harder, 2015:184) and has placed sustainability and its leadership “into a box, both mentally and in practice” (Sterling, 2013:39). The placement of this position is also relevant to how sustainability is perceived and implemented; to align a dedicated role with an operational or academic function of a university or college for some, will immediately pigeon hole and call into question its relevance to the other organisational functions. Similarly, the sector’s focus on campus greening may have perpetuated many of the barriers to academic engagement or the perception of whose responsibility it is. Indeed, those responsible for campus sustainability are increasingly working to legislative or regulatory parameters, and the financial expectations of implementing such measures, neither of which affect academic staff who aren’t required to take sustainable development seriously unless driven by personal interest, student demand or the respect of other academic professionals (Jones et al, 2010; Brinkhurst et al, 2011). It is certainly easier for universities and colleges to ‘tackle’ campus greening and eco-efficiency rather than to instil the cultural and behaviour changes required to embed sustainability holistically and systemically within institutions (Fien, 2002; Sterling, 2013).

Sustainable development conflicts with existing concepts and teaching methods which are based on static and reductionist approaches (Lozano, 2006, Waas et al, 2010), and the language used which is mainly focussed on anthropocentric, industrial, mechanistic and computational metaphors (Blewitt, 2004). Therefore campus greening’s popularity is perhaps unsurprising given that it essentially improves existing mechanistic processes and philosophies. However, eco-efficiency cannot be relied upon to deliver long term sustainability; opportunities for efficiencies will eventually become exhausted (Garud and Gehman, 2012), and there is little point in having outstandingly efficient and low environmental impact buildings if more of the same pedagogies and policy instruments are being applied (Shields et al, 2002; Phillips, 2009[a]).

In addition to its perceived irrelevance, further barriers to academic engagement with sustainability according to Dawe et al (2005), Jones et al (2010), Safarzynska et al, (2012), and Christie et al (2014) include:

- An overcrowded curriculum
- Threat to academic freedom and credibility
- Limited staff awareness and/ or expertise
- Limited institutional drive and commitment
- Unclear guidance on how to incorporate sustainability
- Restrictive organisational structures
- Behavioural inertia caused by habits and routines

However, despite these barriers, there is still more interest in sustainability to be found in universities than in schools or colleges. According to Scott and Gough (2010) this is perhaps due to the comparatively higher degree of autonomy universities have over their curriculum, and being less affected by the external and internal push and pull factors that influence schools and colleges, notably from the government, civil society, accreditation bodies, and internal stakeholder demands: as stated by Posner and Stuart (2013: 275), “it is important to consider the influences from beyond campus borders”. Of relevance to colleges is their proportionately greater reliance on government funding than other sectors within education, which render colleges especially vulnerable to changing political agendas (Foster, 2005). This undoubtedly has an impact on how leaders prioritise, manage, and differentiate essential from non-essential business functions. Indeed, colleges surveyed as part of the study on ‘The Prospects for Green Jobs to 2020’ (Kythreotis, 2011), reported that there were a number of constraints affecting their ability to develop a greener curriculum. Funding, student and employer demand, accredited qualifications and staff expertise were identified as the most significant constraints amongst the majority of respondents. One participant of Kythreotis’ study illustrates the push-pull conflict between FE colleges and industry: “The cycle is very simple. Demand from the client, often inspired by legislation or financial opportunity, course and qualification development by an awarding body, funding from the client or through one of the myriad of government funded schemes, delivery by the training provider... followed by employment or not depending on who request/delivers the training.” (Kythreotis, 2011: 6).

Kythreotis’ study highlights that perceived constraints to developing not just a ‘greener’ curriculum, but any curriculum development or divergence from ‘business as usual’ were both externally focussed and perceived to be dependent on demand or external direction. This however reveals and reflects a wider sector conflict surrounding the perception of what sustainability entails and how this determines

where the power for its implementation is believed to reside, compared with responsibility for other business facets such as financial sustainability for which participants of this study expressed full responsibility.

2.2.2 Sustainability reporting in Higher Education

Though there are many drivers for universities to engage with sustainability both operationally and academically, the focus of many universities remains on campus greening and operational sustainability. This therefore raises the question and highlights the paradox of why many universities have become signatories to internationally developed higher education sustainability declarations, whose principles far exceed the typically demonstrated parameters of sustainability. As stated by Wright (2002), common principles found within the majority of international declarations typically include:

- Sustainable physical operations
- Sustainable academic research
- Environmental literacy
- Ethical and moral responsibility
- Cooperation amongst universities and countries
- The development of interdisciplinary curriculum
- Partnerships with government, NGO's and industry
- Public outreach

The number of frameworks developed to guide and encourage sustainability within HE has increased markedly since the introduction of the Stockholm Declaration in 1972, as denoted by table 2. These declarations provide a clear indication of the holistic responsibility of higher education to sustainability, and the transformations required of it in order to embed sustainability (Adombent, 2013; Gomez et al, 2014).

Year	Event/declaration	Level or focus
1972	Stockholm Declaration on the Human Environment, United Nations Conference on the Human Environment, Sweden	Society
1975	The Belgrade Charter, Belgrade Conference on Environmental Education, Yugoslavia	Education
1977	Tbilisi Declaration, Intergovernmental Conference on Environmental Education, Georgia	Education
1987	"Our Common Future", The Brundtland Report	Society
1990	Talloires Declaration, Presidents Conference, France	Higher education
1991	Halifax Declaration, Conference on University Action for Sustainable Development, Canada	Higher education
1992	Report of the United Nations Conference on Environment and Development (Rio Conference); Agenda 21, Chapter 36: Promoting Education, Public Awareness and Training and Chapter 35: Science for Sustainable Development	Society
1992	Association of University Leaders for a Sustainable Future founded, USA	Higher education
1993	Kyoto Declaration, International Association of Universities Ninth Round Table, Japan	Higher education
1993	Swansea Declaration, Association of Commonwealth Universities' Fifteenth Quinquennial Conference, Wales	Higher education
1993	COPERNICUS University Charter, Conference of European Rectors (CRE)	Higher education
1996	Ball State University Greening of the Campus conferences were in 1997, 1999, 2001, 2003, 2005, 2007, and 2009	Higher education
1997	Thessaloniki Declaration, International Conference on Environment and Society: Education and Public Awareness for Sustainability, Greece	Education
1999	Environmental Management for Sustainable Universities (EMSU) conference first held in Sweden. Following conferences in 2002 (South Africa), 2004 (Mexico), 2006 (U.S.A.), 2008 (Spain), and in 2010 in The Netherlands.	Higher education
2000	Millennium Development Goals	Society
2000	The Earth Charter	Society
2000	Global Higher Education for Sustainability Partnership (GHESP)	Higher education
2001	Lüneburg Declaration on Higher Education for Sustainable Development, Germany	Higher education
2002	World Summit on Sustainable Development in Johannesburg, South Africa (Type 1 outcome: Decade of Education for Sustainable Development; Civil Society outcome: the Ubuntu Declaration)	Society
2004	Declaration of Barcelona	Higher education
2005	Start of the UN Decade of Education for Sustainable Development (DESD)	Education
2005	Graz Declaration on Committing Universities to Sustainable Development, Austria	Higher Education
2009	Abuja Declaration on Sustainable Development in Africa: The role of higher education in SD, Nigeria	Higher Education
2009	Torino (Turin) Declaration on Education and Research for Sustainable and Responsible Development, Italy	Higher Education

Table 2 - History of initiatives taken in society, education and HE to foster sustainable development (Lozano et al, 2013:12)

Many of these declarations specified their focus on HE, however it is not known if those aimed at 'education' more broadly have had any direct bearing on colleges either in their buildings, outreach or curriculum delivery. One question that could be investigated in future research is if those colleges who have engaged with sustainability have done so either as a result of 'education' targeted declarations, or from following the lead of universities who engaged with sustainability as a result of signing up to an international declaration.

Becoming a signatory of a HE declaration is one voluntary method available to universities in order to demonstrate a commitment to sustainability. In other cases, institutions have instead chosen a more micro approach to sustainability by creating their own policies against which progress will be monitored (Wright, 2002). Others have focussed on gaining certification through formal environmental management systems, or developing their own informal management systems, the goal in both cases to manage their direct operational impacts and reduce environmental risks and therefore reflecting an operational or accommodative response (Clarke and Kouri, 2009). How a university responds to sustainability is dependent on its drivers for doing

so. Drivers relevant to universities that initiate a first generation sustainability response, typically through the implementation of an environmental management system are as follows:

- Compliance and liability
- Employee demand
- Customer requirements
- Cost savings
- Allows for external certification
- Improves internal cooperation and management
- Assists in the internal and external communication of environmental efforts
- Externally and internally legitimates environmental efforts (Clarke and Kouri, 2009).

An operational or accommodatory response therefore typically require the reporting or disclosing of sustainability progress, and is one factor that drives organisations to engage with sustainability. There are three main approaches organisations used to report or disclose their sustainability progress: 1) through their accounts, 2) through narrative assessments, and 3) indicator based assessments. It is the latter of these methods that is deemed most accurate as they tend to be more objective, tangible, and comparable than other methods (Gomez et al, 2014). Internal management systems and international frameworks both use indicator-based assessments which are important for cross-institutional communication, evaluation, benchmarking and learning of sustainability progress, all of which assist in understanding the future actions required (Shields et al, 2002; Dunphy et al, 2007), whether the university decides to act upon these recommendations or not. However, although indicator based assessments are the most accurate at what they do – namely quantitatively assessing sustainability – they are representative of the way in which sustainability is perceived and possibly defined i.e. with an environmental focus. As highlighted by (Shields et al, 2002; Shriberg, 2002; Clarke and Kouri, 2009), how a university, organisation or sector defines sustainability and sustainable development will therefore impact on the indicators deemed suitable to measure and report on its sustainability progress. Paradoxically, though the focus of all higher education declarations is the ethical and moral responsibility of universities to lead and promote change for sustainability (Wright, 2002; Wright, 2004), the tendency of universities to focus only on more readily measurable indicators such as eco-efficiency negates the more difficult but more

significant indirect impacts of university's such as learning and research (Clarke and Kouri, 2009).

It is unclear whether dominant 'environmental' perceptions of sustainability are a product or the cause of the axiom commonly revealed within sustainability reporting where "what gets measured gets done" (Shriberg, 2002: 153). In other words, is the continued perception of sustainability a result of or perpetuated by the fact that a university's indirect impacts are more difficult to implement and measure than its direct impacts? It is puzzling given that operational sustainability is not the primary focus of higher education declarations, and yet forms the main focus of sustainability initiatives on campus (Wright, 2002). Correspondingly, a study of academic literature published within the *International Journal of Sustainability in Higher Education* conducted by Wals and Blewitt (2010) revealed that during the first nine years of its publication (2000 – 2009), articles were focussed on environmental management, university greening and reducing a university's ecological footprint. Articles then published post-2009 were found to focus more on systemic change across the whole institution through pedagogy, learning, instruction, community outreach and partnerships. Indeed, higher education frameworks have seen the considerable progress of eco-efficiency measures within HE institutional operations (Waheed et al, 2011), however reorienting education toward sustainability has been far more challenging (Clugston, 2004). As stated by Shields et al (2002) and Bekessy (2007), evidence suggests that non-binding declarations and arguably even binding declarations rarely influence the overall institutional practices but instead "tinker around the edges" (Shriberg, 2002: 155) and may be endorsed by universities for public relation purposes, rather than as a reflection of its support to bring sustainability into higher education (Wright, 2002).

HE and FE institutions continue to take a vertical, hierarchical approach to integrating sustainability into curriculum where sustainability is organised into separate courses (Ceulemans and Prins, 2010), rather than for example, taking a systemic, horizontal and broader approach to integrating sustainability within the curriculum and other social or people based impacts (Gomez et al, 2014), thereby compounding the perception that sustainability is a niche academic interest, rather than of a collective interest and responsibility. The exclusive responsibility of those in operational roles within universities for the implementation of sustainability is also reflected by the fact that the majority of institutions most commonly report on eco-efficiency, not sustainability

(even though they perceive they are reporting on their sustainability) using indicators that reflect operational impacts only such as resource consumption or waste recycled (Shriberg, 2002; Hendricks and Grin, 2007; Banerjee, 2008; Clarke and Kouri, 2009; Lozano and Young, 2013; Gomez et al, 2014). On the one hand, this could be because operational issues offer the easiest quantitative indicators to report against compared with other university dimensions or functions, which are reflected by more difficult to assess qualitative, and value based indicators (Shriberg, 2002; Wright, 2002; Palmer, 2004). However, it could also reflect and/ or perpetuate a superficial accommodative response whereby sustainability is largely understood to be an operational issue, a phenomenon that may well be unintentionally exacerbated by the sharing of 'best practice' case studies and success stories. While such cross institutional communication is important, especially amongst peers and practitioners (Wright, 2002; Karatzoglou, 2013), to those looking on, it can paint a misleading picture that substantive work is being carried out comprehensively across the sector (Shriberg, 2002) and does nothing to prevent the perception that the challenge of sustainability has been met simply by signing a declaration, or developing an institutional policy (Wright, 2002). As stated by Shiel (2013: 113), "a toolkit for sustainable development will not save the world".

The use of such analytical and empirical frameworks also characterises sustainability within higher education as a mechanistic and reductionist function (Wals and Blewitt, 2010), and is counterintuitive to the principles of sustainability which within education, requires an alternative to – not a refinement of - the dominant mechanistic paradigm education continues to serve (Blewitt, 2004). Reporting on exclusively best practice case studies also negates or bypasses the methods, cultures and contexts within which change takes place, not to mention how or why these circumstances determine what is 'best' (Stephens and Graham, 2010). However, while frameworks present limitations to the achievement of sustainability within education, methods of comparison facilitate interaction and shared learning amongst those within responsibility for sustainability which is critically important for the progression of sustainability, especially at a niche level (Stephens and Graham, 2010). Such practices were gaining momentum within the FE sector, which although had a tendency of celebrating the same best practice examples and relied upon sector led and sector focussed research by the AoC or the now redundant LSIS, had started to deliver signs that the sector was moving towards an accommodative response to sustainability. However, the demise of LSIS and their sustainability leadership programmes in 2013 which have not been adopted by its successor 'The Education and Training Foundation' is evidence of the perception of

sustainability being a peripheral or niche interest, and that the purpose of the sector does not deviate from what it has essentially always been: to follow business and provide students with competencies based on skills demands.

Whilst this chapter has defined sustainability and placed it within the context of higher education as a sector that has an implicit moral duty to lead society to a more sustainable future, the next sub-chapter introduces an alternative governance framework and the specific need for a renewed leadership for sustainability within education,

2.3 Transition studies and the Transition Management Framework

The purpose of this chapter is to explain the transition management framework (TMF) and, through the use of applied examples to the FE sector, highlight its utility as this study's conceptual framework. Though there is a growing body of transition theory literature, much of this chapter focuses on the work of the Dutch Research Institute for Transitions, which has made a significant contribution to transitions studies (Jorgensen, 2012) through work by authors such as Derk Loorbach and Jan Rotmans. Other key papers used for the development of this chapter focus on the application of transition studies for the advancement of sustainability within higher education, utilising the work of Jennie Stephens, Amanda Graham (2010) and Stephen McCauley (2012). Additionally, the work of Frances Westley et al (2011), Jochen Markard et al (2012), and Raghu Garud and Joel Gehman (2012) amongst others has been useful in order to bridge the still relatively unexplored gap between the research fields of transition studies and sustainability within higher education.

2.3.1 Introduction to transition theory

In 2005 the UN, through its Millennium Development Goals (MDGs), documented a global consensus for the need of sustainable development, and for it to be demonstrated through significant progress within areas of poverty eradication, primary education, equality and diversity, mortality and healthcare, developing global partnerships and ensuring environmental sustainability (UN, 2005). In 2015 these goals were superseded by the development of the 2030 Agenda for Sustainable Development, which consists of 17 Sustainable Development Goals (SDGs) and 169 targets that came into force on 1st January 2016, committing all signatory countries (including the UK) to tackle the issues such as gender inequality and climate change the targets represent (HOC, 2016). While it is beyond the scope of this study to discuss the

success or failure of the MDG's or the likely success of the SDGs, they are representative of the persistent and complex societal level problems we now face as a result of embedded processes that have led to economic, environmental and social unsustainability. Recent studies have indicated that the SDG's will complement the growth of 'sustainability science' within academia (Baker-Shelley et al, 2017), where instead of being a marginalised research field, sustainability is becoming a discipline in its own right (Trencher et al, 2014). Being mindful that these research outputs may not quickly find their way into FE curriculum, it is proposed by this study that the UK's commitment to the SDGs could provide a possible incentive for FE's governmental departments to initiate action within the sector itself. How this might be applied to the study's proposed framework for steering such action is discussed in chapter 6.2.2.

Returning to the persistent and deep-rooted problems that the SDGs and their targets represent, business as usual policies and societal mechanisms are not an option for their resolution (Rotmans and Loorbach, 2009; HOC, 2016). These mechanisms that "still rely primarily on advice from neoclassical economics" (Markard et al, 2012: 964) are based on principles and characteristics that are contrary to those required for sustainability (Dunphy et al, 2007; Loorbach, 2010). Only radical change can facilitate sustainability transitions that require "systemic shifts in deeply held values and beliefs, patterns of social behaviour, and multi-level governance and management regimes" (Westley et al, 2011: 762).

Transitions are understood as "a shift in dominant social configurations to encompass a corresponding change in markets, user practices, policy and cultural discourses" (Coenen et al, 2012: 965). Transition management is the "deliberative process to influence governance activities in such a way that they lead to accelerated change directed towards sustainability ambitions" (Loorbach and Rotmans, 2010: 239).

Like sustainable development, transitions are a process of change and can only be achieved over long time scales, requiring participation from multiple societal levels, evolving through multiple development phases (Loorbach et al, 2009; Safarzynska et al, 2012, Adombent, 2013; Sedlacek, 2013). Transitions focus on radical and structural change in terms of technology, economy, culture, ecology and institutions (Loorbach et al, 2009; Rotmans and Loorbach, 2009; Loorbach et al, 2010; McCauley and Stephens, 2012; Garud and Gehman, 2012) and have emerged as a result of a shift in the political landscape that allows new forms of bottom-up governance practices (Jorgensen, 2012).

Reflecting the change in governance of the FE sector where colleges were removed from local government control in 1992, transition management theory emerged from a shift in the political landscape moving from centralised government control to a more liberal market based structure (Loorbach, 2010). Though the ability of leaders to implement policies in a top-down manner has diminished (Loorbach, 2010) and indeed, the efficacy of “expert-driven, centralised, and top-down approaches to problem solving are not nimble enough to effectively address our global challenges” (Westley et al, 2011: 772), transition management does still require top down support for bottom up approaches to be effective.

Due to growing societal challenges, literature and research interest into transition theory as a method of describing previous transitions and to intervene and create change in future transitions is becoming increasingly popular (Jorgensen, 2012, Farla et al, 2012). Transitions challenge current policy making mechanisms which, in an increasingly complex society, try and fail to accommodate competing agendas that politicians try to satisfy, but that actually perpetuate short term decision making and temporary consensus, deterring leaders from considering the long term decisions necessary for sustainability (Doppelt, 2010; Loorbach, 2010; Ryan and Cotton, 2013). More problematically, “every action, whether short or long term will lead to changes in societal structures, which in turn transforms the problem itself” (Loorbach, 2010: 164).

As will be described subsequently in chapter 5.1.1, which makes specific reference to the FE sector’s approach to sustainable development, short-term policymaking processes perpetuate the wicked problems that contribute to unsustainability. Even environmental policy making is developed if not with short-term success or failure targets, but for winning short-term political favour with voters and therefore hold little long-term accountability for their success or failure. Transition management therefore seeks to embrace the symptoms of societal complexities that often lead to the perceived need for short-term policy making, which involve “complexity, uncertainty, multiple stakeholders and perspectives, competing values, lack of end points and ambiguous terminology” (Morris and Martin, 2009: 156).

As complex problems are growing and not diminishing in scale, it is clear that our society is governed by the inertia of existing structures containing locked-in flaws, dominant networks and institutional barriers (Rotmans and Loorbach, 2009; Westley et al, 2011; Markard et al, 2012). Additionally, the task of mediating this complexity

becomes more difficult as multiple stakeholders contribute to the democratic process (Burns, 2000), often resulting in weak leadership tendencies by becoming subservient to external influences and bureaucracy (Sweeting et al, 2004). Locked-in flaws are supported by an ongoing trend of organisations to focus sustainability efforts on eco-efficiency and incremental change (Loorbach et al, 2010), and neglecting social and cultural elements relevant to any transition (McCauley and Stephens, 2012). Incremental change is often invisible (Stephens and Graham, 2010), and is insufficiently equipped to cope with the challenge of sustainability (Markard et al, 2012), as it aims to preserve existing functions, individualism, and innovation processes (Loorbach et al, 2009; Westley et al, 2011; Adombent, 2013; McCauley and Stephens, 2012). Promoting incremental change using eco-efficiency and greening existing business models is also misleading, as it can “lull people into feeling that the environment has been, and is, adequately considered” (Shriberg, 2002: 155), whereas actually, eco-efficiency only supports or indeed refines systems that perpetuate technological innovation and economic growth (Dunphy et al, 2007). This highlights the difference between innovating *within* current systems and innovation *of* our current systems. Though innovation can be defined as the “first introduction of new products, processes and services, and organisational forms” (Adombent, 2013: 22), and within western society has contributed to increased standards of living, it has occurred at the expense of and without due consideration given to the complex societal challenges represented by unsustainability (Westley et al, 2011). Modern cultures share an optimistic faith in technological innovation and assume that, “with the appropriate regulatory reforms and institutional innovations, the sustainable reorientation of national and global economics can be achieved with a minimum of disruption” (Quilley, 2009:44), and therefore fail to recognise that “innovation is both a contributing cause for our current unsustainable trajectory and our hope for tipping in new more resilient directions” (Westley et al, 2011:763).

2.3.2 The distribution of power and leadership: essential components of transition management.

“Climate change is a failure of leadership, most seriously the intellectual leadership of our politicians, business people and education systems – and most heinously universities, where a great deal of leadership education goes on” (Parkin 2013: foreword Sterling, 2013).

Leadership, like governance, is essentially “a process of influencing others toward a common vision” (Middlebrooks et al, 2009: 32). Though it is traditional practice for an organisation to have a formal, positional leader with whom the power of decision-making is ultimately vested (Minkes et al, 1999; Middlebrooks et al, 2009), leaders may also be identified through their reputation and how others perceive them based on their behaviour, regardless of their position (Sweeting et al, 2004).

Sustainability in particular requires distributed leadership and participation from all areas within an organisation through a combination of top down and bottom up action (Blewitt, 2004; Brinkhurst et al, 2011; James and Card, 2012; Kurland, 2014), dictated not just by position, hierarchy, or job description (Clarke and Kouri, 2009; Loorbach et al, 2009; Barth, 2013; Beltran-Kadji et al, 2013; Davison et al, 2014; Lawson, 2014). There is a growing awareness of the limitations surrounding traditional top-down leadership and of notable relevance to leadership for sustainability, its inability to harness the leadership potential of those lower in the hierarchy (Davison et al, 2014). Indeed, distributed leadership requires the sharing of power and authority and therefore democratising the typical hierarchical decision making process (Lawson, 2014); sustainability is “unattainable without commonly recognised, democratically legitimated cultural values” (Adombent, 2013: 11).

Distributed leadership can pave the way for individuals at any level to take the position of a sustainability leader, however their and other’s success still requires the support and endorsement of the formal organisational leader, whose influence can catalyse and spread the effects of informal and distributed leadership (Ferdig, 2007; Brinkhurst et al, 2011). While awareness of the limitations surrounding traditional top-down leadership is growing, transformational change within existing structures is difficult, not least because leaders themselves may not possess the necessary skills to inspire transformational change (Shiel, 2013).

Most leaders utilise transactional approaches towards leadership as they seek to hold together a wide and growing range of interests and demands (Eddy, 2005; Beltran-Kadji et al, 2013). As highlighted by Hoover and Harder (2015) in chapter 2.2.1, a continued tendency to therefore power point responsibility for sustainability onto individuals such as environmental managers, or environmental champion leaves the consistency of sustainability efforts vulnerable to staffing changes (Brinkhurst et al, 2011) and is demonstrative of the continued use of conventional methods for organisational

sustainability, that focus on technical methods of compliance (Sweeting et al, 2004; Loorbach et al, 2009; Shiel, 2013). In these cases, sustainability is treated as a niche subject or an add-on to an organisation's interests (Loorbach et al, 2009), while "leaders continue to continue to centre their efforts along one line of industrial thinking, allowing the expansive celebration of three areas of innovation: 1) new product development, 2) the rights of consumers, and 3) the transfer of technologies" (Piasecki, 2000: 115).

It is however, not just leaders with a lack of interest or relevant skills to lead sustainability that prevent initiatives taking place or limit their reach (Wright, 2010; Elmualim et al, 2010; Hoover and Harder, 2015). In those cases where senior leadership support recognises the need to build leadership capacity within an organisation, through for example, ordaining power and responsibility for sustainability to an individual, it can still be damaging as it restricts a wider appreciation that it is "larger than a single person's efforts" (Krizek et al, 2012:27), and that nobody else need take responsibility (Ferdig, 2007; Blincoe and Spangenberg, 2009). Consequently, progress of sustainability remains underfunded and under supported (Calder and Clugston, 2004) with sustainability projects often giving way under the strain of other priorities (Bardati, 2006). All this continues to take place within institutions that may have become signatories of higher education sustainability declarations (see chapter 2.2.2), therefore highlighting the on-going gap between the rhetoric and reality, or the theory and practice of sustainability (Wals and Blewitt, 2010; Stevenson, 2007; Shiel 2013).

It is a perplexing arrangement however because although a lack of dedicated staff and funding are significant barriers to transformational change (Kurland, 2014), to rely on both for the realisation of transformational change is to risk the continued perception that the investment of money or manpower is enough. Given that the most successful and consistent contribution and response to sustainability by universities and colleges has been within campus greening (Fien, 2002; Selby et al, 2009; Christie et al, 2014), it is unsurprising that leaders may consider their university's response to sustainability sufficient if physical campus greening initiatives are being endorsed and funded (Wright and Wilton, 2012). The risk is revealed and perceptions are reinforced during periods of austerity that the only method of implementing sustainability requires capital investment and can therefore 'wait' for economic recovery. However this recovery is dependent on "a return to exactly the same unsustainable system which caused the economic collapse in the first place" (Phillips, 2009[a]: 210). Rapid changes

in government policy, and for universities and colleges, the challenges of short-term influences such as student demographics, changing economic conditions and a competitive landscape (Stephens and Graham, 2010; Migliore, 2012) augment the phenomenon whereby during times of fiscal or administrative demand, power is centred with an organisational leader who favours a more transactional than transformative leadership approach (Eddy, 2005). In these instances, typical approaches to sustainability are often initiated to resolve a problem, rather than considering a collective (transformative) goal (Loorbach et al, 2009), with few education leaders grasping fully the wider implications of the sustainability agenda beyond employing a dedicated role such as an environmental manager (Shiel, 2013; Lozano et al, 2013).

It is therefore imperative that all leaders and senior management teams have a common understanding of the term sustainable development (Wals and Jickling, 2002; Anderberg et al, 2009), as well as “leadership that mobilises people to address new problems through new learning is the most appropriate strategy for effecting major and lasting paradigmatic change” (Blewitt, 2004: 5). However, why would some leaders view a suitable response as anything but the installation of eco-efficiency measures when there is little to no articulation or consistent expectation of higher or further educational curriculum reform from internal or external stakeholders? Indeed, “established theoretical, empirical and sub-disciplinary concerns appear to hold sway of emerging issues and debates, however pressing” (Smith et al, 2004: 199). A conceptual shift is required to lead all organisations away from the typically economically driven paradigm to a more balanced sustainability paradigm, focussing not just on the economic savings to come from sustainability measures within existing processes and structures, but the equal consideration of ethical and environmental values and new methods of governance (Middlebrooks et al, 2009; Linnenlueke and Griffiths, 2010; Barth, 2013; Hoover and Harder, 2015). Notably, this means coordination and mid-long term decision making by leaders and governance networks, shifting from the short-term based policy making processes that come from largely transactional leadership methods (Loorbach, 2010; Sedlacek, 2013), and the reconciliation of society’s actions with the goals of sustainability, which will also require a reordering of values. However, as comfortingly stated by Shields et al (2002:154) “The fact that values are slow to change does not mean they can never change”.

Transition management theory is a governance framework that could assist in this reordering of values, and indeed re-balancing of power, as it recognises that leaders, or ‘front runners’ from multiple levels within an organisation or sector, are necessary and critically important for the development of emerging niche activities that could eventually lead to the challenging of the dominant regime (Loorbach et al, 2009; Stephens and Graham, 2010; Coenen et al, 2012; Safarzynska et al, 2012, Hoover and Harder, 2015). Front-runners must therefore a) be recognised, and b) nurtured so that they have a continued presence over a strategic time scale (Loorbach, 2010), and their actions not restricted to incremental initiatives at an accommodative or operational level in order to protect or not disrupt current processes and paradigms (Bawden, 2004; Westley et al, 2011).

This requires leadership and skills from multiple levels instead of a tendency to rely upon or seek to uphold a top-down ‘command and control’ structure (Baker-Shelley et al, 2017). Not only are such structures incompatible with sustainability leadership because they reinforce a denial and ignorance of the systemic issues that have led to unsustainability (Baker-Shelley et al, 2017), but also they perpetuate what Ferdig (2007:30) terms a “learned helplessness”, whereby relying upon leaders overlooks other areas from where innovative solutions may be generated (Ferdig, 2007). “Sustainable development, if it ever happens, will be a process in which everyone learns all the time” (Scott and Gough, 2004:244). A sustainability leader or ‘front-runner’ is anyone that can demonstrate, or (but preferably and) instill skills for sustainability, which include but are not limited to an understanding of systemic practice and long-term thinking, an ability to learn - particularly through a “learning as we go approach” (Shiel, 2013: 115), emotional intelligence, the ability to adapt to and anticipate problems arising from complex problems, and open-mindedness to other ways of working (Ballard, 2005; Davies, 2009[a]; Loorbach et al, 2009; Morris and Martin, 2009; Middlebrooks et al, 2009; Shiel, 2013). Capacity and power must be built upon and distributed (Luerderitz et al, 2016) in order to gain enough momentum to “sustain the ability to embark on such sustainability journeys on an ongoing basis” (Garud and Gehman, 2012: 990).

Though discussing universities, McCauley and Stephens (2012) state, “In a broad based economic recession, they [universities] provide a stable institutional and economic presence that can support local and regional economic activity” (McCauley and Stephens, 2012: 223). Not only is this relevant and applicable to colleges, but also is

reinforced by Treat and Hagedorn (2013:5) who state that the role of 'community colleges' is, "not as international education centres, but rather serving the needs of the local community and local employers, and by definition creating local economic development through the provision of a trained workforce". Similarly, describing UK colleges specifically, Foster (2005: 6) describes their three key roles as, "1) labour market preparation for young people, 2) supporting employers in workplace learning, and 3) meeting the wider learning aspirations of the people and communities colleges serve". The demand-response, more locally embedded nature of community colleges and their reactivity to external demands (Eddy, 2005), makes FE a useful sector to examine regarding the role and nature of sustainability leadership within a sub-sector as niche level front runners at a sub-sector level can stimulate regime changes within industries that both govern and are governed by landscape factors (Markard et al, 2012). Indeed, the fact that there has been little landscape level guidance to the sector for introducing sustainability into college's operations or curriculum, makes it even more worthy of scrutiny given the evidence that suggests at a niche level, individual colleges have started to do both, most notably operational sustainability. More broadly, this study's examination of perceptions of power and leadership for sustainability presents an additional opportunity to contribute to transition management research as the "dynamics of power and leadership and their roles in promoting or opposing structural change has not yet been given a particular focus within the TM literature" (Stephens and Graham, 2010: 616).

How the TMF has been applied to this study is described in chapter 2.3.4, but first it is necessary to provide a closer look at the multiple levels of governance that are examined by this study through the multi-level perspective (MLP).

2.3.3 The Multi-Level Perspective (MLP) and Transition Management

Transition management is one of four frameworks that have achieved prominence in transition studies (Markard et al, 2012), and is closely related to:

- Strategic niche management
- The Multi-Level perspective
- Technological innovations systems (Safarzyńska et al, 2012)

Each of these frameworks recognises that "a broad variety of elements are tightly interrelated and dependent on each other" (Markard et al, 2012). The TMF uses a

broader governance perspective than the other transition frameworks (Safarzynska et al, 2012; Markard et al, 2012), but has adopted the multi-level perspective (MLP), an analytically dominant framework used for researching and describing sustainability transition processes (Coenen et al, 2012; McCauley and Stephens, 2012).

The MLP, like transition management, distinguishes transitions by level rather than scale (Coenen et al, 2012), with the three different levels - the landscape, regime and niche reminiscent of typical distinctions of micro-meso and macro level descriptions of societal processes (Stephens and Graham, 2010). These governance dimensions are reflected by the core business of universities, whereby individuals represent the micro level, the interaction between individuals, faculties and departments represent the meso-level, and how the university interacts with external stakeholders and processes represents processes at a macro level (Baker-Shelley et al, 2017).

Examining these levels more broadly across society, the macro political economy represents the landscape (McCauley and Stephens, 2012), and is a “top-down source of exogenous change” (Garud and Gehman, 2012:981). Landscapes place environmental, societal or economic pressures on the incumbent regime (Coenen et al, 2012; McCauley and Stephens, 2012) and provide the environment in which regimes evolve (Westley et al, 2011). For example, the UK political and economic landscape to some extent dictates the costs and accessibility of HE, and to a greater extent, the funding and curriculum offer of FE. Within this study, the landscape level is indeed based on the UK’s political and economic landscape, but specifically represented by the government level management of FE, through the departments of BIS and the DfE.

Representing the next level, a systems ‘regime’ is what stabilises existing trajectories initiated at a landscape level and by its nature will seek to retain its configuration and resist innovation that could disrupt the existing trajectory (Coenen et al, 2012). Regimes stabilised themselves and existing trajectories by “fostering shared routines, regulations and standards” (Garud and Gehman, 2012: 981). At the meso-level, incumbent regimes refer to the dominant paradigm, which is guided and supported by the perceptions and actions of the culture and practices of the context within which it is embedded and represents (Rotmans and Loorbach, 2009; Westley et al, 2011; Garud and Gehman, 2012). Within this study, the regime is reflected by organisations such as the AoC or 157 Group as sector representatives who ensure that its contribution to the aims and objectives set at a landscape is both recognised and valued.

Finally, the niche level is one that “is dominated by uncertainty and experimental disorder” (Coenen et al, 2012: 971). Niches offer a location where it is possible to deviate from the rules set by the existing regime (Geels, 2004) and represent sources of bottom-up change (Garud and Gehman, 2012). New practices are able to develop within niche spaces (Westley et al, 2011) and it is these developments that hold the potential to lead to societal transitions (Jorgensen, 2012). Niches delegate greater responsibility to individual actors (Jorgensen, 2012) and act as ‘incubation’ spaces (Coenen et al, 2012); individual actors will typically form a small group that eventually deviates from the prevailing regime (Rotmans and Loorbach, 2009).

The MLP states that transitions occur when a prevailing regime begins displaying significant problems, perhaps because of pressures directed at the landscape (Garud and Gehman, 2012) (such as NGO or public pressure [Westley et al, 2011]) or pressures *from* the landscape (such as government sanctions or stimuli [Westley et al, 2011]). More commonly however, transitions occur from the bottom-up, through the emergence of radical innovation at a niche level that leads to structural change within the path-dependent regime level, eventually becoming a societal norm at a landscape level (Safarzynska et al, 2012; McCauley and Stephens, 2012). Contrary to previously discussed issues surrounding incremental change, after an idea or process or innovation has been incubated and protected at a niche level for an appropriate amount of time, its “release” to the regime level must take place paradoxically, through small, incremental steps, allowing for adjustment to the new circumstances and the niche level to refine its ‘innovation’ by increasing its efficiency (when appropriate) and reliability. Too much too soon can overwhelm the regime and lead to resistance because of the perceived or actual disruption to the stability of existing processes (Rotmans and Loorbach, 2009; Garud and Gehman, 2012; Safarzynska et al, 2012).

Though this initially appears to contradict previous statements of incremental change being insufficient to cope with the challenge of sustainability, the difference presented here is the need for incremental change once a new regime has emerged and locked in as the dominant design (Garud and Gehman, 2012). The use of IT within the classroom is a good illustration of this, but also of how an innovation does not necessarily translate into a process more conducive for sustainable development. It is also a pertinent example to this study as many leaders perceived the introduction and continuing appetite for IT within classrooms as a sustainable practice, however, more

innovative paradigmatically changing innovations for sustainable development such as education for sustainable development are restricted to a niche, self-led level, taught only by those who have an interest and typically within vocational curriculum.

2.3.4 The TMF as a descriptive and prescriptive framework

Governance theories, like sustainability reporting frameworks, developed over the last 15 years have typically been characterised by descriptive and analytical features that “have rarely offered a prescriptive basis for governance” (Loorbach, 2010: 162). The TMF performs a dual functioning role as both a descriptive - “what is the state of things?” (Baker-Shelley et al, 2017: 273) and prescriptive “what should be done and how?” (Baker-Shelley et al, 2017: 273) framework that is able to analyse and understand historic transitions using a three level analytical hierarchy.

The prescriptive function can be used as an alternative governance approach to initiating, guiding and promoting transformations in prevailing societal structures (Loorbach et al, 2009; Loorbach, 2010; Stephens and Graham, 2010; Markard et al, 2012; McCauley and Stephens, 2012). Before this can take place though, the descriptive function is useful in seeking to identify the nature and prevailing approach of management activities to sustainability transitions. Then, the framework’s prescriptive function comes to the fore when a societal sub-sector or individual organisation demonstrates sufficient niche level development that could put pressure on and create alternatives to dominant regime practices (Loorbach et al, 2009). For example, in the Netherlands and Belgium the TMF has been applied at a sub-sector, sector, regional and international level within the waste management, healthcare and construction industries for the implementation of more sustainable practices. Specifically, as explained in greater detail within Loorbach and Rotmans 2009 publication, the prescriptive function was used operationally within the health care sector to develop an alternative governance approach that placed focus on the care of the patient, rather than the tendency of large-scale care providers to focus on efficiencies and standardisation often to the detriment of patient care (Loorbach and Rotmans, 2010). Experimentation at a niche level coupled with governmental support and co-operation with other sector actors through a program consortium has led to a successful reframing of what innovation in healthcare should look like and the necessary steps to achieve the transition visualised.

As another example, the TMF was used by the roofing industry to identify and develop a feasible and more sustainable alternative to the most dominant roofing material – bitumen. Initiated by entrepreneurs and roofing product manufacturers, the strategic vision of this transition was to develop a product or products that increase the functionality of roofs and contribute to the problem solving of urban issues such as water drainage, energy production, air quality and building safety. The vision and staging of the transition arena was also timely as it supported the sustainability rhetoric at a government level who were consequently keen to offer their endorsement by adopting the transition's new concepts as national policy.

Application to the UK FE sector

Though the descriptive function is typically used to analyse historic transitions, and the prescriptive approach used to initiate and guide new transitions, within this study the descriptive function is being adapted and utilised to distinguish the FE sectors' management approach to sustainability within its analytical hierarchy. In a way, this study is therefore acting as a precursor to future studies that may investigate the functionality of the prescriptive framework, perhaps using action research, to guide a sustainability transition within the sector.

As previously discussed, the TMF is built upon the premise that transitions occur at multiple levels and through multiple phases. It identifies four types of transition management activities that are present (and also present without active transition management [Loorbach et al, 2010]) within the evolution of societal transitions and influence long-term change (Stephens and Graham, 2010; Loorbach, 2010).

The four types of transition management activities - strategic, tactical, operational, and reflexive - as denoted in table 3 operate with different focuses, timescales and actors, and address 'problems' at different levels (Loorbach, 2010).

Transition management activity	Focus	Problem scope	Time scale	Multi-Level perspective: interaction of three levels
Strategic: minimal attention in HE sustainability literature to long-term goal formulation, vision development, etc.	Culture	Abstract/ societal system	Long term (30 years)	Landscape
Tactical: coalitions for sustainability in HE are rapidly growing.	Structures	Institutions/ regime	Mid-term (5-15 years)	Regime
Operational: plethora of examples and studies on specific projects and efforts at individual universities.	Practices	Concrete/ project	Short term (0-5 years)	Niche
Reflexive: potential for more valuation and assessment activities.	Examination and review of activities			

Table 3 - Management activity types and their focus, and highlights of relevant insights from exploration of Transition Management to developing an empirical research agenda on sustainability in HE. Adapted from Loorbach (2010: 171) and Stephens and Graham (2010: 613).

Strategic activities – are high-level processes that require leadership capacity for the establishment of long-term visioning, objective setting and goal formation, and will form the arena within which norms and collective goals are set (Stephens and Graham, 2010; Loorbach, 2010). While strategic activities can take place within any stage of a transition process, in early stages of a transition, strategic discussions are often controversial and in some cases capture the attention of the media and public (Loorbach, 2010), for example, discussions relating to changes in energy supply or pricing, or debates surrounding higher education fees. Within the context of transition management, strategic activities typically signal the first stage of a transition where a specific ‘problem’ and its causes and are posited (Loorbach et al, 2010); conversely however, within progress models surrounding corporate sustainability, an organisation’s culture as it becomes more sophisticated will progress from tactical to strategic activities (Amini and Bienstock, 2014). This highlights one of the main concepts of transition management in that it is a framework that seeks to guide the innovation of processes, rather than innovation within processes.

Tactical activities – the focus of tactical activities is relationship and attention building between stakeholders in order to bring about transformations within an existing structure and specific context that will facilitate mechanisms for change and the achievement of a strategic vision (Loorbach, 2010; Loorbach et al, 2010; Stephens and Graham, 2010). Tactical activities are not concerned with, nor can impact on the development of a societal system at a landscape level, and in isolation, perpetuate governance fragmentation (Loorbach, 2010). For example, the institutional

fragmentation of the UK government in terms of different ministries, departments, and directorates is a major barrier for integrative long-term policies.

Operational activities – within the context of sustainability within higher education, operational activities are the dominant focus of research (Stephens and Graham, 2010), characterised as the implementation of short-term innovative experiments, typically led by the ambitions and specific skills of individuals (Loorbach, 2010; Stephens and Graham, 2010). Within HE and FE, there are many examples of operational activities that have been subsequently further developed as legitimate alternatives to existing technologies, practices and products (Stephens and Graham, 2010; Loorbach et al, 2010). Common examples include the implementation of waste management processes or resource saving initiatives through the use of technological innovations. Though operational activities are often small scale, they are important for identifying barriers for wider implementation (Loorbach et al, 2010), which when overcome, can facilitate progression to tactical activities. For example, operational activities may be retrofitted to existing processes or structures, but are designed into tactical developments; a common example within education is the retrofitting of ‘smarter’ modes of curriculum delivery into existing lecture theatres or classrooms, which within tactical building developments are included as a requirement at design stage. Operational activities if dealt with in isolation do run the risk of leading to the perception that substantial change is being achieved when in fact, activities amount to nothing more than “change within changelessness” (Sterling, 2013: 33).

Reflexive activities – typically detached from governance processes but located within institutions and organisations, reflexive activities include those that monitor, evaluate and assess ongoing policies that are implemented as part of a transition process (Loorbach, 2010; Stephens and Graham, 2010) and are necessary “to prevent lock-in and to enable the exploration of new ideas and trajectories” (Loorbach, 2010: 170). An example pertinent to this study is the study itself, which is assessing the implicit impact of previous and ongoing sustainability activities on perceptions of sustainability as well as perceptions of agency, both of which are cultural based factors that a transition to sustainability relies upon (Loorbach and Rotmans, 2010), and both are factors that have received no previous analysis within the FE sector.

Reflexive learning enables the transition process to ensure that the right questions are being asked, allowing for self-reflection and correction (Westley et al, 2011) “never

assuming that we have found the answer because the questions associated with sustainability are always going to change” (Morris and Martin, 2009: 164). Indeed, the approach to transitions should focus on working towards common ambitions rather than fixed goals (Loorbach et al, 2009), because “sustainability is a process, not a destination” (Shriberg, 2002:155), and a “horizon to be approached but never reached” (Garud and Gehman, 2012).

The transition management cycle

As previously stated, transition processes and perceptions of sustainability differ depending on the context within which they are set (for example, is it taking place within the energy or education sectors), and therefore too its actors, problems and solutions (Loorbach, 2010). The four types of transition management activities as well as being useful within the descriptive function of the TMF, also correspond with several steps that form the prescriptive framework (denoted by figure 5) which follows a cyclical, functional and adaptive non-linear transition management process (Rotmans and Loorbach, 2009; Loorbach et al, 2009; Loorbach, 2010).

The following steps are a process strategy based on the characteristics of the four types of management activities; throughout the transition process, these steps develop to connect and guide each management activity in a specific direction, though need not be followed in a fixed sequence (Loorbach, 2010). Indeed, transitions are not neat and clean, moving sequentially from one activity to another, but are likely instead to be “a very “rugged” terrain because of the many interdependencies involved” (Garud and Gehman, 2012: 991).

The steps of a transition management cycle are:

- 1) “Structure the problem in question and establish and organise the transition arena
- 2) develop a transition agenda, images of sustainability and derive the necessary transition paths
- 3) Establish and carry out transition experiments and mobilise the resulting transition networks
- 4) Monitor, evaluate and learn lessons from the transition experiments, and make adjustments in the vision, agenda and coalitions” (Loorbach and Rotmans, 2010: 238).

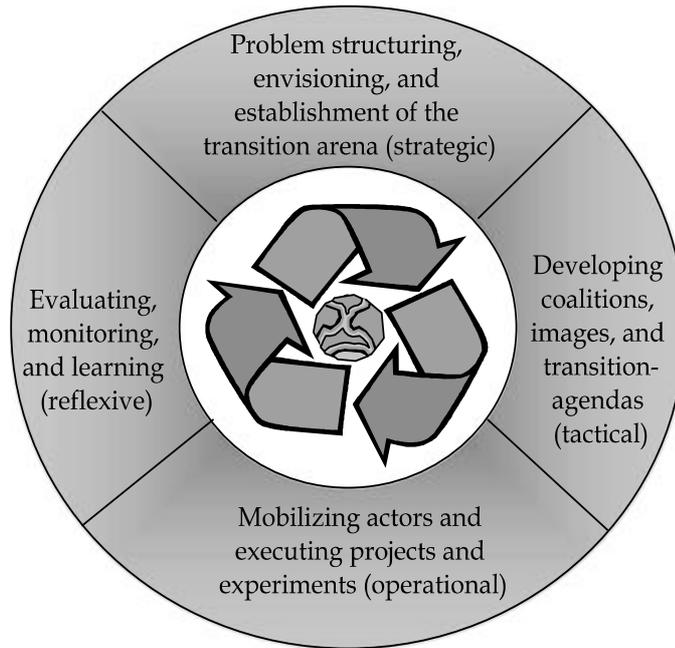


Figure 5 - The Transition Management cycle (Loorbach 2010: 173)

Though the steps of a transition process need not evolve sequentially, the framework also articulates progression of a transition through four-phases of development - pre-development, take off, breakthrough and stabilization (Stephens and Graham, 2010). These phases strongly resonate with Sterling (2004, 2013) who states that consecutive learning through four stages is necessary for the shift in the transition to sustainability and is observed by changes initially in environmental and economic policies, followed by a cultural shift in public awareness, and finally a renewal of emphasis on local democracy and activity (Sterling, 2004; Sterling, 2013). Table 4 illustrates the four phases of organisational learning development, and how they correspond with the TMF's four phases of development and their multi-level focus.

Type of response	Resultant change	Type of learning	Application to the TMF
No response	No change	Denial/ ignorance (no learning)	Pre-development
Accommodation	Green gloss	Adaptive	Take off (Practices)
Reformation	Serious reform	Critically reflective adaptation	Breakthrough (Structure)
Transformation	Whole system redesign	Transformative	Stabilisation (Culture)

Table 4 - Staged learning responses to the challenge of sustainability and their correspondence with characteristics of the TMF - adapted from Sterling (2004: 57)

The parallels between the two research areas of transition management and sustainability learning within higher education are not limited to the four-phased development processes. Many of the “ingredients” that would characterise a sustainable university match those required for transition management, most notably the ability to learn, reflexivity, transdisciplinarity, critical debate, collective responsibility and engagement, long-term orientation and a systems approach (Sterling, 2013).

Sterling’s four-phased learning approach also resonates with some of the TMF’s management activity characteristics; for example ‘adaptive’ responses to sustainability accommodate “disturbances without fundamentally changing the whole system” (Sterling, 2004:57). The parallel dynamic within the TMF would be operational activities taking place at a project level over a short-term period only, and would be “typically led by the ambitions and specific skills of individuals” (Loorbach, 2010; Stephens and Graham, 2010), but neither operational nor tactical activities are concerned with, nor can impact on the development of a societal system at a landscape level (Loorbach, 2010). Sterling (2004) and Philips (2009) describe how leaders will make space for innovation, typically within accommodative and reformative responses but only if the attendant risks are small and rewards, such as to gain a competitive edge over rivals, are sufficiently attractive: “It is less likely that the sector will opt for fully transformative change as the sector is a prime agency of learning, but itself not a reflexive learning system” (Sterling, 2004:51). For an institution to move beyond an accommodative or adaptive response it requires significant learning of those particularly who hold leadership positions, however it must be kept in mind that as a subsystem of society, education cannot transition to paradigmatic change at a rate “faster than society as a whole” (Sterling, 2004: 58). Indeed, while some universities have started to incorporate sustainability into their educational missions and practices (Stephens and Graham, 2010), they as with any individual organisation, cannot become sustainable in isolation as they are still part of and contribute to the societal systems, however optimised, of production and consumption (Loorbach et al, 2010). There is therefore a need for a recursive relationship between higher education and society that would allow for co-evolution through parallel shifts (Sterling, 2004). Unlike other businesses, universities are therefore key actors to influence as well as being influenced by processes of social change (Stephens and Graham, 2010; Adombent, 2013), but like all businesses, must behave as coevolving actors within society as a

whole in order to realise their transformative potential (Loorbach et al, 2010; Brinkhurst et al, 2011; Adombent, 2013; Christen and Schmidt, 2012).

Both four staged processes typically follow bottom-up movement through each phase of learning or transition process. However within the TMF, a strategic process can for instance take place at a niche level, but then must evolve through each subsequent level in order to overthrow the incumbent regime and therefore eventually lead to societal landscape changes. The TMF recognises that “developments in many domains and at many scales contribute to a societal transition” (Stephens and Graham, 2010: 614) and therefore in this regard, progression through four phases of development may be difficult or counterintuitive to apply in all transition management circumstances, particularly those within education. Instead, the four staged learning process, and the four phases of transition development can be observed as part of an organisation’s experience over time – outside of any prescribed transition management process - as a result of multi-level interactions.

2.4 Highlighting the literature gap: the study’s research objective and research questions

As this chapter has indicated, literature concerning sustainability within education has almost exclusively focussed on higher education, with FE colleges receiving little to no specific academic attention as a result of those writing about HE having had limited or no experience of the FE sector. It is suggested therefore that the research outputs regarding sustainability within HE have been assumed as applicable to FE colleges, or the significance of the differences between the two sectors have not been considered.

As discussed earlier in this chapter, typically used sustainability progress models ‘classify’ progress of an institution’s sustainability efforts based on a linear interpretation, which may vary significantly across other areas of the institution, and according to stakeholders’ perceptions. Though it is difficult to escape the limitations surrounding the inherent bias of any study examining a specific cohort of stakeholders’ perceptions, especially so of an already highly contested term, to begin substantiating the sector’s specific position regarding sustainability, this study (rather than taking a linear ‘case study’ approach and assessing sustainability performance) is seeking to understand and map management approaches to sustainability based on key stakeholders’ perception or perceptions of sustainability compared with perceptions of sustainability in practice. The study therefore responds to the literature gap identified

by Wright and Horst (2013), who state that there are few studies that explore the conceptualisations of sustainability, particularly those held by major stakeholders. The significance of senior stakeholders is also echoed by Beltran-Kadji et al (2013) who, in a study examining the views of school Principals on leadership and leadership practices in relation to sustainable development, state, “the role of school Principals has consistently been identified by educational research as critical to the successful and sustainable implementation of educational reforms” (Beltran-Kadji et al, 2013: 304).

It is important to highlight that although this study is essentially founded upon a heuristic inquiry, as a result of the researcher’s professional experience within the sector, the study as explained in chapter 3 is interpretivist and exploratory in nature. Therefore, its purpose is not to assume there is a problem concerning sustainability within the sector and to devise a solution or model to illustrate this, instead, it intends to simply explore how the sector conceptualises sustainability, and if indeed there is a problem worthy of further investigation. For example, the problem may be less the acknowledgement and active engagement with a college’s social or economic responsibilities, and instead more confined to a problem of environmental responsibility. As conferred by Shriberg (2002:158), “opting to use the term “management” or “environmental” instead of “sustainability” may be more resonant with people’s comprehension of the term, however since sustainability is qualitatively different from “environmental responsibility”, campus leaders might attach different meanings to questions based on their interpretations, none of which might approach theorists’ and practitioners’ meaning of “sustainability”.

2.4.1 Interpretational confinements of the literature review

Terminology and interpretational issues are not only a by-product of a study on sustainability (as discussed in further detail in chapter 3.2.3), but have been perpetuated by this study’s conceptual focus. As Baker-Shelley et al (2017) rightly point out, analyzing a sustainability transition through one perspective, such as the sustainability of education and research is impractical and would not provide a holistic picture of where on a sustainability transition an organisation really is. Indeed, a focus on overt sustainability and the sustainability discourse could itself be counter-productive given, as stated by Visser (2015), sustainability itself is not an effective strategy for change. However, rather than considering other theoretical perspectives that contribute to organisational change such as behavioural science and psychology, organisational change and management (including political leadership [Kiraly et al,

2017], socio-ecological systems, and corporate governance and CSR (Baker-Shelley et al, 2017), the focus of this literature review and this study as a whole (at its outset) was to examine the moral imperative of sustainability in education, specifically HE given the literature gap of sustainability education in FE. Additionally, other areas of comparison such as transformation in HE responding to other – what were once peripheral -issues such as health and safety, equality and diversity and employability that could have resonance for the cultural changes required for sustainability, were not specifically examined. The reason for their scoping out is the same; this study was exploratory in both its explicit topic and implicit learning journey. Just as the emergence, dominance, complexity and relevance of power within the study's results was unexpected, so too were the relationships of other theoretical perspectives in understanding FE's leadership and management approach to sustainability. That is not to say that they were not intuitively known of by the author, more it was the moral case for sustainability that represented a cathartic motivation driven by a career in sustainability that wanted to simply examine and explore *how*, in the 21st century, sustainability is perceived by educational leaders.

Therefore, just as a literature review that covered these other theoretical perspectives as well as comparable changes within higher education would have – with hindsight – made a more instructive and informed literature review and study as a whole, looking for patterns, seeking solace and examining potential areas of resonance by comparing FE with its closest relative, HE, felt the most appropriate place to start this very exploratory study and to fulfill its research objective. Indeed, it was examination of literature on sustainability in HE (particularly the work of Tarah Wright) that informed the development of the research questions as well as other key research decisions, such as the interview and focus group questions, and the decision to use content analysis.

Developed to reflect the limitations presented by the literature reviewed, the objective of this study was therefore:

“To determine if there is a relationship between Further Education leaders’ perceptions of sustainable development, and the nature of its practice within FE colleges”

In order to achieve this research objective, three detailed research questions have been developed:

Research question 1: **What is the dominant perception of sustainable development by FE leadership?**

Research question 2: **What are leaders' perceptions of power and leadership for sustainability within FE?**

Research question 3: **How are FE colleges perceived to contribute to sustainable development?**

These research questions will be answered by the examination of perceptions of sustainability, its practice and leadership held by individual college leaders, employees of colleges in less senior positions, and the sector's funding and membership bodies as detailed in chapter 4 and discussed in chapter 5. As the study's conceptual framework, the TMF will be used to validate the research findings. Its application and adaptation to suit the parameters of this study is discussed subsequently.

2.5 Key theories from the theoretical background: applying the TMF as the conceptual framework.

As previously discussed, existing literature within the research field of sustainability within higher education is dominated by empirical and descriptive studies, often including examples of best practice, and focusing on tactical and operational activities only (Stephens and Graham, 2010; Dade and Hassenzahl, 2013).

Stephens and Graham (2010) also highlight the scarcity of studies that explore strategic dynamics within HE that could facilitate change for sustainability, and state "a valuable area of future research could involve analysis of the ways in which universities, and/ or the sector as a whole, are oriented toward or engaged in a transition, and in what ways organisations of higher education are oriented toward maintaining the status quo rather than fostering change" (Stephens and Graham, 2010: 613). Principal authors of transition management recognise that though the TMF it is still in development and has commonly been used to induce change within the energy, water and transport subsystems (Stephens and Graham, 2010; Loorbach, 2010; Markard et al, 2012), it is recursive and scholars invite exploration of its value in different contexts (Luederitz et al, 2016): "[the TMF] can be applied on the level of a societal system, but as well as on a sub-system, or even the project level" (Loorbach, 2010: 171). Indeed, as the education sector and its sub-sectors are significant societal change agents, "embedded in their own cultural and social contexts that precipitate a unique set of challenges and

opportunities” (Stephens and Graham, 2010: 616), studies that explore this role and the challenges associated within change within higher education, specifically “multiple levels of action, and the role of the university in operationalising a transition are worthy of a review” (Stephens and Graham, 2010: 612).

Though this study is inherently descriptive and empirical in nature (and therefore adding to the dominant trend of existing literature as noted above by Stephens and Graham), the TMF’s descriptive ability to distinguish governance activity through a multi-level perspective remains suitable for this study, which is focussing on leadership dynamics only. As the research gap exploring sustainability within FE is almost exhaustive, readjusting the TM focus to examine leadership perceptions of sustainability provides a logical place at which to start the exploration of the sector’s transition.

2.5.1 Adapting the TMF: conceptual framework

Given the ever changing parameters of sustainability and the inherently complex nature of higher education institutions, the linear view taken by sustainability progress models “may give potential change agents an inflated or diminished view of their situation, both of which can derail or stifle nascent initiatives” (Stephens and Graham, 2010: 615). This critique is similarly relevant to common environmental or sustainability assessment frameworks such as the ISO14001, which although in some cases do include a reflexive (monitoring and evaluating) element, (illustrated within environmental management systems as ‘Plan, Do, Check, Act’ [Clarke and Kouri, 2009]), their task is to simply measure and subsequently reduce an organisations environmental impact; an insufficient response to the complex problem of sustainability which “requires more radical and structural changes within and between organisations” Loorbach et al (2010:134). The TMF is therefore being used as this study’s conceptual framework, which according to Robson (2002: 63), provides “the theory about what is going on, what is happening and why”, and the “system of concepts, assumptions, expectations, beliefs and theories that support and inform research” (Maxwell, 1996: 25).

Since there does not appear to be a demand from the sector for a prescriptive insight into how a transition toward sustainability may be facilitated, a descriptive 'snapshot' of the FE sector’s leadership approach to sustainability may inspire further studies or scrutiny of the sector. By focusing on leadership approaches rather than exclusively

sustainability activities, the study's conclusions could be used to inform future studies that may investigate the transferability of the prescriptive function, perhaps using action research, to guide a sustainability transition within the sector. There is also an inherent reflexive dimension to this study through the examination of perceptions of sustainability practice, as results will reflect the impact of historic and expired strategies within the sector's sustainability transition.

The spatial dimensions of the traditional TMF have been adjusted and scaled down to reflect the leadership dynamics of the further education sector, notably its relationship with the government, the nature of which is to deal with more urgent, shorter time scale problems, rather than the longer-term perspective offered by science (Adombent, 2013). While short term policy making decisions are not conducive to facilitating sustainable development, and operate on a significantly shorter time scale than the landscape activities proposed within the TMF, it is relevant to this study as it reflects more accurately the conditions from which this study has emerged. Therefore:

- The TMF's landscape level refers to the highest tier of FE sector leadership, which is led by the government departments, the DfE and BIS, who sponsor the EFA and SFA (see figure 1).
- The regime level refers to the self-leadership of the sector by membership based sector interest groups, specifically the AoC, and the '157 Group'. These two groups represent the critical mass of leadership engagement with sector wide issues, and through their membership structure, facilitate a more direct lineage of management from the government at a landscape level to individual leaders at a niche level. The disadvantages of choosing these two groups to represent the regime level are discussed in chapter 3.2.3.5.
- The niche level refers to the leadership of individual colleges and was examined by interviewing the most senior leaders of colleges, which in most cases was the college Chief Executive and Principal. Focus groups were also conducted with middle – lower management as a means of appraising senior leader's perspectives and offering a platform for the perspectives of the 'niche' within the niche to be heard.

Accordingly, the spatial characteristics the transition management activities, each of which are associated to each level of leadership, have also been adjusted as denoted in table 5.

For this study:

- Strategic activities are based on a five to ten year timescale, and will be assessed using indicators that refer to sustainability and long-term visioning, objective setting and goal formation.
- Tactical activities are based on a two to five year timescale and will be assessed using indicators that refer to lateral relationship building between sector stakeholders with the intention of facilitating mechanisms of change required for sustainability.
- Operational activities are based on a nought to two-year timescale, and will be assessed through references to short-term or ongoing sustainability projects or innovations, that may or may not be referenced to a specific individual within the organisation.

Multi-Level perspective	TM activity	FE focus	Research method
FE landscape (5-10 years)	Strategic	BIS, SFA, EFA, DfE	Content analysis
FE regime (2-5 years)	Tactical	AoC, 157 Group	Content analysis
FE niche (0-2 years)	Operational	Individual colleges	Interviews, focus groups, content analysis

Table 5 - conceptual framework based on Loorbach (2010) and Stephens and Graham (2010).

It is important to note that while BIS for example, will be examined as a sector ‘landscape’ stakeholder that acting on behalf of the government should be expected to provide more of a strategic focus to the sector, the purpose of the study is to examine and map at which TM activity each of multi-level stakeholders are *actually* operating in relation to sustainability and sustainable development. For example, emergent key themes from data analysis may suggest that perceptions of sustainability as a concept referring to business continuity are more strategically inclined and relate to a landscape perspective by citing government priorities, national socio-economic trends, or the needs of future generations. At a niche level, FE could therefore be assessed as focussing on strategy when conceptualising business sustainability, but focuses on operational or tactical activities when referring to environmental sustainability. A subsequent research conclusion could be that there is a mismatch between perceptions of sustainability, its leadership and its practice within the leadership hierarchy of the sector. When relating this back to the research objective, it could be surmised that there is a weak relationship between how sustainability as a concept is

perceived and how it is practiced. The strengths and weaknesses of using the TMF as the study's conceptual framework are discussed in greater detail in chapter 6.

2.6 Chapter summary

This chapter has outlined this study's research objective and questions and the key theories obtained from the theoretical background, which concluded that frameworks typically used to assess sustainability progression within education would be inappropriate for this study. Rather, it was deemed more suitable to adapt the leadership and governance descriptive abilities of the TMF as a conceptual framework against which the study's research findings will be validated in order to determine the prevailing management approach taken by the multiple levels of FE leadership to sustainability.

Chapter 3. Research approach and design

This chapter provides a detailed description of the study's ontological and epistemological approach, the choice of Grounded Theory (GT) as the research methodology and how this links with the study's conceptual framework. The chapter then discusses the data collection methods, the application of GT to the data analysis methods, and the advantages and disadvantages associated to each. A detailed account of the limitations of this study associated with the researcher and a reflection on the data analysis and overall research process concludes the chapter.

3.1 Research approach

While a number of different authors have developed models illustrating the relationship between ontology, epistemology, theoretical perspectives, methodologies and research methods (such as Crotty, 1998, Blaikie, 2007, Gray, 2009), it is Gray's 2009 adaptation of Saunders et al (2007) diagram of the elements of a research process, denoted in figure 6, that has been further modified to illustrate the research approach of this study (as denoted by the red arrows), incorporating also Grix's (2002) terminology and position of ontology and epistemology. Though arguably this study is both exploratory and descriptive, and operates mainly at a cross-sectional level, (though there is a longitudinal element within the research method), as the red arrows denote, this study originates from a constructivist ontology, an interpretivist epistemology, and interprets theory using a symbolic interactionism perspective. The study adopts an inductive GT methodology, and uses interviews, focus groups and the analysis of secondary data as its research methods.

Each element of the study's research process will now be explained in detail.

3.1.1 Constructivist research ontology; an interpretivist epistemology

At the start of any research project is a researcher's personal experience, which impacts on the researcher's perspective of the world and what constitutes social reality, or a researcher's *ontological perspective* (Crotty, 1998; Blaikie, 2007; Grix, 2002).

This study was conceived as a result of the researcher's professional experience whereby it was observed that multiple perspectives have developed and continue to develop the meaning of sustainability, rather than it having a static and external meaning that has yet to be discovered. As stated by Palmer (2004), sustainability is an

ambiguous and widely contested term, interpreted differently depending on the context from which it emerges.

The researcher's experience has therefore naturally influenced the judgement that a) this study is important to research, and b) the researcher's values as well as the values and concepts implicit within the study have determined the research philosophy and design (Robson, 2002; Gray, 2009): the limitations presented by the researcher's experience of the sector are discussed in greater detail in chapter 3.2.3.

The focus on sustainability and how it is perceived presents an extra layer of subjectivity to contend with; therefore it is perhaps inevitable that the ontological perspective of this study is constructivism, which can be defined as:

"A position that asserts that social phenomena and their meanings are continually being accomplished by social actors. It implies social phenomena and categories are not only produced through social interaction but that they are in constant state of revision" (Bryman, 2001: 16).

"Constructivism rejects the view that truth and meaning exist in the external, but is instead created by the subject's interactions with the world. Meaning is constructed, not discovered, so subjects construct their own meaning in different ways, even in relation to the same phenomenon" (Gray, 2009: 17).

A constructivist approach believes that reality is socially constructed, and therefore it is the task of constructivist researchers to understand and derive multiple constructions through an inductive approach that seeks to establish patterns, consistencies and meanings (Robson, 2002; Gray, 2009). While ontology is focused on a researcher's worldview, epistemology focuses on the knowledge gathering process (Grix, 2002). The epistemological stance of this study is interpretivism, which is commonly linked to constructivism (Gray, 2009), and is "predicated upon the view that a strategy is required that respects the differences between people and the objects of the natural sciences and therefore requires the social scientist to grasp the subjective meaning of social action" (Bryman, 2001: 12).

Like constructivism, interpretivism regards reality as a social construct (Blaikie, 2007) but is centrally motivated by a concern to understand and explain the actions and practices of actors (Hay, 2011). Of relevance to this study is the particular focus of

interpretivism on interpretations. Not only do our interpretations and subjective understandings of the world guide our beliefs, understandings, conduct, and actions, but these in turn lead interpretivist researchers to their ideas (Hay, 2011). Learning then is “shaped not only by what happens between individuals in interaction, but by the cultural, historical, and social contexts in which their interaction is embedded” (Lattuca, 2002: 713). Again, this has clear resonance with this study, as it is the researcher’s experience and own interpretation of the behaviours and beliefs of the FE sector with respect to sustainability that led to the judgement that research must be conducted. It is accurate therefore to say that without this professional experience and an understanding of the social and cultural context within which it is embedded, the research gap or research opportunity might not have been identified. It was the researcher’s experience therefore that led to the perception that the study was required, particularly so in order to highlight the crucial differences between the HE and FE sectors, and how this may have impacted on perceptions of sustainability and its practice. The approach to this study was therefore as much pragmatic as heuristically founded as it is the researcher’s intent to demonstrate practically how different the two sectors are, and therefore furthering the development of sustainability theory, though within a sector that has not been empirically studied before. The theoretical perspective of this study is discussed in greater detail in 3.1.3.

3.1.2 An exploratory, inductive and flexible approach

As discussed within the background and literature review chapters, there is substantial literature and research based on the examination of sustainability within HE, but an absence of pre-existing theories regarding sustainability within FE specifically. The purpose of this study is therefore exploratory as it intends to discover what is happening in an unknown situation in order to generate ideas for future research (Robson, 2002).

While the dominant research approach is exploratory, there are elements of a descriptive and interpretive research approach, which are defined respectively by Gray (2009:35) as: “to ‘draw a picture’ of a situation, person or event or show how things are related to each other”, and “to explore people’s experiences and their views or perspectives of these experiences”. Of further relevance to this study is a descriptive approaches’ requirement of *previous knowledge* of the situation being researched and described (Robson, 2002).

Exploratory, descriptive and interpretive approaches are all inductive in nature, seeking to establish theories through the emergence of connections and meanings from the data gathering process (Gray, 2009). These are different to deductive processes that are typically of a quantitative and fixed design, are theory driven and seek to link research to theory through the testing of hypotheses (Robson, 2002; Gray, 2009).

Though flexible designs can legitimately incorporate quantitative methods, social research processes, and exploratory studies in particular are commonly qualitative and of a flexible design, whereby the research approach is able to evolve and develop as the research process continues (Robson, 2002).

Rather helpfully, the exploratory, inductive and flexible approach of this study is implicit within its ontological and epistemological perspective. Not only are interpretive studies typically inductive in nature, but also constructivist and interpretivist researchers tend to use qualitative research methods such as interviews and observation (Robson, 2002; Gray, 2009). A researcher's ontological and epistemological perspective therefore determines the research approach and choice of methodology (Grix, 2002; Gray, 2009).

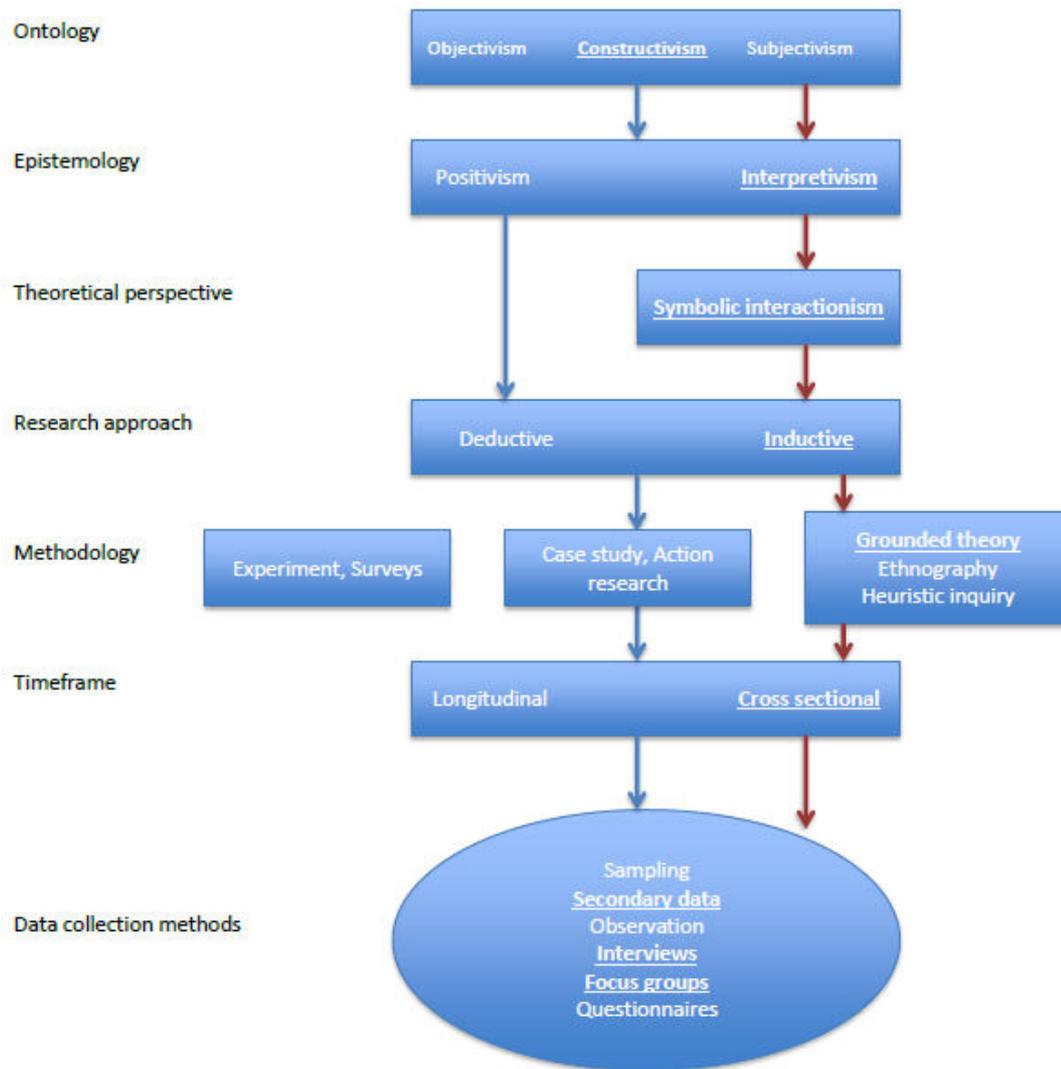


Figure 6 - The elements of the research process. Adapted from Gray, (2002: 33), adapted from Saunders et al (2007). The red arrows indicate the research approach taken by this study.

3.1.3 Using symbolic interactionism within an interpretivist epistemology

As we have seen, the ontological perspective of this study is founded upon a worldview that reality is socially constructed. The principle concern of this study is to gather knowledge using an interpretivist epistemology, through a congruent symbolic interactionist theoretical perspective, in order to understand the perspectives and practices of sustainability within the FE sector. This approach was also used by Littledyke et al (2013) who used symbolic interactionism as their theoretical perspective when conducting interviews as their main research tool to investigate practice and perceptions of sustainability within HE (coincidentally they too observe online communications of sustainability as a supportive secondary data set).

A theoretical perspective is, “the philosophical stance informing the methodology and thus providing a context for the process and grounding its logic and criteria” (Crotty, 1998:3). Symbolic interactionism is an example of an interpretivist approach, both of which seek to understand and explain the human world based on a perspective that:

- “People interpret the meaning of objects and actions in the world and then act upon those interpretations.
- Meanings arise from the process of social interaction.
- Meanings are handled in, and are modified by, an interactive process used by people in dealing with the phenomena that are encountered.
- Meanings are not fixed or stable, but are revised on the basis of experience” (Gray, 2009: 22).

There are other theoretical perspectives relevant to this study; phenomenology for example seeks the opinions and interpretations of participants through the collection and analysis of qualitative data (Gray, 2009). This study however uses a more structured approach than the conventional phenomenology perspective, largely due to the challenges associated with access to the selected research participants. There are also inherent heuristic aspects of this study as a result of its origin and the experience of the researcher. A researcher using heuristic inquiry will seek to find an answer to a problem that the researcher has had direct experience of, which in this study, is the experience of the researcher as a sustainability practitioner within the sector under scrutiny. However, in order to remain faithful to the study’s interpretivist epistemology and exploratory nature, the purpose of the study is not to answer a specific problem, but rather identify if there is a problem concerning how sustainability is perceived. In

short, as a result of practitioner experience, the researcher suspects there is a problem regarding perceptions, but as this has not yet been empirically investigated, the study must remain exploratory.

3.1.4 Research design: using a Grounded Theory methodology

Grounded Theory is a commonly used qualitative, inductive and flexible research approach, heavily influenced by symbolic interactionism and interpretivism that seeks to develop theoretical ideas based on the emergence of themes arising from data (Crotty, 1998; Robson, 2002; Gray, 2009).

Building upon the exploratory nature of this study, GT is pertinent to applied areas of research, commonly education, nursing and organisational studies, where there is an absence of pre-existing theories (Robson, 2002; Gray, 2009). It is being used as the design for this study's methodology, which as defined by Crotty (1998) is: "the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes" (Crotty, 1998:3).

A methodology also reflects the researcher's ontological and epistemological assumptions (Grix, 2002); GT has clear resonance with the constructivist and interpretive philosophies upon which this study is founded, as it is a theory which is "discovered, developed and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon" (Strauss and Corbin, 1998: 23).

Typically using semi-structured interviews, the researcher develops a central theory based on multiple layers of meaning that are derived from the data (Robson, 2002); multiple layers of meaning can be explored jointly between the researcher and the participant whereby rather than accepting a superficial analysis of a response, the researcher can probe more deeply into the participant's unstated explanations and assumptions, and how these may impact on future actions (Charmaz, 2006; Gray, 2009). This relates back to the central premise of symbolic interactionism where the interpretation of actions guide further actions and interpretations themselves are constantly revised according to experience (Gray, 2009). Indeed, GT is itself a "method of constant comparison" (Pidgeon and Henwood, 1996: 92).

Within this study, data was collected using semi-structured interviews, focus groups, and the content analysis of key FE sector papers, publications and online content. In order to derive the core theme present within the collected data, analysis will be

carried out in three stages according to a GT methodology, as stated by Robson (2002: 493):

1. Find conceptual categories in the data
2. Find relationships between these categories
3. Conceptualise and account for these relationships through finding core categories.

The application of GT to the analysis of this study's data will be explained in greater detail in chapter 3.2.2.

3.1.5 Linking the research approach to the conceptual framework

The purpose of this final section of the chapter is to highlight the relationship and relevance of the study's research approach to the conceptual framework being used to validate the study's research findings. How these elements of the research process file into the research structure is shown in figure 7.

Symbolic interactionism is congruent with the principle of GT whereby theory is developed through multiple layers of meaning. This is also true of the study's theoretical framework, the Transition Management Framework (TMF), which is based on the premise that change is created through multiple layers of leadership and multi-phased processes.

Both GT and the TMF are also inductive in nature and are built on an interpretive epistemology since both are of the view that the nature and dynamics of society and its subsystems are related to the manner in which the systems' actors behave and react to these dynamics.

It is the purpose of this study to derive a core understanding of the FE sector's leadership approach towards sustainability in order to determine its relationship with how sustainability is practiced. Through a research process heavily influenced by interpretivism, this will be achieved by analysing data for common perceptions of sustainability, perceptions of power for sustainability leadership, and perceptions of how colleges practice sustainability.

Resonating further with interpretivism, as a result of the absence of pre-existing theories within the research area, the research's purpose is to provide a rudimentary

'mapping' of an unknown sector's approach to sustainability. As stated by Hay (2011), "interpretivists restrict their empirical concerns to the mapping and interpretation of actors' beliefs, and the location of such beliefs and meanings in the context of pre-existing yet dynamic and open-ended traditions" (Hay, 2011: 167).

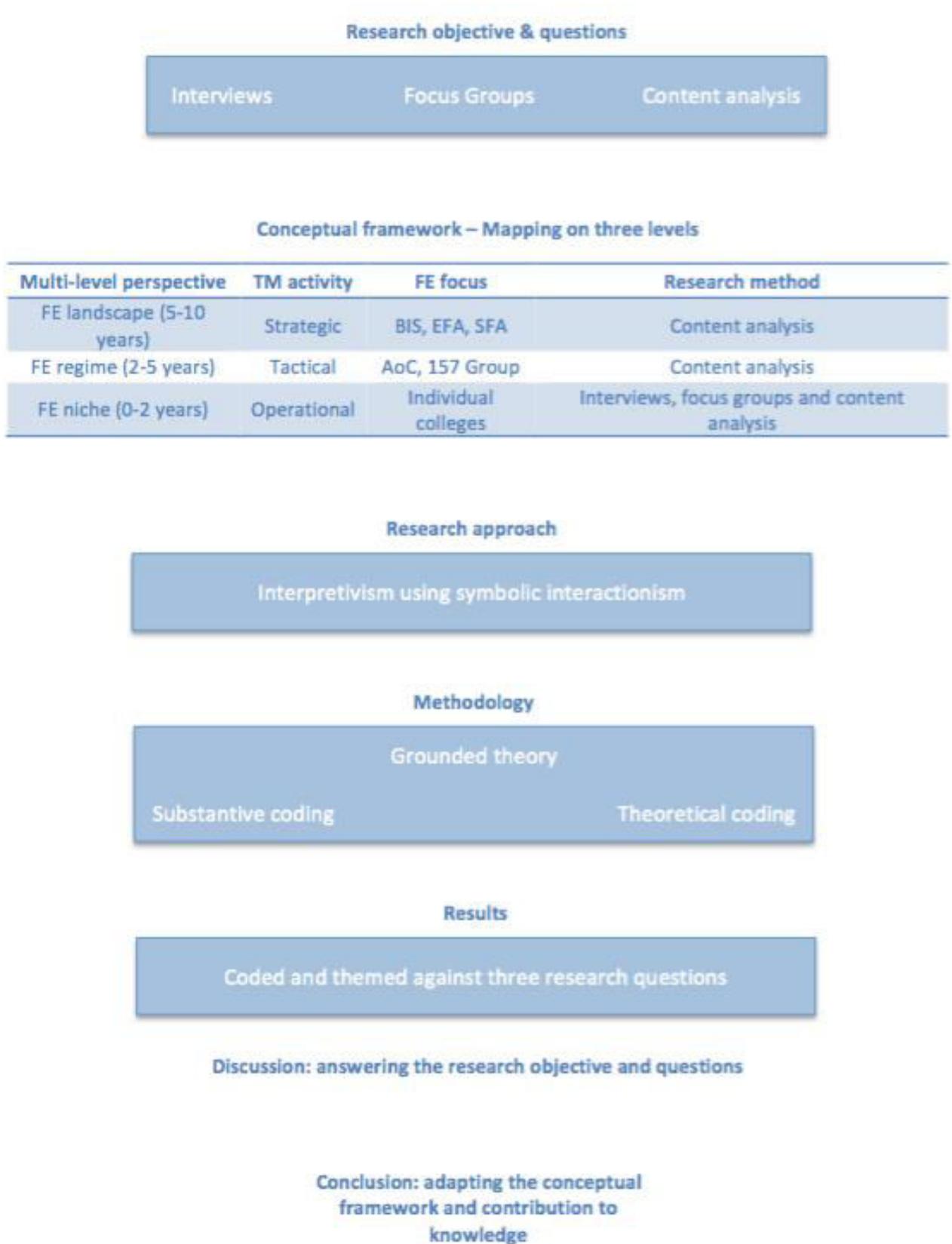


Figure 7 - A diagram linking the research's objective, approach, conceptual framework and methodology.

3.2. Data collection and analysis methods

This chapter provides an account of the data collection and data analysis methods used within each stage of the research process. To begin with, the chapter discusses in turn the data collection methods used for interviews, focus groups, and secondary data, in each case detailing the aim, approach, sample, design, and advantages and disadvantages of each collection method. The subsequent chapter then discusses and provides diagrams to illustrate the analysis methods used for each of the data sets collected. Lastly, the limitations of each data collection method are discussed in detail, before an overall reflection and summary of the research process concludes the chapter.

3.2.1 Data collection methods

This research used several data collection methods that were identified as appropriate to investigate perceptions of sustainability within the chosen field, and therefore to answer the research questions highlighted in chapter 2.4.1.

Data was collected through sixteen semi-structured interviews, five focus groups, and the analysis of sector based publications and individual college and FE stakeholder websites. In the absence of previous studies that would normally be used to inform further studies such as this, much inspiration and guidance has been taken from the work of Wright (2010), Wright and Wilton (2012) and Wright and Horst (2013), who explore how Canadian university's presidents and facilities managers conceptualise sustainability in higher education. These studies also helped to strengthen the validity of the study, as interview and focus group questions were adapted versions of those asked of Canadian university leaders. Other ways in which validity and rigour were ensured throughout each stage of data collection and analysis are discussed within each sub-chapter.

3.2.1.1 Semi-structured interviews

Forming the primary method of data collection, the aim of conducting interviews was to investigate how leaders of FE colleges conceptualise sustainability, power for sustainability leadership and what they perceive demonstrates sustainability in practice within their institutions. As stated by Robson (2002) and Gray (2009), qualitative interviews are a common method chosen within flexible research designs, either as the sole method of data collection, or used in combination with others.

This study used semi-structured interviews within which open questions were asked. The advantages and disadvantages of using open questions compared to closed or scaled questions are as follows:

Advantages:

- "Open ended questions are flexible and allow the researcher to go into more depth or clear up any misunderstandings;
- Enable testing of the limits of a respondent's knowledge
- Encourage co-operation and support
- Allow the researcher to make a truer assessment of what the respondent really believes
- Can produce unexpected answers" (Robson, 2002: 275)

Disadvantages:

- "The possibilities for loss of control by the interviewer;
- Are much more difficult to analyse than closed questions" (Robson, 2002: 276)

How the first of these disadvantages was overcome is discussed in chapter 3.2.3.2, with the second discussed in chapter's 3.2.2.3 and 3.2.3.1.

The approach, sample and design of interviews

The sampling frame for this study was initially limited to individual member colleges of the '157 Group', chosen due to its quasi-leadership role within the sector. Access to this group, as well as the collective size of the group and its member colleges (discussed in chapter 1.5) made the group appealing as an achievable and representative sample size. Pre-existing knowledge of this group also played a part in its choice as a sample as the researcher's previous employer was a member college of the 157 Group, and the Principal of this college at the time was the 157 Group Chair. With the support of the researcher's college Principal, the researcher was given unique access to the group, particularly the senior leaders of member colleges, who were personally encouraged to participate by the group Chair.

Inviting participation

A research invitation asking Principals to take part in a one hour interview about their understandings of FE colleges and sustainability was distributed to member colleges by email through the 157 Group and was reinforced by the group Chair during a scheduled meeting. At the time of contact, there were twenty-nine members; of these, ten Principals agreed for their college to participate in the research resulting in interviews of seven Principals, one Vice-Principal and two Directors in round one. Six further FE colleges were contacted and subsequently participated within a second phase of interviews. As denoted by table 6, these participants comprised five Principals and one Vice-Principal; three of these colleges belonged to the 157 Group. In total, twelve interviewees were Principals, two were Vice Principals for 'Corporate Services' or 'Resources', and the remaining two were Directors of either 'Physical resources' or 'Premises'. Two additional participants took part in a joint interview with their Principal (3a, 3b, 3c); these two participants were the college's Director of Property and Sustainability Coordinator.

Several other Principals in the first instance nominated their senior staff in equivalent 'Corporate services/ physical resources/ premises' roles; however in all cases the researcher reiterated the purpose of the research and the requirement of Principal participation. Subsequently most Principals agreed to be interviewed; in the four instances where they did not, Principals felt their nominated staff members would be better suited to answer questions within the research area. This is relevant as it denotes an assumption by those Principals that sustainability/ sustainable development is within the remit of those with responsibility for college's premises or

resources. In total, sixteen FE colleges participated within rounds one and two; 81% of participants belonged to the target 157 Group of colleges, amounting to 44% of the total 157 Group membership.

#	Job title	157 Group member	Date of interview
1	Principal & Chief Executive	Yes	09.05.13
2	Principal & Chief Executive	Yes	19.05.13
3a, 3b, 3c	Principal & Deputy CEO, Director of Property, Sustainability coordinator	Yes	22.05.13
4	Acting Principal & CEO	Yes	07.06.13 (telephone)
5	Principal & Chief Executive	No	17.06.13
6	Director of Premises	No	01.07.13
7	Deputy Principal for Resources	Yes	02.07.13
8	Vice-Principal for Resources & Planning	Yes	10.07.13
9	Principal & Chief Executive	Yes	16.07.13
10	Principal & Chief Executive	Yes	19.07.13
Round two			
11	Principal	No	25.10.13
12	Chief Executive	Yes	06.11.13
13	Principal & Chief Executive	No	08.11.13
14	Group Chief Executive	Yes	14.11.13
15	Vice-Principal Corporate Services	No	27.11.13
16	Principal & Chief Executive	Yes	10.12.13 (telephone)

Table 6 - Interview participants - thirteen 157 Group members participated in the interviews, accounting for 81% of the sample.

Interview schedule

The interviews were conducted in two rounds; the first ten interviews were held May - July 2013, and the remaining six were conducted October - December 2013. All interviewees were provided (by email) with a project information sheet prior to the interview, a copy of which can be found in appendix one, reiterating the information provided in the initial research invitation. Before commencing the interviews, which generally took no longer than one hour, participants were asked to read through and sign on approval a participant consent form. The researcher also signed this form with each party retaining a copy for their records. The researcher explained that this form was for the protection of both parties, and that the participants' responses would

remain confidential. The researcher also explained the purpose of using a recording device, and that only the researcher would be accessing and transcribing the interview recordings.

As denoted in table 6, participants have been given a respondent number in order to assure confidentiality. However, the number of institutional members of the 157 Group is restricted to approximately thirty members; therefore confidentiality for thirteen of the participants is confined to being a member of a group rather than anonymity within the sector. This was made explicit when inviting participation and reiterated on the participant consent form.

With the exception of two interviews that were held over the telephone, the remaining fourteen interviews were conducted in a face-to-face setting at each participant's college. On each occasion, the interviews began with the researcher reminding the participant of the purpose of the research, and assuring them that there was no right or wrong answer to each of the questions. Time management during the interview was critical as in most cases the participant had meetings to attend immediately following the interview; only after conducting the first few interviews did the researcher learn that a maximum time limit of five minutes per question should be heeded in order for each of the questions to be answered. Time management was therefore introduced as the process evolved, rather than planned for prior to the first interview.

Twelve questions were developed in accordance with the three core themes explored within the research questions: perceptions of sustainability as a concept, perceptions of leadership and power for sustainability, and perceptions of sustainability in practice.

As previously stated, this study reflects the approach taken by Wright (2010) and Wright and Wilton (2012) who explore senior HE stakeholders' conceptualisations of sustainability, by using interviews in which participants were asked seven questions relating to sustainable development and sustainable universities. These questions (denoted in table 7) were adapted to an FE context and included within a wider set of interview questions (denoted in table 8) designed to explore in greater detail the three core themes under examination. As stated by Gray (2009), designing questions that focus on the research objectives as well as building rapport in order to explore participant's responses further are other ways that rigour can be introduced throughout the interview process.

Within the theme of power, participants whose college belonged to the 157 Group were asked a question regarding the leadership of the 157 Group, and if they perceived it to have a sustainability leadership role within the wider FE sector. Those participants who did not belong to the 157 Group were asked instead if they believe sustainability needs to be led within the sector, and whom that leader might be.

The purpose of these questions was to explore if there was a difference between how participants viewed their role as individual leaders, and as a member of a leadership group, and, if non-157 Group members perceived the 157 Group to have a leadership role for sustainability.

- 1 What key issues are facing this university over the next ten years?
- 2 When you hear the term sustainable development, what does this mean to you?
- 3 What role, if any, do you feel universities in general should play in achieving sustainability?
- 4 When you hear the term “sustainable university”, what does this mean to you?
- 5 What, if any, barriers do you see preventing your university engaging in sustainability initiatives?
- 6 Do you foresee different barriers and challenges in the future?
- 7 What factors do you think would drive your university to make becoming a leader in sustainability your top priority?

Table 7 - Interview questions asked by Wright (2010) and Wright and Wilton (2012)

- 1 What key issues face your College in the next five to ten years?
- 2 When you hear the term sustainable development, what does this mean to you?
- 3 When you hear the term sustainable college, what does this mean to you?
 - a. Does this differ to the present day?
- 4 What role, if any, do you feel colleges should play in encouraging sustainability within the education sector?
- 5 For 157 Group participants only: what role if any do you feel the 157 Group should play in encouraging sustainability within the FE sector?
- 6 For non-157 Group participants: do you feel that sustainability within the sector needs to be encouraged, and if so, by whom?
- 7 What are the ideal characteristics of an organisation or group that would be effective in encouraging sustainability within the sector?
- 8 What, if any, barriers do you see preventing your college from engaging in sustainability initiatives?
 - a. How could these be overcome?
- 9 Do you foresee different barriers and challenges emerging in the future?
- 10 What would make becoming a model of sustainability a top priority for your college?
- 11 By which methods do you think that sustainability is best implemented within an organisation?
- 12 Do you have any examples of how your organisation is implementing sustainability that you wish to share?

Table 8 - Interview questions asked within this study

3.2.1.2 Focus groups

The aim of conducting focus groups was to gather information from middle to lower tiers of management within colleges in order to identify their perceptions of sustainability, power for sustainability leadership, and what they perceive demonstrates sustainability in practice within their institutions. The subsequent purpose of this was to identify if perceptions of these issues differed depending on hierarchical position within the college; do senior leaders of colleges have a different perception of sustainability, its leadership and practice to those working in lower ranks? It was felt that in order to fulfil the research objectives, further exploration of the key themes of perception, power and practice was required in order to enrich the data and provide concurrent or converse perspectives to those offered by college senior leaders.

Advantages and disadvantages of focus groups

Used in applied social research, focus groups have many advantages and disadvantages according to Robson (2002) and Gray (2009), the most relevant of which to this study are listed below:

Advantages:

- Focus groups can raise awareness of the research topic, and engage participants who otherwise hold cynicism or hostility towards the research topic
- A relatively inexpensive, flexible and efficient method of collecting a large amount of qualitative data
- Are able to reveal consistent or conflicting views within what the group considers the most important topics
- Can be an enjoyable experience for the participants
- Empower participants to offer comments in their own words, as well as being stimulated by thoughts and comments of others in the group.
- Focus groups are more inclusive than questionnaires or surveys, and contributions can be encouraged from people who may not normally contribute or have the opportunity to contribute to surveys.

Disadvantages:

- To ensure equal participant contribution, only a small number of questions should be asked, typically fewer than ten within one hour.

- Considerable expertise is required to facilitate focus groups, particularly in order to ensure equal contribution of participants, and to avoid group dominance, conflict, and biased or extreme views
- Participants may feel reluctant to contribute due to confidentiality issues within the group
- The results reflect the views of the group participants only and must not be generalised or assumed to represent the views of the wider college population or sector

How each of these disadvantages was overcome by the researcher are discussed in detail in chapter 3.2.3.3.

The approach, sample and design of focus groups

The sampling frame for focus group participation was initially limited to members of a consortium of colleges, based within the same county as the researcher's own college. The researcher considered this appropriate in order to mitigate some of the administrative issues surrounding the arrangement of interviews that were mostly much further afield. As the arrangement and participation of focus groups was dependent on more people, the researcher felt that professional links with each of these local colleges would ease access and enable the researcher and host college to secure or re-schedule arrangements if necessary.

Ideally focus groups would have been conducted in the same colleges that had participated in interviews, however, due to the inherent complexities of arranging interviews with unknown senior members of staff and their administrators, the researcher felt that to ask for a further hour of the college's time involving a greater number of staff would have been unsuccessful, or may have even precluded some colleges from interview participation. Only in one case was a focus group conducted in a college that had also participated in an interview; this college was the researcher's employer at the time, and the researcher felt comfortable in asking colleagues to participate in the focus group. The limitations associated with the different sampling of each group are discussed in chapter 3.2.3.3.

The researcher invited participation by telephoning or emailing contacts within five of the seven consortium's colleges. Following initial discussions, contacts were emailed with a more formal research invitation stating the purpose of the focus groups, and

that participation was ideally sought from a range of business support and academic staff within each institution. All five initial contacts agreed to participate, but two eventually declined as a result of staffing changes. The researcher's preferred sample size was ideally six colleges, and over the course of six months in 2013 the researcher invited several other colleges within the wider region to participate. Two further colleges agreed to participate therefore five colleges in total participated in individual focus groups. One of the five colleges that took part in the focus groups also participated in the interviews therefore twenty individual colleges took part in these stages of research.

	Academic	Business support	Total
Focus group 1	3	6	9
Focus group 2	0	6	6
Focus group 3	0	7	7
Focus group 4	3	7	10
Focus group 5	3	5	8

Table 9 - Mix of participants within each focus group

Though the researcher requested for a range of business support and academic staff, participants were mostly made up of business support staff consisting of managers of estates and facilities and their operational staff, and some academic middle managers, as seen in table 9. One explanation given was that the teaching commitments of academic staff meant they were less flexible during working hours than business support staff; other feedback stated it was the perception of academic staff that sustainability was more relevant to their operational colleagues. The mix of participants desired was not achieved which therefore impacted on the heterogeneity of the group, however, though there were several participants who held the same positions within their colleges, and all participants were employed within colleges at the time, most participants held different positions and had come from different professional backgrounds. In some cases, participants gave examples of methods or procedures used by their previous employer and compared them (positively and negatively) to methods used by their current employer.

Focus group schedules

The focus groups were conducted at each participating college and were held November 2013 – April 2014. Before commencing the focus groups, which generally took no longer than one hour, participants were handed a consent form, which, along with the use of a recording device was explained verbally. Participants were asked to sign their forms before the focus groups began. The researcher signed each form with each party retaining a copy for their records.

At the start of each focus group, the researcher reminded the room of the purpose of the research, assuring participants that there was no right or wrong answer to each of the questions. As each focus group had at least six participants, the researcher stated that it was important that when responding, participants did not speak over each other. The researcher also stated that it was not compulsory for each participant to respond to each question, and that if it became evident all responses had been given, the questions would move on. It was also stated that a maximum of ten minutes ideally should be allowed for answering each question.

Having learned much about time keeping during the interview process, the researcher found it easier to keep to time by moving onto the next question when a natural gap in conversation became available. If one did not become available, the researcher politely signalled to the person speaking that the focus group needed to progress.

1	What is the first thing you think of when you hear the word sustainability?
2	Can you think of an organisation that behaves in a sustainable way? a. Can you reflect on what information your perception is based upon?
3	What are your thoughts on sustainability as a priority for this college?
4	Can you discuss in what ways you believe the college contributes to sustainability?
5	What barriers do you see preventing the college from engaging with sustainability?
6	What are your thoughts on how the college could be more sustainable?

Table 10 - Questions asked during each focus group

The questions asked during each focus group (denoted in table 10) were largely based on those asked during interviews, exploring the themes of perception, power and practice of sustainability. However, questions 2) and 2a) were asked in order to build upon question 1) by further investigating perceptions of sustainability, what constitutes sustainable behaviour and how participants became aware of such behaviours. Though answers to these questions could potentially deviate from the primary purpose of

answering the study's research objectives, the questions did not preclude participants using a college or colleges within their answers. The use (or not) of colleges within these answers would act as supplementary evidence to subsequent questions. These slightly broader questions were also informed by the potential role the education sector has in being a sustainability leader, as discussed within chapters 2.2 and 2.3, therefore if participants did not offer examples of colleges or universities as organisations that behave sustainably and all answers pertained to sectors, organisations or industries outside the education sector, this could indicate a perception issue regarding the role of education and its perceived contribution to sustainable development.

3.2.1.3 Content analysis

The aim of conducting content analysis of college websites and sector based sustainability publications was to investigate the key characteristics of publicly available information displayed by colleges or made available on their websites, and the information available to colleges on sustainability provided by the organisations tasked with leading the sector because as stated by Scott and Gough (2004: 243), "universities' websites represent the view they want the world to have of them".

As discussed in chapter 4.4 and demonstrated within appendix four, sector sustainability targets set by BIS, the LSC and LSIS have become redundant without succession, and there is a continued absence of sustainability declarations (such as those available to HE) available to or participation expected of FE organisations. Therefore the purpose of this exercise is to determine if and how colleges publicly communicate sustainability, and if the key characteristics of such communication reflect the sustainability approach indicated by participants of focus groups and interviews. Though discussing HE, Scott and Gough (2004) state that sectors do not operate independently of what is happening, or what is possible across the sector within individual institutions. Therefore, what is happening within individual institutions affects, and is affected by what is taking place across the sector. The purpose of analysing websites and sector publications is to determine the nature and presence of patterns regarding a college's communication of sustainability, and if this is reflective of a wider management approach taken by the sector.

The rationale and methods used by this study have taken inspiration from Selby et al (2009), who gathered and analysed the content of websites, online prospectuses, and

marketing materials to corroborate and augment information and themes derived from the other methods of data collection such as interviews and focus groups. It also drew inspiration from Karatzoglou (2013) who performed content analysis of selected peer-reviewed journal articles in order to identify conceptual patterns within existing research, and Scott and Gough (2004), who conducted a brief survey of 18 UK universities' websites for the key characteristics attached to search terms 'sustainable development' and 'sustainability', which were sought by using the websites internal search engines.

The advantages and disadvantages of content analysis

Content analysis is an unobtrusive and cost effective method of data analysis allowing the researcher to 'observe' without being 'observed' (Babbie, 1992; Robson, 2002; Gray, 2009). Essentially it involves the researcher inferring meaning from textual data by identifying its characteristics (Gray, 2009) such as counting and comparing key words or content (Hsieh and Shannon, 2005), and is particularly useful for the further development of a concept that may have been identified through other analytical approaches (Lindkvist, 1981). While this is a key strength, it also compounds an inherent limitation of content analysis, (and also this study as a whole) whereby "researchers may approach the data with an informed but, nonetheless, strong bias. Hence, researchers might be more likely to find evidence that is supportive rather than non-supportive of a theory" (Hsieh and Shannon, 2005: 1283).

The reliability of content analysis is assisted greatly when the analysed content is in a permanent form and can be subject to a repeat analysis (Robson, 2002); in this study, the majority of online material being analysed using this method will be subject to periodic review and is therefore not permanent, however other data sources such as the published AoC material are in a permanent form, though no longer publicly available. A further disadvantage of content analysis, particularly summative content analysis is the potential for the broader meanings of the data being lost as a result of honing in on the use of specific words (Hsieh and Shannon, 2005); while this could be countered by the researcher checking the meaning of the content with its author, it would present a challenge in this study as the content is anonymously published, and its verification would be reliant on the staff member responsible being available or willing to comment.

How the researcher attempted to overcome each of these issues is discussed in chapter 3.2.3.4.

The sampling of information

The websites of the twenty colleges that participated in this study's interviews and focus groups were analysed for common themes on the communication of sustainability.

Websites belonging to the 157 Group and the government's sponsoring departments of the FE sector – The Department for Education (DfE), The Department for Business, Innovation and Skills (BIS), The Education Funding Agency (EFA), The Skills Funding Agency (SFA), and the Education Training Foundation (ETF) were searched. In addition to the existing AoC sustainability webpage which was also searched, key themes contained within three printed copies of AoC guidance documents published in 2007 – 2008 but that are no longer available on the AoC website were also examined. Though no longer publicly available, these documents were available for scrutiny as a result of the researcher's professional experience, having previously referred to them for professional use.

In total, twenty-six individual websites and relevant documents contained therein, and three sector-based publications were examined within this phase of research. This research was carried out subsequent to the interviews and focus groups to ensure that the researcher did not have preconceptions of the college's sustainability approach (except in the small number of cases where the college was already known to the researcher) based on the results of content analysis.

The collection of information

The analysis of interviews and focus groups followed a Grounded Theory (GT) inductive process that allowed themes to emerge from the data as it was analysed. Content analysis on the other hand is deductive in nature, where coding criteria must be defined before data is analysed and is often derived from theoretical models (Flick, 2006). To combat restrictions to inductive coding that pre-coding presents, a summative content analysis approach was used in this study. Summative analysis, as denoted by table 11, is both inductive and deductive allowing for the derivation of codes from data as analysis progresses, as well as those identified beforehand informed by literature (Hsieh and Shannon, 2005). The keywords identified and used for the analysis of websites and documents are described in combination with the analysis process in chapter 3.2.2.5.

Type of content analysis	Study starts with	Timing of defining codes or keywords	Sources of codes or keywords
Conventional content analysis	Observation	Codes are defined during data analysis	Codes are derived from data
Directed content analysis	Theory	Codes are defined before and during data analysis	Codes are derived from theory or relevant research findings
Summative content analysis	Keywords	Keywords are identified before and during data analysis	Keywords are derived from interest of researchers or review of literature

Table 11 - Major coding differences among three approaches to content analysis (adapted from Hsieh and Shannon, 2005: 1286).

A summative approach is also an unobtrusive method of studying the phenomenon of interest and provides insight into how words are used (Babbie, 1992). Summative analysis identifies particular words or content of text for the purposes of understanding its contextual use (Hsieh and Shannon, 2005); in this study, website information is analysed to identify common themes of how colleges and other FE stakeholders communicate sustainability. On the one hand, it is difficult to unpick the biases and assess causal relationships introduced by using the selected website and document content because they have been written for purposes unrelated to this study (Robson, 2002; Gray, 2009); however because the content (or absence of) is a reflection of the

phenomena being investigated, its latent properties are equally as important to the analysis as the manifest items – i.e. where manifest items are physically present (such as a particular word), and latent content is inferred or deduced by interpretation only (Robson, 2002; Hsieh and Shannon, 2005). This further justifies the use of a summative analysis process, which allows for deduced and inductive coding.

The researcher's professional experience of the sector assisted greatly in the location and navigation of all websites examined as many colleges follow similar patterns when sharing information on their websites. Having visited all websites for professional purposes or interest, the researcher was able to locate information much more quickly, or could make contact with the relevant person in order to request signposting to the information if publicly available.

Using the search criteria

Where a search function existed, websites were searched using the terms 'sustainability', 'sustainable development', or 'environment' or 'environmental'. All four search terms were used for each website to ensure accuracy and data saturation; in some cases, using the search term 'sustainability' did not yield any results, however the search term 'environment' or 'environmental' did. Since not all websites had an internal search function, a manual search of likely sub-pages, such as corporate information pages, 'About us' sections, or annual and strategic reports were conducted. As the study progressed, the researcher determined that to ensure completeness, these 'likely' sub-pages and annual/ strategic reports contained within all websites should be investigated irrespectively of the success of using search terms. In a very small number of cases, this yielded some information when using search terms had not.

Each individual search item generated from the initial search was followed for further scrutiny and analysis of common themes. In many of the individual colleges' cases, searches led to either a separate 'sustainability webpage', containing relevant documents such as Green Travel Plans, environmental policy statements, and in a small number of cases, annual sustainability reports.

All other organisational websites were searched using the same method as individual colleges. Each of these had an internal search function and in DfE's case, many thousands of search items were generated, which in the vast majority of cases referred

to items containing the literal use of the term 'sustainability' - for example, 'An analysis of the sustainability of the public finances'. Search items were filtered according to those government departments with stewardship of FE, namely BIS, the EFA and SFA, though these individual websites were in their own right examined.

Once the location of website information had been noted, to assist analysis, all website material was compiled through copying and pasting into a separate MS word document. Similarly, relevant documents embedded within the examined websites were downloaded and printed off in order to assist the analysis process.

The limitations presented by using such search terms are detailed in chapter 3.2.3.4.

3.2.2 Data analysis methods: the analysis of interview and focus group data

This sub-chapter introduces Grounded Theory (GT) as this study's research methodology, providing an explanation of how it has been applied to the analysis of interview and focus group data. The chapter begins with an introduction of GT, its two main schools of thought and how theoretical sensitivity was applied in this study. Its application to the analysis of interview and focus group data is then discussed in detail. A subsidiary qualitative analysis method, content analysis, was used as a deductive methodology to examine the information more formally presented on college websites and sector publications that are not known of beyond the sector. The application of this different analysis method is explained in detail at the end of the chapter.

3.2.2.1 Grounded theory

Grounded Theory is a commonly used qualitative, inductive and flexible research approach, heavily influenced by symbolic interactionism and interpretivism, that seeks to develop theoretical ideas based on the emergence of themes or phenomena arising from empirical data, rather than using data to verify a pre-existing hypothesis (Robrecht, 1995; Crotty, 1998; Robson, 2002; Walker and Myrick, 2006; Wasserman et al, 2009; Gray, 2009). It is suitable as a methodological framework if the aim of the study is to learn about individuals' perceptions, and rather than simply using the data to describe what is happening, it can be used to understand the process by which it is happening. In this respect, it is particularly useful when applied to social problems or situations to which people must adapt (Corbin and Strauss, 2008). As already discussed, nothing more urgently requires humans to adapt their behaviours, culture and values than sustainable development, however, before the sector's propensity or willingness

to change can be investigated, this study is seeking first to understand the conceptualisations of sustainability held by those responsible for leading the sector.

Founded by Anselm Strauss and Barney Glaser in the 1960's, GT integrates the depth and richness provided by qualitative data and the logical, rigorous and systematic analytical process favoured by quantitative disciplines (Walker and Myrick, 2006). It is being used as the principal design for this study's methodology, which as defined by Crotty (1998:3) is: "the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes". A methodology also reflects the researcher's ontological and epistemological assumptions (Grix, 2002); GT has clear resonance with the constructivist and interpretive philosophies upon which this study is founded.

Grounded theory identifies themes contained within the data that are used to generate an overarching theory. Locating the central theory held within the data is achieved through the use of theoretical coding. As described by Walker and Myrick (2006: 549), coding is "an iterative, inductive, yet reductive process that organises data, from which the researcher can then construct themes, essences, descriptions and theories". During data analysis, key themes contained within the data, for example, interview transcripts, are highlighted by codes which are constantly compared against each other and distilled into a smaller number of abstract categories which "weave the fractured story back together again" (Walker and Myrick, 2006: 556) to form the basis of a theory (Pidgeon and Henwood, 1996; Robson, 2002). Rather than a formal theory, which is more abstract for the application to a wider range of problems, Charmaz (2006) states that most grounded theories are substantive theories as they focus on particular problems in a specific, substantive area. Indeed, it is the intention of this study to form a substantive theory based on the perceptions of sustainability by FE leadership.

Glaserian or Straussian?

How the coding process is carried out depends on whether the researcher uses a Glaserian or Straussian approach. Glaser advocates the use of two sub-phases of coding- substantive and theoretical- where substantive coding involves open coding and selective coding which together use constant comparison process to produce categories and their properties (Walker and Myrick, 2006). The subsequent theoretical coding phase is the conceptual process of linking substantive codes to produce a theory.

Strauss on the other hand favours a three-phase approach using open, axial and selective coding, a method which some believe to be too constrictive as it places emphasis on looking for data, rather than looking at the data itself (Robrecht, 1995).

While Straussian GT is more suited to constructivist ontology (Charmaz, 2006), the analysis process itself is less intuitive than the Glaserian substantive coding process, yet despite this, the Glaserian process is more embedded within a positivist paradigm believing that theory should be built entirely from observation, seeking out the objective truth within the data without any preconceived ideas or theories held by the researcher. As stated by Glaser, GT is removed from routine perceptions or perception of others “since there is always a perception of a perception” (Glaser, 2002: 6).

Whether using a Glaserian or Straussian method however, the coding and categorising are still in the hands of the individual researcher (Wasserman et al, 2009), therefore while analysis should commence without prior assumptions of what the data may hold, all GT theorists will embark on the study with a theoretical position and knowledge of the area under scrutiny (Gray, 2009). With this in mind, the researcher’s prior experience and knowledge of the sector were embraced for use within the construction of theory, rather than trying to ignore or forget what was already known. While this is more resonant with Strauss’ iteration who states that it is likely or should even be expected that the researcher will focus on different aspects of the data depending on their background, beliefs and values (Charmaz, 2006), this study followed a Glaserian coding technique but from an interpretivist standpoint. This relates the GT methodology used to the study’s theoretical perspective of symbolic interactionism, and the dual role performed by the researcher and research participants to construct the data. Not only will the researcher and research participants have held interpretations of sustainability based on their experience of the topic, but also these may have been subsequently revised due to their participation in this research, potentially leading to some unexpected research outcomes.

3.2.2.2 Theoretical sensitivity

The challenge of working with qualitative data is to organise and reduce the multiple meanings implicit within the words and language used by the research participant (Walker and Myrick, 2006). This is central to maintaining 'theoretical sensitivity', which is the researchers' ability to generate and relate to concepts emerging from the data (Glaser, 2002), and to be mindful of subtleties of meaning, separating those that are relevant from those that are not (Strauss and Corbin, 1998).

While Glaser and Strauss agree on the importance of theoretical sensitivity, they differ in how this is achieved. Glaser believes simply that complete immersion in the data is the only method by which the data can 'speak', whereas within the Straussian method, the researcher is required to step back from the data and its analysis, and to ask questions of the data and consider its relevance to the emerging picture (Walker and Myrick, 2006; Gray, 2009). Another method of assisting theoretical sensitivity is to iteratively collect and analysis of data out of sequence, which can then guide further data collection until thematic saturation is reached (Wasserman et al, 2009). Due to the restrictions surrounding the collection of interview and focus group data, this study followed a more rigid approach whereby the majority of empirical data was collected before formal analysis began. However there was sufficient time within interview and focus group schedules to allow some reflection of the questions asked and to allow the researcher to begin constructing memos based on initial thoughts as they transpired. After completing the analysis of interviews and focus groups, the initial sampling of the secondary data to be analysed was altered based on the emergence of analytical themes. For example, the researcher felt it was also relevant to examine the location of sustainability data held on college websites as well as the specific content. This was based on the emergence of a common conception of sustainability being an agenda mainly suited to operational roles within the college. As well as the analytical process itself, theoretical sensitivity was sought by using further methods as summarised by Gray (2009: 512):

- "The literature, which helps highlight issues and what might be important and unimportant
- The professional experience of the researcher, showing what is important in the field of the research chosen, and how things work, allowing events to be more clearly understood and interpreted

- Personal experience, including experience in research, which can facilitate the making of comparisons”.

Like any research methodology, the use of GT has limitations, notably its complexity and the time involved in the memo writing and coding processes. Though software such as NViVO is available to help with data sorting and analysis process, after trialling its use early on in data analysis, the researcher felt that more time would be taken in becoming familiar with the software that could be better utilised within a manual analysis technique. This was greatly assisted by the fact the researcher had transcribed each of the interview and focus group transcripts herself, during which a memo-writing process was established. A candid reflection on the limitations surrounding the researcher’s practitioner experience of the sector is provided in chapter 3.2.3.2, however it is appropriate to also note that this experience may have exacerbated criticisms of GT being an unfavourably subjective process, heavily dependent on the researcher’s discerning ability to conceptualise, as opposed to simply describing, emergent themes (Glaser, 2002:3). Other common criticisms of GT include, but are not limited to, the flexibility of the method being used within studies that lack methodological rigour (Bryant, 2002), and inaccurately labelling a methodology as GT when in fact, other methodologies such as ethnography have been used (Stern, 1994). How GT and the rigour of this methodology were applied to the analysis of this study is detailed in the next chapter.

3.2.2.3 The application of Grounded Theory: data analysis of interviews and focus groups

Though the data analysis process should be well defined, starting with a basic description, evolving into conceptual ordering and then theorising (Patton, 2002), Strauss and Corbin stated, “Sometimes one has to use common sense and not get caught up in worrying about what is the right or wrong way. The important thing is to trust oneself and the process” (Strauss and Corbin, 1998: 295). This was indeed the approach used by this study whereby analysis began simply by reading and re-reading interview and focus group transcripts (which were transcribed by the researcher) and sector publications. To achieve familiarity and complete immersion in the data to the point where patterns were beginning to emerge, a Glaserian analytical process was followed as denoted in figure 8. Each stage of this process will now be explained in greater detail.

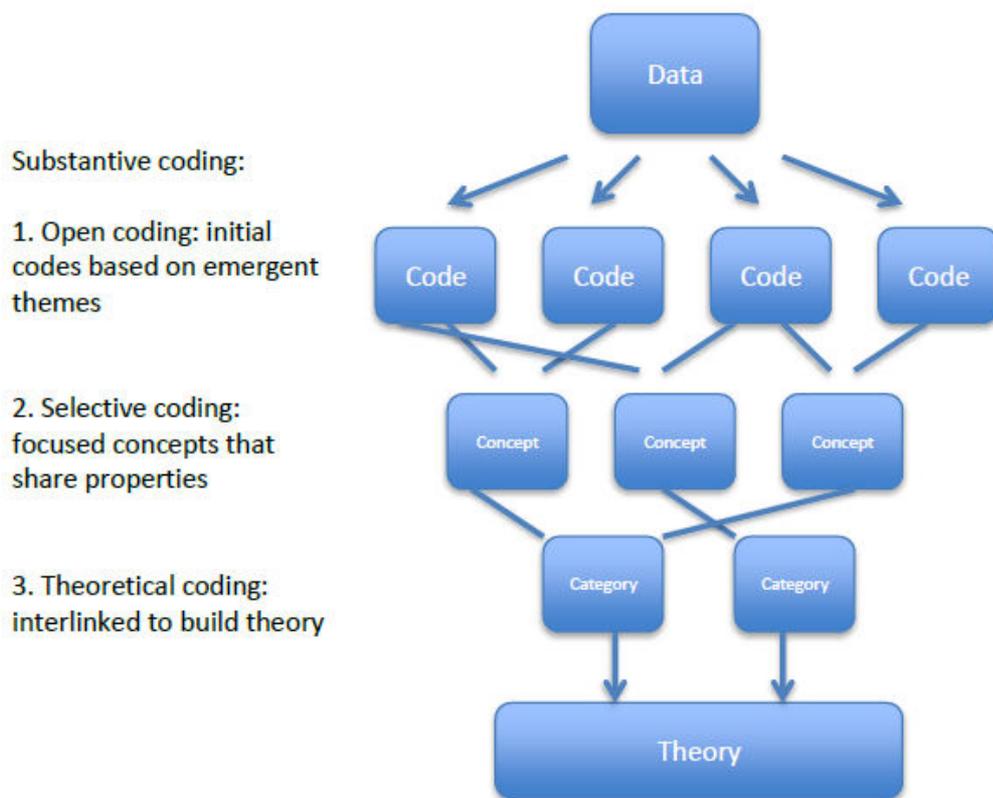


Figure 8 - Diagrammatic representation of the Glaserian coding process used within this study, as described by Glaser, 2002 and Walker and Myrick, 2006.

Step 1 – Open coding

The purpose of open coding is to disaggregate the data into smaller units to identify initial themes or concepts important to the research participant, and not formulated based on the pre-conceived ideas of the researcher (Robson, 2002; Walker and Myrick, 2006; Gray, 2009). Glaser (2002) advocates a line-by-line scrutiny of the (interview) data and attachment of conceptual labels, based on the research participants' own words, also known as an 'in vivo' code. It is important that coding generates the abstract concepts contained within the data rather than it just being a method by which to extensively describe the properties of a category (Glaser, 2002; Charmaz, 2006); in other words, "grounded theory should not describe the whole unit [of data], just a core process within it" (Glaser, 2002: 9).

To assist with the navigation of the analysis itself, Gray (2009) suggests that the data is asked a consistent set of questions, keeping in mind the original objectives of the research, though to be prepared for unanticipated results or theoretical positions to emerge. Keeping a theoretical account through the use of memos is also an important part of the Glaserian analysis process as ideas, new perspectives or emergent concepts may develop rapidly and could quickly be forgotten (Walker and Myrick, 2006; Gray, 2009; Wasserman et al, 2009). Keeping memos and being clear about the purpose of the research was how the researcher attempted to overcome the difficulty that can be associated with the analysis of open questions as mentioned earlier by Robson (2002). Closed questions with 'yes' or 'no' answers may have been more appropriate for studies examining sustainability within sectors or organisations who had a clearer or more well researched attitude towards sustainability. Though the terminology itself is open to interpretation and therefore asking open questions could have exacerbated interpretational issues, it was felt a more appropriate strategy to take in order to understand how the term is conceptualised within an under researched sector.

Memos were used throughout the substantive coding process within this study. This process began with the researcher manually transcribing interview and focus group recordings in order to become familiar with the data. This assisted and informed the subsequent analysis procedure whereby interview and focus group data were analysed with pen and paper, without the aid of computer software such as NViVO. Interview responses were analysed several months ahead of focus group transcripts.

Following the Glaserian coding method, the open coding analysis of transcripts began using a line-by-line process where common words and phrases were highlighted as they appeared. This line-by-line examination of individual and grouped transcripts was assisted by the use of memos, diagrams and a quantitative analysis record using MS Excel, as denoted by figures 9 and 10. Additional notes were made alongside many responses where an initial reflection of the response as a whole, pertinent links with related literature, and prompts for further analysis were felt necessary to be highlighted. This method was used for both interviews and focus group transcripts, however in the case of the latter, different participant's responses were kept separate from one another to ensure that potentially different perspectives were clearly defined to avoid analysis confusion.

Step 2 - Selective coding

The next stage of substantive coding is the comparison of the similarities and differences of recurring incidents to produce a core category that links them all together; this was carried out for every in-vivo code until it was clear that conceptual saturation had been reached. Through theoretical coding, the resultant smaller number selective codes representing the main narrative held by the data should be united into the highest conceptual level to form a substantive theory (Glaser, 2002). Open coding and selective coding analysis were carried out for each individual interview transcript, however to provide a different analysis perspective, particularly as the purpose of the study was to examine the common perception of sustainability held by FE leaders, individual interview transcripts were then segregated into new documents specific to each interview question. For interviews, this resulted in thirteen separate documents (taking into account sub-question 8a); for focus groups, this resulted in seven separate documents, (taking into account sub-question 2a). For both the initial and secondary transcript groupings, individual participant responses were broken down into smaller parts, typically a paragraph long, depending on the overall length of the response. Most responses were up to half a page long; however there were a small number of cases where responses were only a sentence long, and in other cases, up to two pages long. The analysis process for focus groups was essentially the same whereby each focus group transcript was read through as a whole, before answers to each question were segregated into individual documents for an alternative analysis perspective.

As selective coding progressed, the researcher compiled and added detail and further thoughts alongside a preliminary corresponding open code in a separate handwritten

memo document for each question. Acting as analysis aids, the frequency of commonly used words and terms were quantitatively recorded in a spreadsheet, and relationship diagrams between emerging selective codes were hand drawn and edited as the analysis unfolded, but neither were used in the final analysis or discussion.

Representing step two denoted by figure 10, memos, diagrams and quantitative analysis assisted with the selective coding process, which grouped open codes that shared properties into a fewer number of focused codes. These were then typed into an individual account for each transcript and question. Each individual account was distilled into key categories relating to the themes interrogated by the research questions, namely perceptions of terminology, perceptions of power and perceptions of practice. This distilled account formed the basis of step three as shown in figure 11, whereby a detailed theoretical account of the notable results to emerge from interviews and focus groups was developed. These results are discussed at length in chapter 4, and their relevance to the conceptual framework and literature is discussed in detail in chapter 5.

4. Results

The following section reports on the analysis of the data and is listed by question in the order that they were asked during the interview process. The major themes that were revealed from analysing the interviews are shown and frequency of responses is based on the number of participants involved in the study (N = 16).

4.1 Question 1: what are the key challenges or issues facing your college in the next five to ten years?

In response to this question, most frequently cited were concerns of funding and finance, notably sector funding cuts by government, the financial pressures relating to reduced capital grants and property re-development, the on-going financial solvency of the college or, as one participant described, "the sustainability of the business". Though respondents stated their concerns surrounding funding reductions, some also described positively the opportunities that this presents as colleges seek to diversify into different markets to increase business resilience. Competition with other local education providers in an increasingly open market was cited as another issue but reinforced the college's incentive to diversify into alternative streams of funding, often sought locally through partnerships with industry, employers and 'Local Enterprise Partnerships' (LEP's). This indicates a strong link between finance and the second most common theme, 'local external forces'.

Respondents described the importance and dual purpose of relationships with local government, local industry, and local employers for developing business links, which informs colleges of the needs of employers, local skills shortages, in turn influencing the college's curriculum provision (and associated marketing) with the expectation of attracting student enrolments and therefore financial income. In some cases however, local external forces are perceived to present a financial risk to colleges if local government and local business through the LEP's were to bypass colleges and forge direct links to determine the supply and demand of local vocational education needs:

"there's the increasing profile of the local enterprise partnership, potential that we will no longer be delivering apprenticeships, and no longer have the funding directly for apprentices..."

When discussing curriculum, longer term strategy statements such as "educating in a context fit for the future", were explained concurrently with the necessity to have a flexible or short term 'product' or curriculum offer fit for meeting changing industrial needs:

"becoming more financially viable; we've got to pay for this building. And increasing our student numbers, becoming more focussed on the needs of employers and just kind of, keep evolving ourselves for the future".

"We're about to start on site with a new build, and we've designed that specifically to have space that's flexible...[to changing demands]"

Local external forces and college funding and finance are therefore inherently linked to the development and quality of college curriculum or 'product' offer, which itself is a key determinant of the least cited theme of 'reputation'. As one respondent stated:

"...because that [Ofsted] grade determines [which] bids we can apply for, pots of money, projects, all of it, and working with employers. So clearly a major focus is to turn around that quality and improvement grade so that we can continue to develop our curriculum, and our bids, and our broader role within the community".

External influences and sector trends strongly influence the physical parameters of a college's curriculum delivery. Most notably respondents described the need for technological improvements and classroom innovation for future teaching and learning, particularly online and distance learning. As one respondent noted:

"I think there's a big issue around technology and keeping abreast of the latest technological developments and incorporating them into teaching and learning because if we don't, the students will, and we're going to get left behind aren't we?"

Discussions of technological innovation often led onto the need to simultaneously reduce the size of the college estate, as well as to invest in more energy and cost-efficient buildings. It is only within this theme of 'physical presence' where specific references were made to sustainability, but exclusively using terms that related to energy consumption and efficiency:

"We will take on board issues of energy efficiency and sustainability, again, in so far as we're able, so main goals are to get the estate as efficient as possible".

Reputation, local external forces and income diversification due to funding pressures link also to concerns of 'uncertainty' and the national position of colleges. Specifically, the issues and implications of perceived reactive government policy and priority changes, and an inconsistent approach towards colleges (particularly tuition fees) are as a result of what one respondent considered being an issue of identity:

"As long as people in power keep asking 'what is it colleges do?' 'How important is it?' we're going to be in a bad place I think".

"I don't believe there will be consistency but I think that consistency of approach is absolutely critical even if it seems to be a negative... I think having consistent negativity is better than having it flitting from one to the other".

Uncertainty also impacts on the internal culture of a college, typically through funding and its effect on what, how, where and to whom a college delivers its curriculum. The college's internal culture is therefore vulnerable to external forces, but is relied upon to deliver the changes required. Several respondents noted the importance for it's workforce to adapt to the changes taking place within the sector but equally, that the internal culture may need to change so that college's can deliver curriculum demands and to the standard required. This therefore links a college's internal culture to its reputation and therefore financial opportunities:

"If we've got a right strategy in place, structure follows strategy, so we should have the right people in place and then financial should follow".

Responses suggest that a college's workforce and internal culture as well as it's reputation have the most direct impact on it's students, or 'customers':

"The second big issue for me is about focussing on having the right people and workforce skills organisationally to meet our aspiration in terms of what we want to do".

Other than the internally focussed issue of 'adding value to the learner experience', discussions surrounding students focussed on the external dynamics of the direction of government funding, business and industry trends, and the resultant supply and demand of enrolments to particular curriculum areas. Though some respondents described competition from other providers as an issue, the perceived risk is to some facets of the college student intake (such as apprenticeships, HE or international students), not the role of colleges as a whole, or the supply of students:

"Well they [colleges] actually have customers who are called students, so we'll always have students, for the next 10 years we'll have students, and our job with students will be the same".

The dominant issue within the theme of curriculum was surrounding the local cohort of students, their employment upon leaving college and their resulting contribution to the local economy. This therefore links curriculum with reputation; by supplying the local labour market, colleges are able to demonstrate their social and economic contribution thereby positively impacting on the local reputation and perception of the college.

Headline theme	Number of institutions
Funding and finance	14
Local external forces	13
Curriculum	11
Uncertainty	8
Physical presence	8
Student focus	7
Internal culture	5
Reputation	4

4.1.2 Conclusion

Is FE addressing sustainable development?

Though this question did not refer specifically to sustainability, answers suggest that FE leaders do not perceive sustainability as an issue explicitly or implicitly over a strategic time frame.

When considering the mid to long-term issues facing colleges, leaders describe issues that refer indirectly to sustainability but within the social and financial facets of sustaining the college as a business only. Explicit references to sustainability were limited to examples of eco-efficiency, described as part of the overall solution to reducing costs and achieving financial sustainability.

A disconnect is also emerging within the use of the sustainability discourse, for example, referring to sustainability and energy efficiency, and differentiating sustainability as a business term from the wider notion of 'sustainability' which was displaced from the main narrative.

What is the relationship between perceptions of sustainable development and practice by FE leadership?

Though examples of practice are not asked for specifically in this question, those mentioned are typically eco-efficiency related but implicitly reflect a social bias where internal culture and external community links are considered important for the long term sustainability of the college.

What is the perceived power distribution by FE leaders?

When discussing the purpose and paradigm of colleges, a conflict emerged between colleges seeking financial autonomy, but looking to government and other external forces to determine what the sector's purpose is. This suggests the distribution of power is located at a landscape level and perhaps reflective of a lack of confidence to seize power and control more locally.

In conclusion, perceptions of uncertainty and financial concerns are the most significant issues for FE leaders over a mid- to long-term time frame. This may exacerbate perceptions of the relevance of sustainability as both themes are products of and perpetuate short term, reactive tendencies.

Figure 11 – An example of an individual account where open codes were distilled into selective codes, subsequently informing the theoretical coding process.

3.2.2.4 The analysis of college websites and publications

The analysis of websites and publications followed a method of content analysis rather than Grounded Theory, which rather than letting the data 'speak' instead asked very specific questions of the data. This method advocated by Robson (2002), relies upon the researcher having a specific set of criteria or indicators against which categories within the data will be organised.

These criteria against which each of the twenty college websites and relevant content were searched are as follows:

Manifest items:

- What information is publicly available?
- Is there a separate webpage/ website? Or is it included as part of other website information?
- How accessible is this from the website home page?
- The properties of such information;
 - Its location
 - The amount of information
 - Does a specific staff member endorse the information, and if so, what is their role?
 - Are policies or operational documents dated and signed?
 - Were links to further information provided and active?

Latent information:

- What are the main themes present in the data?
- What is the first piece of information used, and does it relate to internal or external activities?
- What college facet does the information relate to, for example, does it focus on curriculum or operational matters, or both equally?
- What is the nature of the information relating to curriculum and operational initiatives?
- What is the nature of language used regarding initiatives – is it suggestive of a long or short-term project, or does it state specifically the length of the project?

- How the information could be summarised: does it address economic, social and environmental sustainability?

As the first stage of searching for 'manifest' items, each of the twenty college websites was explored for usage of the search terms – 'sustainability', 'sustainable development', 'environment', and 'environmental'.

Links to returned search items were then followed, with the location and number of 'clicks' from the homepage counted. This was felt relevant as an emergent theme from conducting interviews and focus groups suggested that sustainability and its communication was the responsibility of operational roles, such as Estates and Facilities functions. It was also felt appropriate that the ease of access to returned search items was recorded as many senior leaders had expressed that sustainability was a college priority along with other 'initiatives' such as equality and diversity and health and safety. Websites were therefore searched to corroborate such statements.

Recording the location of sustainability information allowed inferences to be made as to the implied ownership and perceived importance of sustainability, for example, does it sit within a curriculum or operational webpage? Were there direct and easily navigated links to sustainability information highlighted on the website homepage? As a comparison, the ease of access to other issues cited as important to the college such as equality and diversity and health and safety, were also recorded. Ease of access of information was recorded by counting the number of 'clicks' required to access sustainability information (where it existed), from the website homepage. Only the qualitative inference of this information contributed to the analysis and subsequent discussion chapters. How this information was initially recorded can be seen in appendix five.

The next stage of analysis returned to the nature of information, and whether the college had provided a dedicated means to communicate sustainability, either through a separate webpage within the website, or a separate website linked from the college website. In those cases where sustainability information formed part of other communications, such as through annual reports, or corporate information pages, results were recorded as 'nothing dedicated'. The availability of information was recorded as one of the following categories: 'nothing dedicated', 'dedicated webpage', 'dedicated website', 'policy documents only', 'nothing publicly available'.

Further properties of this information were then analysed, including the amount of information (does it amount to paragraphs and external website links, or was there a large amount of written information), and if the information was endorsed by a member of staff (and what their role was, if specified). Other properties such as whether policy documents were signed and dated were felt relevant to record, as its perceived importance could be inferred depending on the results. I.e. if a policy document was not signed, this could denote that nobody was held accountable to its implementation. If signed but undated, this could imply that the policy was not subject to periodic reviews. If signed, dated and with a review date, this conversely would imply that its implementation was being actively managed.

External or internal links to other webpages on the college website where provided, were also checked to determine if the links were still active, as well as the nature of information being linked to. If links were broken or inactive, this could suggest that the webpage or information was not regularly checked or maintained. The analysis of latent properties was informed by sustainability within higher education literature (such as the difference between and relevance of education for, and education about sustainability) and the researcher's professional experience of sector terminology, which could be used to identify the further analysis of categories. For example, the vocational or academic nature of curriculum areas as well as a foundational knowledge of each area's curriculum content, or the predisposition of initiatives towards either an academic or business support area.

Reflecting the broader purpose of the study, it was not the object of the analysis to gauge success; rather, the study's purpose was to identify the properties and characteristics of common themes used by colleges to communicate their sustainability approach. Supporting the use of the TMF as the study's conceptual framework, these would then be dovetailed into the broader conceptual themes to emerge from interviews and focus, therefore contributing to the 'mapping' of the sector's management approach towards sustainability.

Where dedicated information regarding sustainability existed, its latent properties were analysed firstly by recording the theme of the headline piece of information used, i.e. what information was used to set the tone, for example, was it carbon based or specifically refer to the environment? The internal or external (or equally both) focus of communications was then recorded. For example, an external focus of the college's

role to the community, or its students to global sustainability issues, may suggest an understanding of the college's social responsibility to sustainable development. If information focussed on internal measures taken by the college as a contribution to sustainability, this may be suggestive of sustainability being viewed more operationally. These views would then be subsequently altered if necessary as further latent properties emerged, for example, did a college begin by discussing external matters, but later gave only examples of internally focussed operational initiatives? The converse situation may also apply.

Information was then analysed like interview and focus group transcripts using a grounded method to determine the focus of the information and examples (where given), and to which area of the college they applied. Data was analysed against three categories – perceptions of sustainability, the key themes to emerge from the body of text, and if the text explicitly or implicitly stated where the power or responsibility for sustainability within the institution fell. This, as demonstrated in appendix five, was conducted for each of the study's participating college websites.

If websites discussed mainly recycling initiatives, or the procurement of local products and food sources, this would suggest an operational focus or, that the college chose only to communicate operational initiatives. This in itself could be suggestive of how the college perceives sustainability, or what the college perceives to be the most relevant or important initiatives to share with the general public. In cases where there was not any dedicated information, but links to courses were provided, links were followed to understand the nature of the sustainability curriculum being offered. For example, was it a dedicated course or did sustainability form part of a module within an existing course? The common themes to emerge from all identified examples were summarised and recorded to corroborate (or not), the evidence to emerge from interviews and focus groups where participants specifically discussed examples of sustainability practice.

The nature of the language used in all examples was analysed to infer if examples of sustainable practice were at planning or implementation stage. For example, does the language used suggest that actions had been undertaken (if so, is there reported progress?) or are actions at planning stage only? Additionally, website information was analysed to determine if responsibility for sustainability initiatives was specified, and if so, what was the position or positions of responsible staff members. Though this was

not of central importance to the purpose of the analysis, to determine whether or not a college was choosing to communicate what it proposes to do, rather than what it has actually done, or if it was communicating only what it has done, with or without detail on proposed further actions could be reflective of the college's overall management approach to sustainability. For example, if a college chose to report initiatives already in implementation, this could be suggestive of someone with assigned responsibility of sustainability. If a college chose to instead communicate what it intends to do, this may indicate a pre-operational management approach to sustainability, leading to the question of what would provoke a transition to active management.

Forming the final stage of analysis was the summation of the information presented. Does it reference examples of economic, social and environmental sustainability, and if not all three, to which facet of sustainability was information more heavily biased? In those cases where no dedicated information for sustainability communication existed, but websites did provide links to course descriptions which included sustainability, this would have summarised according to earlier identified properties. In all of these cases specifically, sustainability was inferred through an environmental sustainability perspective only, with particular focus on teaching students about eco-efficiency within construction and built environment curriculum areas.

3.2.2.5 The analysis of landscape documents and websites

Websites and a sample of publications belonging to the 157 Group, the DfE, BIS, SFA, EFA, ETF, and the AoC were analysed using the same method as the college websites where manifest and latent properties of the information presented were examined. However, because much of the information generated by the website search results related to the literal use of the word sustainability, the researcher, using tacit knowledge, had to exercise discretion in order to filter out those search results that were clearly irrelevant for further analysis. The remaining suitable search items were then analysed against the same manifest and latent items listed below:

Manifest items:

- What information is publicly available?
 - Is there a separate webpage/ website? Or is it included as part of other website information?
- How accessible is this from the website home page?
- The properties of such information;

- Its location
- The amount of information
- Does the information specify responsibility for sustainability, both within the department and individual colleges?
- Were links to further information provided and active?

Latent information:

- What are the main themes present in the data?
 - What is the first piece of information used, and does it relate to internal or external activities?
 - What college facet does the information relate to?
 - What is the nature of language used regarding sustainability initiatives?
 - How the information could be summarised: does it address economic, social and environmental sustainability?

In addition to the organisational websites listed above, the latent and manifest properties of all publicly available annual reports belonging to the SFA as well as three printed copies of AoC guidance documents published in 2007 – 2008 were also examined. Though the AoC publications were no longer publicly available, these documents were available for scrutiny as a result of the researcher's professional experience, having previously referred to them for professional use. As the principal membership organisation for the sector and the primary distributor of guidance to the sector, their analysis was felt still to be a relevant contribution to the study as their content could potentially explain or reflect the key themes to emerge from interviews and focus groups. What could not be explained, and is a limitation of this analysis, is whether the guidance issued was in response to demand from the sector on what the sector believed to be pertinent sustainability issues, or vice-versa.

Manifest and latent information gathered from organisational websites and publications was then sorted into a table form – as seen in appendix four – that organised the data by project/ webpage title, the overview of the information, how many college participants if specified, whether that project or website had links with other sector sustainability projects or publications, and what its key messages were. This last category was determined using the same, grounded method that was used to analyse focus group, interview transcripts and college websites. This process when conducted for the information presented on organisational websites and publications such as the SFA annual reports was not particularly onerous due to the lack of, or

minimal information presented. In these instances, it was the absence of information or only the literal use of sustainability that were the most telling and common of research findings.

Sector publications on sustainability were however numerous and the key messages analysed from each in some cases corroborated with, and in other cases challenged the key themes to emerge from interviews and focus groups. This is discussed in detail in chapter 4.3.

3.2.3 The limitations of data collection procedures

This sub-chapter provides a detailed account of the limitations identified by the researcher, concerning the researcher and the research process. Firstly, an account of the limitations associated with the collection of interview data as well as the personal impact the researcher may have had on this process is provided. This pattern is repeated for the account of limitations surrounding focus group and secondary data collection, before the sub-chapter concludes with an overall reflection of the research process and general analytical issues surrounding the sustainability discourse.

3.2.3.1 Limitations relating to interview data collection

Interviews as a method of qualitative data collection offer several advantages, and inevitably some disadvantages, as discussed by Robson (2002) and Gray (2009):

Advantages

- A more direct method of obtaining answers to research questions
- Provide a rich, highly personalised, data source
- Allows the researcher to probe further into responses, investigate motives and follow up non-verbal cues

Disadvantages

- A lack of standardisation raises reliability and quality issues
- Risk of researcher bias
- Time consuming to organise, conduct, and transcribe

Conducting interviews offers the researcher freedom and discretion to choose the sequence and exact wording of the questions asked depending on the interview's conditions (i.e. if a question has already been answered in response to a previous question) (Robson, 2002). However, bias through the 'interviewer effect' can come into play if questions are not asked in the same way, where emphasis or tone of voice may

change the nuance of the question (Gray, 2009). 'Interviewer effect' is one way in which researcher bias can occur within qualitative interviews. As stated by Gray (2009: 377), there are a number of ways in which this bias occurs:

- "Departures from the interviewing instructions
- Poor maintenance of rapport with the respondent
- Careless prompting
- Biased probes
- Asking questions out of sequence
- Biased recording of verbatim answers" (Gray, 2009: 377).

To overcome these disadvantages and also the disadvantages associated with asking open questions within interviews, the researcher followed the same protocol throughout each interview asking questions within the same sequence. If interviewees answered subsequent questions before they were asked, the researcher upon reaching this question would simply ask the participant if they had anything else to add to their previous statements. Questions five and six were asked depending on the interviewee's membership of the 157 Group, therefore only a small percentage of interviewees were asked question six (denoted in table 12), reflecting that the majority of participants' colleges belonged to the 157 Group. The researcher was able to build enough rapport with each of the candidates so that (although with trepidation at first) the researcher could indicate when the interview needed to move on.

The researcher was extremely aware of the risk of careless prompting and using biased probes to explore participant's responses further. Though this required careful balancing to ensure rapport could be still be developed, the researcher kept prompts to a minimum; within interviews prompts were not often required anyway as participants talked openly and freely in answer to each of the questions. Prompting was needed within some focus groups where answers were less forthcoming, but this seemed to be as a result of group dynamics and shyness rather than uncertainty of the topic itself. Where further probing was required in interviews and focus groups, the researcher referred back to the skills developed during a small amount of teaching experience which helped to ensure leading questions or questions that would satisfy the researcher's professional agenda were not asked. Indeed, the researcher was well aware of the risk of the connotations of also being a sustainability practitioner within the sector, therefore at the start of each interview and focus group the researcher

reiterated clearly that to all intents and purposes, their professional role should remain irrelevant to the participant's responses.

Interview question	Response rate (%)
1	100
2	100
3	94
4	81
5	68
6	25
7	68
8	100
9	43
10	94
11	81
12	68

Table 12 - Breakdown of those questions asked within interviews. A low response rate denotes where the question was not asked, rather than refusal to respond.

Telephone interviews were conducted twice in this study due to the geographical distance involved for one participant, and the time constraints for another participant. In both instances, the interviewees were emailed a project information sheet and participant consent form prior to the interview. Before questioning commenced, the researcher verbally explained the purpose of the consent form, and requested that if the interviewee was satisfied, that they sign, scan and return the consent form to the researcher electronically. In both cases this procedure was completed. The researcher also explained that the telephone interview was being conducted privately, and in order to record the interview, the telephone was on loudspeaker function. In both cases, the interviewees stated that they understood and were comfortable with this. As stated by Robson (2002), telephone interviews can be just as advantageous as face-to-face interviews and are less susceptible to the 'interviewer effect'; however they can pose difficulties to building rapport between the interviewer and interviewee. It was the researcher's experience that telephone interviews were conducted more promptly and with no detriment to building rapport, however due to the variable quality of telephone signal, the researcher found it more difficult in places to transcribe both recordings.

3.2.3.2 Inherent limitations relating to the researcher

It is appropriate within GT studies for the researcher to critically reflect on their influence on the research process (Gray, 2009), and in this study's case, especially important to discuss the limitations relating to the researcher, due to the researcher's previous experience and proximity to the sector while the study's data was being collected¹.

There are several researcher-based limitations that are relevant to this study, which will be discussed in more detail subsequently and relate to both the conduct of interviews and focus groups.

- “The inherent biases of the researcher regarding data collection, analysis and interpretation
- The effects of the researcher on the study participants
- The effects of the study participants on the researcher” (Onwuegbuzie et al, 2008: 3)

The inherent biases of the researcher

Undoubtedly the researcher's experience of the sector was beneficial for the identification of the academic research gap, which subsequently led to the development of this as a research project. The researcher's proximity to and reputation amongst senior staff members and peers during employment was also beneficial in securing project endorsement and therefore access to other senior members of staff within other colleges who were invited to participate. Access to senior sector stakeholders and the researcher's knowledge of the sector are therefore perceived to be key strengths derived from the researcher's professional experience and status within the sector.

While knowledge of the sector was of significant benefit for the conception and progression of the study, the researcher's tacit knowledge also presents some limitations that have become apparent throughout some aspects of data collection but more notably, the data analysis process.

¹ The researcher left sector employment shortly after completing the data collection process.

Data analysis limitations – tacit knowledge

Tacit knowledge, or tacit skills, are often taken for granted and refer to a person's unarticulated contextual understanding of a specific situation or context, for example, skills or knowledge that are acquired through professional experience (Ambrosini and Bowman, 2001). During interviews and focus groups, tacit knowledge in some cases led the researcher taking for granted the implicit meaning of some of the terminology or phraseology used by participants. Consequently, the researcher, for the purposes of data recordings or analysis did not invite participants to explain their response in layman's terms; therefore, it is expected that some tacit knowledge is embedded within the analysis of data, which would not have occurred without the researcher's professional experience.

While the possession of tacit knowledge acted as a key motive for deciding that the project was worthy of investigation, it also alludes to the researcher's professional perception of the sector's understanding and progress of sustainability. This therefore acted as a motive in itself for the choice of research participants for both the interviews and focus groups. Regarding the former, the 157 Group was chosen for its leadership credentials within the sector, which the researcher considered important for investigating the true state of sector leader's understandings of sustainability. When choosing colleges to participate in focus groups, the researcher chose colleges with whom the researcher had well-established professional links that were useful in securing the necessary commitment for participation. Additionally, colleges were chosen based on the view of the researcher that they would provide a balanced perspective, rather than for example, choosing colleges that may have had similar 'positive' or 'negative' approaches to sustainability.

In order to maintain integrity, only one participant (typically the person with whom the researcher had a professional connection, and had organised the focus group to take place within their college) within each focus group was aware of the researcher's professional awareness of some of the sustainability activities taking place within each college. Therefore other participants within the focus groups were able to speak candidly in answer to each question without taking the researcher's tacit knowledge for granted. The approach taken in each focus group is explained in greater detail subsequently.

Tacit knowledge could also be perceived to add further strength to the research, when for example, the researcher assessed academic literature for similarities between HE and FE. Without tacit knowledge, the differences and similarities may not have been as forthcoming or obvious and therefore one may have assumed that all sectors within the UK education system were subject to the same phenomena. As one example, the issues surrounding the use of the word 'initiative' as discussed in chapter 2.2.1, have been experienced first-hand by the researcher as a sustainability practitioner. However, this again reflects an inherent bias as this is based on the researcher's perception that sustainability should be managed as a process and not as part of a process or initiative.

Finally, tacit knowledge proved to be both a strength and weakness for the identification of documents suitable for analysis as the third source of this study's data. Without tacit knowledge, a researcher would have found it more challenging to know which sector stakeholders were likely to publicise information on sustainability, and where within websites the information would be likely found. Tacit knowledge also made the navigation of college websites easier as the researcher knew that colleges followed similar information sharing patterns; the researcher was also aware that the perception of sustainability reflected the location and manner in which it was publicly communicated. Evidently, both could be construed as a reflection of the researcher's bias and that a researcher without previous experience of the sector could not take such patterns of communication for granted and could uncover additional relevant information. This researcher's efforts to circumnavigate any website or publication 'blind spots' are discussed in more detail in chapter 3.2.3.4.

Data analysis limitations – multiple interpretations

It is important to note that the researcher's professional experience will have inevitably led to some inherent biases when interpreting the study's data. While it is the study's intention to seek out the perceptions and interpretations held by FE leaders of sustainability, it is highly probable that the researchers' professional experience will have led to a potentially different research outcome compared with someone employed within a different role within the sector, or without any experience of the sector.

The interpretational issues are therefore three-fold:

- 1) To use interpretations as the “medium of analysis” (Hay, 2011: 168) is to base research outcomes on interpreting interpretations
- 2) This is compounded within this study as the research outcomes are based on interpreting interpretations of an inherently ambiguous term
- 3) Interpreting the data itself will have been based on the researcher’s own interpretations, and if analysed by someone within a different role, or external to the sector, could have been interpreted differently

The use of the TMF as a conceptual framework assisted the researcher in navigating some of the interpretational issues presented by providing a structure against which dominant themes to emerge from investigating perceptions could be verified. For example, interpretations and perceptions that pertained to short-term projects or spoke of sustainability as something that augments (rather than challenges) existing practices would reveal an operational focus by the sectors management. Within the TMF, this has neither positive nor negative connotations, as it is a reflection of a management approach, not a measure of progress, based on the perceptions of a small number of stakeholders. The impact of interpretational issues to the study’s conclusions may have therefore had more bearing if the study was intending to determine sustainability progress.

Data collection - the researcher: participant effect

As stated by Onwuegbuzie et al (2008:6), “the interpretive researcher must reflect upon how the researcher may have affected the participants”. It is this researcher’s belief that the data collected during interviews and focus groups will have been subject to many reactions, not least to the topic itself. Although the terms sustainability and sustainable development are ambiguous and open to many interpretations, they have been communicated within the FE sector largely within the confines of eco-efficiency or environmental projects. It is the researcher’s belief that this could have reinforced media-based stereotypical projections of what sustainability means and represents. This was considered within the design of the interview and focus group questions, where participants were asked to describe their interpretations of sustainability, which as the interview and focus groups progressed, evidently evolved beyond the parameters of their initial interpretation.

The presence of the researcher it is believed, will have led to reactivity for the following reasons:

- Gender and age: the researcher believes that being young and female may have reinforced perceptions held by the research participants who were in most cases more senior males, of a sustainability professional. This may have initially led to participants providing appeasing or controversial responses as a result of their perception of the researcher, and topic. One participant described how they were sorry for the opinion they were about to give regarding “tree huggers” in response to one of the questions asked. The researcher’s age and gender it is believed, also played a role in gaining access to research participants where the researcher had been informed that participants wanted to “help out” because the researcher was of their daughter’s age. In other cases, participants stated their participation was because they were interested to know more about the research topic.
- Internal/ external status: though the researcher has had significant professional experience working with a diverse hierarchical range of colleagues, there is a possibility that the perceptions of some participants of someone conducting a PhD may have impacted on the candidates’ manner, and how candid they felt their responses could be. On several occasions, participants (within interviews and focus groups) made comments referencing their uncertainty of the subject, and that the researcher probably knew more about it than them.

Being known to one interviewee and to a small number of focus group participants may have also affected the manner and openness of responses compared to those participants to whom the researcher was unknown. The internal role of the researcher as a sustainability practitioner may have also led to known participants providing appeasing responses, viewing the researcher as a colleague instead of an impartial researcher. In this instance the researcher reiterated that the purpose of the research was not to necessarily focus on what the college may have already done or ‘celebrate’ the work of the researcher as a practitioner, but to explore and perhaps challenge existing perceptions of sustainability and what might the college be better placed to do in its future sustainability endeavours, and what barriers might need to be overcome in order to achieve this. Participants appeared satisfied with this explanation and only in a small number of cases was the researcher’s name and work mentioned – typically in reference to the barriers that were evident in introducing more sustainable practices.

Data collection - the participant: researcher effect

The effects of research participants on the researcher are far fewer than in the converse situation.

During the first few interviews, the hierarchical position of the research participants did have an effect on the researcher that was revealed through nervousness and hesitation when asking further probing questions. The participants' status also made the researcher nervous to ensure that time keeping was upheld in order to make time to ask all of the questions. On several occasions, this meant that the researcher had to politely interrupt the interviewee if it was felt their response had gone off-topic or was reiterating earlier points.

The hierarchical position of the researcher, combined with age and gender may have led to some interviewees or focus group participants believing that they could condescend the researcher either explicitly through off-topic remarks, or implicitly by talking over the researcher, talking amongst colleagues instead of to the researcher, which also impacted on the quality of the recording and others wishing to participate, or, by ignoring the researcher's time-keeping requests.

Data collection - the institutional: research effect

As previously stated, colleges that participated in focus groups were chosen by the researcher as they belonged to a local consortium of colleges with which the researcher had professional experience, and which therefore simplified and eased travel and access arrangements. In contrast to the colleges belonging to the 157 Group (with one exception), the colleges that took part in focus groups were generally much smaller and were perceived by the researcher to be subject to different positive and negative institutional factors (such as the size of their stakeholder cohort, funding constraints, and institutional flexibility or autonomy).

157 Group members were initially targeted to participate in interviews as the researcher believed that the quasi-leadership role performed by the group, along with their similar institutional parameters (namely, they are all extremely large colleges – see chapter 1), would be appropriate to provide a more representative 'picture' of the state and attitude towards sustainability leadership within the sector. After conducting interviews and focus groups (whose participants came from in most cases much smaller colleges), the size of the college was found to have little consequence on how

the interview and focus group questions were answered. The difference was found instead to be senior leader's propensity to use the more literal understanding of the term sustainability, which may be indicative of the more direct relationship 157 Group colleges have with the government, and therefore may be more prone to adopting the trending government discourse. The urban location of most 157 Group colleges may also lead to different organisational characteristics and language trends compared with smaller, more rural or perhaps specialised colleges. Large urban colleges may have different or more popular curriculum areas that in turn have led to the forging of relationships with more numerous or larger private firms, thus impacting on the college's priority areas.

Given that only 20 colleges participated in the research altogether representing only 44% of the 157 Group's membership, arguably the data sample neither represented the 157 Group nor the sector. With this in mind, were this study to be repeated, the researcher would endeavour to utilise a more diverse range of colleges, chosen not by institutional size, but on perception of sustainability approach – perhaps based on the achievement of awards, or presence (or not) of publicly available sustainability information, or perhaps just a random sample irrespective of the college's publicly facing sustainability approach.

A further and unavoidable weakness of this study echoes a point made by Shriberg (2002) and Beltran-Kadji et al (2013) who state that to assess characteristics of an organisation using the input from the most senior decision makers is not only difficult, but can be misleading, especially when examining the role of leadership. In response, and for the purposes of data enrichment, this study sought alternative stakeholder views of the role of leaders (with regard to sustainability) by conducting focus groups with lower-middle management. However, the most substantial data set is formed from interviews conducted with the most senior leaders of each college and therefore has the greatest contribution to the study's research findings. Given the widely cited importance of leadership commitment required for the validation of an organisation's commitment to sustainability, and the lack of knowledge held about the sector and its perceptions of sustainability, it was felt most useful to examine senior leaders perceptions as a starting point in researching the FE sector.

Further studies with perhaps a greater number of researchers would be better positioned to explore the perceptions of other FE stakeholders, namely students,

awarding bodies, employers and the FE inspectorate – Ofsted – which in this case were omitted in favour of a more direct lineage of management, with senior leaders and focus groups representing the niche level, sector representative groups representing the regime level, and the government’s sponsoring departments as representatives of the landscape level.

The most notable of limitations surrounding the choice of stakeholders at a regime and landscape level is that they generally represent college’s business support areas, rather than the academic interests that awarding bodies and curriculum regulators preside. However, while each of examined stakeholder’s websites and documents may have an overall bias towards business support, their role does not explicitly exclude academic engagement or representation, rather their approach to academic engagement is for the purposes of overall business support – i.e. are colleges providing the most appropriate education to suit economic and government needs?

3.2.3.3 Limitations relating to focus group data collection

The limitations surrounding the inherent bias of the researcher, the researcher: participant effect, the participant: researcher effect and the institution: researcher effect previously discussed are all relevant and transferable limitations to the focus group process. There is an additional limitation regarding the colleges that the researcher intended to invite to participate in focus groups, compared with the colleges who subsequently participated. The intention was to invite colleges who had had their senior leaders participate in the interview process so that the views of their staff could be compared to the views of the senior leader. However, due to the time and distance involved in travelling to many of the colleges, and the complication of not having a less-senior point of contact to correspond with to organise focus groups, the researcher felt it would be more reliable to approach colleges within a local proximity with whom she had existing professional relationships. Only one of the colleges that had participated in an interview also participated in a focus group.

It is difficult to assess if and how this sampling issue may have affected the results; on the one hand, results suggest that senior leaders have largely consistent views with regards to the themes being investigated through the study’s research questions. Therefore, it would not be inaccurate to speculate that the senior leaders of those colleges who participated in focus groups would have held similar views to their peers. This study’s focus group results are also largely consistent with one another therefore it is also likely that similar themes and perspectives will have emerged from groups

whose senior leader had participated in an interview. However as stated earlier, the focus group's results are representative only of the group itself, a different mix of participants under different conditions, or asking different questions may well have led to very different result outcomes. This 'generalising' disadvantage associated with focus groups specifically may also be applicable to the study as a whole; can the views of a minority reflect those of the majority? This cannot be assumed, and therefore it is worth reiterating that the purpose of this study is to glean a snapshot of the management approach taken by a small group of colleges and hopefully inspires further research in this unknown area.

What is also difficult to understand is if the results and dynamics demonstrated by the samples that contributed to the study would have been different or similar to results, had focus group and interview participants been from the same institution? Were this study to be repeated, it would be beneficial to target interview and focus group participants from the same college.

Specific limitations regarding the focus group process and how the researcher attempted to overcome these issues are as follows:

- The researcher's point of contact for the organisation of each focus group was also known to the researcher professionally: focus group one was conducted within the researcher's employing college and therefore participants were colleagues of the researcher. To mitigate any assumptions made by the focus group participants of the researcher's tacit knowledge, the researcher stated that her role within the focus groups was as a researcher and university student, and not as a peer or colleague on behalf of their employer. Therefore, the participants were asked to answer questions assuming that the researcher had no previous knowledge of the college or its approach to sustainability. This appeared to be well received and understood by the participants, and only in a small number of cases did the researcher have to ask participants for clarification or further explanation of their response.
- Many participants stated that they enjoyed the experience, however in one focus group where there was a conflict in opinion some participants appeared to be annoyed and frustrated. The researcher tried to allay tension by stating that it was acceptable for participants to have different opinions, and that it provided an equally valid contribution to the research.

- Though the researcher had some teaching experience that provided foundation knowledge of the skills required to ensure group command and discipline, the challenges associated with the researcher's lack of specific experience were revealed through time keeping issues, and equal group participation. Despite the encouragement of the researcher and keeping focus group questions to a minimum, two participants within focus group three did not make a contribution. During focus group two, time keeping was initially an issue due to the dominance of one focus group participant. To combat this, the researcher used rapport with the participant to ask them to allow others to participate, and reminded the group that a maximum of ten minutes should be given to answering each question.

3.2.3.4 Limitations relating to secondary data collection

Many of the limitations experienced within focus groups and interviews were related to the interaction with research participants; however because the analysis of website and publication documentation was conducted as a desk study independently by the researcher, there are far fewer interaction based limitations surrounding this data collection process. Nevertheless the main limitation presented by this data collection method was the not insubstantial issue of embedded bias and reliability – both of the search terms used to identify the data, and the researcher's ability to analyse the data using a reliable and unbiased method (as previously indicated in chapter 3.2.1.3).

When sampling the information to analyse, website searches were made only for results that referred to the search terms which may have precluded website content or embedded documents that referred to sustainability implicitly, but using different terminology. This presented an inherent limitation as using such terms with an environmental bias could in fact have returned results that only indicate a lack of environmental engagement. In other words, environmental sustainability is only one facet of sustainable development, and therefore should not be synonymous with sustainability itself. However, indications to come from conducting interviews and focus groups led the researcher to believe that this indeed how the participants perceived sustainability, and therefore whilst it is not the only way in which it can be defined, it is one of two ways that the sector appears to define it. However, to introduce greater rigour into the process and equal coverage of each college and sector organisation website, strategy documents and annual reports where available were examined to determine if, for example, a strong organisational commitment to sustainability was articulated within an organisations' annual report, and its absence on the website was therefore not necessarily representative of the organisations'

approach. Indeed, it was kept in mind that sustainability might simply have been poorly communicated on publicly facing websites (as opposed to internally accessed intranets) because of website's typical focus on the perceived needs and expectations of prospective students. Conversely, college websites like university websites must ultimately "represent the view they want the world to have of them" (Scott and Gough, 2004: 243); therefore this reasoning rather than an excuse may be further evidence of how sustainability is perceived.

It is relevant to note that these limitations did not become apparent until the data analysis stage; though the researcher was intuitively aware of the terminology issues presented by the sustainability discourse, it did not occur to the researcher that these would be played out within the data collected, particularly during interviews. The purpose of providing information prior to interviews and focus groups was to indicate the purpose and parameters of the research. Nevertheless, despite interviewees interchangeably using different definitions of sustainability, these language-based indicators were still needed in order to fulfil the research objective. Indeed, whilst the choice of indicators resulted in unanticipated limitations, it has provided an additional and valuable contribution to the study's research.

Another limitation in the data access itself was that only a small number of publications (but all SFA annual reports) were examined representing a sample of a number of sustainability documents developed *for* FE colleges specifically by other organisations and consultants (many of whom were external to the sector) as well as those developed for FE and HE, available on the websites of other sector stakeholders such as HEFCE and sector membership bodies such as the EAUC. However, as the primary purpose of this exercise was to examine how colleges and FE funding bodies communicate sustainability it was deemed appropriate to limit online searches to those organisations with the most direct relevance to the study and relationship with FE only. Were this study repeated, the collection of data from a wider population of colleges – either all 157 Group members, or all UK FE colleges – and organisations, including the EAUC, HEFCE, awarding bodies and the sector's inspecting organisation 'Ofsted' would be recommended to ensure more accurate representation of the sector as a whole.

Returning to how data was accessed, this statement made by Scott and Gough (2004:243) "one needs to be extremely cautious about the degree of significance

attached to a limited survey of a small sample of this kind, particularly when the results depend in great degree upon the workings of each university's internal search engine", is relevant to this study as some of the college websites did not have an internal search function. To circumnavigate this, the researcher manually searched corporate information pages as well as online prospectuses and curriculum webpages to locate possible sources of sustainability information. Only in a small number of cases after manual searches were conducted was information deemed unavailable, however this does not necessarily represent the colleges approach to sustainability. These colleges may have chosen to limit such information to college staff and students only through internal communication streams. Indeed, even in the majority of cases where information was located, there may have been much more available through such means that the researcher could not access.

Though it could be suggested that the researcher should have made contact with each college to request the disclosure of information, this a) may not have been successful, and b) would rely on the person asked/ referred to, and their interpretation of what sustainability information meant, or they felt was relevant. This is also pertinent to the researcher and the search terms chosen, which were limited to four iterations of what the researcher believes to constitute sustainability terminology. As stated by Karatzoglou (2013:46) "content analysis cannot elude the author's subjective comprehension and explanation of certain findings and patterns", and Scott and Gough, (2004: 244) "there are dangers in being over-prescriptive about what counts as sustainable development".

As a counter argument to this, though search terms encompassing all of those used for example by Lozano et al (2013), which included references to sustainability within curriculum, research, operations, outreach, collaboration, assessment and reporting, transdisciplinarity, institutional framework would be valid and more representative of all facets of sustainable development, the researcher believes that they are more indicative of a search to determine progress, and would therefore assume that progress was being made within FE (not to mention that research does not apply to FE). Instead, and as explained in earlier chapters, the purpose of this study was to identify a more rudimentary 'is sustainability even being talked about?' approach, not assuming that progress was being made.

3.2.3.5 Limitations presented by the choice of conceptual framework

Transition management theory has been developed using distinct timescales that are reflective of those represented by significant societal transitions. For the purposes of this study however, these time scales have had to be adjusted and downscaled in order to reflect the nature of the sector's governance, the characteristics of which have ironically constrained the ability for the framework to consider timescales beyond five years. This presents a boundary to the application of this study's research outputs, which could only be used as a descriptive indicator of the overall sectors' management approach to sustainability, and not for the prescriptive application of the framework to induce a systemised transition unless the framework was revised – see chapter 6.

A further study boundary presented by the use of the TMF is that it is not a specific leadership framework; rather, it is a framework that focuses on influencing multiple levels of governance and their activities in order to accelerate change towards sustainability. This study can only utilise the framework as far as using its descriptive function following the examination of leadership perceptions *of* their activities to provide a rudimentary map of the sectors' overall management approach to sustainability. At this stage, it is suggested that the prescriptive function of the TMF is not appropriate for use within this sector as it is unknown whether a transition to sustainability is wanted by the sector. It is suggested that future studies examine why, in the absence of external incentives, colleges may engage with sustainability. This is a research gap identified by Shriberg (2002) who though discussing HE sustainability assessment tools, is particularly relevant to FE and could contribute to transition management literature by identifying frontrunners within the sector who could then participate in the promotion of a sector wide transition.

Though the purpose of the study was to examine the perceptions of sector leaders in positions at a landscape, regime and niche level, the data gathering time constraints limited the ability of the researcher to conduct interviews and focus groups only at a niche level. Data gathered to represent the regime and landscape levels was limited to publicly available information held online, and therefore is unable to be an accurate representation of each tier's management approach to sustainability. Additionally, the organisations selected to represent the regime management level were limited to the 157 Group and AoC. The decision to omit other significant sector stakeholders such as awarding bodies, Ofsted, the Quality Assurance Agency (QAA), the Gazelle Group, the European Regional Development Fund (ERDF) or each college's Local Enterprise Partnership (LEP) that may have greater resonance with academic staff or college

specialist areas, risked the results naturally reflecting the language used within business support areas to which many of the focus group participants and some interview participants belonged.

Though the 157 Group and AoC were chosen as FE's collective equivalent of UK HE's Russell Group drawing upon tacit knowledge that these groups are important to college senior leaders, the limitations of their specific scrutiny preclude the other stakeholders of FE that may have alternative approaches to sustainable development. However, as the purpose of this study was to examine the FE's leaders' management approach to sustainable development, with the additional considerations of data access² and the volume of data to analyse, it felt more appropriate to focus on a small number of groups that represent the interests of colleges generally, and whose membership leaders value.

Were this study to be repeated, it is suggested that the regime management level should be represented by a wider number of sector stakeholders that have a wider range of specialisms such as those that examine and direct curriculum. An ideal element of this approach would be to use the same data collection method at each management level. Though access was the primary reason for this study's varied data collection methods, interviews, focus groups and analyses of online approaches to sustainability communication at each leadership level of the sector should ideally be used in order to determine a more accurate assessment of each level's management approach to sustainability.

The specific limitations associated with the application and adaptation of the TMF is discussed in greater detail in chapter 6.2.3.

² The researcher made multiple attempts to gain access to Ofsted and the SFA but was unsuccessful.

3.3 Concluding thoughts: a reflection of the data collection and analysis processes.

This chapter has described in detail the procedures followed for each of the data source collection and analysis methods and has endeavoured to provide an exhaustive reflection of the study's limitations. The data collection and analysis processes though enjoyable were challenging to the researcher, largely as a result of the simultaneous role that had to be played as a sustainability practitioner in order to obtain access to data sources, and then as an academic when analysing the research outputs. It is inevitable that the transcription of interviews and focus group recordings were influenced by the researchers' interpretations, as transcription is itself an interpretive and constructive act (Grundy et al, 2003), however, interpretational insight and tacit knowledge of the sector also allowed the researcher to recognise and understand the implicit meaning of phrases and nuances used by research participants. Indeed, whilst being a part-time student presented a problem regarding the timeliness of this study's write-up overall, the researcher's access to interviewees and the time provided by the process allowed for greater reflection of the data's collection and analysis methods, as well as their interpretation.

Returning to the limitations presented by the chosen topic and its terminology, on the one hand, sustainability and sustainable development as explicit terms used within each of the data collection methods could have been removed, with perceptions being explored using more implicit language, therefore avoiding founding a study upon interpreting interpretations of an already ambiguous term. Indeed, the use of sustainability terminology may have prompted participants to respond using a discourse they felt resonated with sustainability leading to different responses being given than if asked peer-to-peer. To overcome issues surround different interpretations of sustainability during interviews, Littledyke et al (2013) after asking the participant their understanding of sustainability provided a working definition of sustainability to clarify the scope of the interview.

Similarly, the analysis of website and publication information were confined to interpretations of the material to emerge, which itself was implicated by the search terms used, namely 'sustainability', 'sustainable development', 'environment' and 'environmental'. These were search terms chosen by the researcher based on terms that are commonly used and recognised within the higher education community, however these terms may not be as relevant or share the same meanings within the FE sector, especially as it does not perform academic research. However, while using

explicit terms to understand the sector's perception of sustainability will inevitably result in research outputs that are confined to what the sector believes *should* be labelled as sustainability, to understand if there are additional understandings or wider perceptions that fall beyond the boundaries of those search terms used requires the ability of the researcher and their tacit knowledge of both the sector, and the sustainability discourse, which is arguably laden with as many interpretational risks as using the explicit sustainability terminology. In either case, it is recommended that studies that use tacit knowledge follow an interpretivist framework (Ambrosini and Bowman, 2001), which supports this study's use of an interpretivist epistemology, and the TMF as its conceptual framework, however it is arguable that conceptualising themes using based on specific terminology conflicts with GT as each of these themes bring pre-existing meanings.

The question must also be raised of whether the nuances of what participants believe sustainability to mean have been checked within other study's that explore perceptions, or sector based surveys or reports. For example, the AoC website (2016[a]) states that 99% of colleges have sustainability as a strategic aim. Whilst it is assumed that the statistic is in reference to what has been defined as a 'holistic' understanding of sustainability throughout this study, it is not clear either way. However, a subsequent question of does this actually matter is also raised. As later chapters will discuss, this study highlights that the issue with sustainability is one of perception and ultimately, it is actions rather than words or terminology that matter and lead to real change.

Perhaps it is inevitable that any study investigating perceptions of sustainability will encounter interpretational issues, and therefore it is the onus of the researcher to highlight such issues rather than trying to find ways in which to avoid them. Indeed, it may be more fruitful to reveal the interpretational issues that clearly still thrive within sustainability discourse, especially within a previously unexplored sector which although shares many similarities with the HE sector, has significant differences and therefore potentially a different role to play within the sustainability agenda.

Chapter 4. Results

This chapter discusses sequentially the results to emerge from interviews, focus groups and content analysis, with the structure of each sub-chapter's results corresponding with the themes explored within each research question, namely perception of sustainability as a term, perceptions of power, and perceptions of sustainability in practice. The chapter concludes with an overall summary of the results to emerge, if and how these reflect some of the key themes and theories explored within literature, and as a precursor to the broader discussion in chapter 5, what these results indicate in relation to the conceptual framework and the study's research objective.

Using a grounded theory analysis method, interview and focus group transcripts were explored individually and collectively to generate the open, selective and theoretical coding. Transcripts were therefore analysed as a whole, grouped by question category (perception, power and practice), and responses to individual questions (for example, all responses to question 8).

The theoretical codes generated from this grounded theory analytical method are denoted in table 13 and form the structure of interview and focus group results detailed in sub-chapters 4.1 – 4.2.3. Their interrelation and wider contextual relevance with existing key theories is discussed in chapter 5.

Question category	Category theoretical codes
Interviews	
Perception of definition	Interchangeable use of business continuity and eco-efficiency. Lacking confidence stifles ambition. Strategy undermined by changing policy.
Perception of power	Leadership by business continuity. Seniority and responsibility inversely related. Funding prohibits leadership. Lack of contextual relevance to FE. Vocational focus at odds with HE agenda. Power pointing to external influences.
Perception of practice	Demonstrated by eco-efficiency and product relevance. Eco-efficiency dominated by mitigation. Eco-efficiency supports business continuity. Barriers evident of cultural and terminology issues. Sustainability term and sector reputation counterproductive. Competing 'other' priorities. Distributed leadership more accessible. Senior leadership and external influences legitimise investment.
Focus Groups	
Perception of definition	More consistent than senior leaders. Eco-efficiency dominant. Operational and non-academic/ vocational participation reflects perception. Conflict between economy and environment.
Perception of power	Moral duty of colleges unsupported. Conflict between eco-efficiency and cultural engagement. Requires in-house leadership but external leadership and legislation perceived to be most important.
Perception of practice	Eco-efficiency and pedagogy. Vocational curriculum enhancer. Finance and culture the most significant barriers. Perceived as an inconvenience.

Table 13 – Theoretical codes to emerge from Grounded Theory analysis of interviews and focus groups.

4.1 Interviews

The following section presents the analysis of dominant themes revealed within interviews. Responses to each of the thirteen interview questions have been subdivided into three sub-chapters, with each sub-chapter corresponding to an overarching theme interrogated within the research questions – perception, power, and practice.

4.1.1 What is the dominant perception of sustainable development by FE leadership?

Perceptions of sustainability, sustainable development and sustainable colleges were polarised into two specific themes of business continuity and eco-efficiency. These themes were also reflected within discussions describing the key issues currently experienced by, or facing colleges in the future. For example, respondents used the term sustainability to describe financial sustainability and business continuity, stating that a sustainable college is one that achieves financial sustainability or ideally financial growth. Eco-efficiency in many cases was discussed separately to business continuity and was often referenced as evidence of a college's commitment to sustainability, however it was always cited as an important contributor to the financial sustainability of a college.

Perceptions of business continuity and sustainability

Sustainable financial growth, achieving profit and managing financial risk were commonly used terms when describing the characteristics of a sustainable college. Consequently, respondents stated the sustainability or continuation of a college was at the centre of their college's strategy, and to have a 'sustainability strategy' is necessary for a college to be sustainable. Other respondents also described the importance of having an 'environmental policy' to fulfil sustainability, or 'green', conditions attached to funding bids, typically for new building developments.

Central government sector funding cuts were described as the most significant threat to the sustainability of colleges. As a counter measure, colleges have been increasing their business resilience by diversifying into different markets, forging direct links with local employers, industry and the LEP. Competition with other local education providers in an increasingly open market was cited as an additional incentive for colleges to diversify. While respondents described positively the opportunities presented by business diversification, for a college to do this successfully relied upon its ability to adapt and be flexible to changing demands, something which respondents

believed perpetuates existing issues relating to confusion over the sector's reputation and identity that in turn, exacerbate an already inconsistent approach towards colleges by the government:

"As long as people in power keep asking 'what is it colleges do?' 'How important is it?' we're going to be in a bad place I think" (Interviewee 9, 16/07/2013).

"I don't believe there will be consistency but I think that consistency of approach is absolutely critical even if it seems to be a negative. I think having consistent negativity is better than having it flitting from one to the other" (Interviewee 11, 25/10/2013).

In order for a college to become sustainable, and, the action of a sustainable college was perceived as one that values its external relationships and sells itself to powerful stakeholders such as the LEP. Collaboration with important local or regional stakeholders were perceived as necessary to ensure colleges remain informed of changing economic and local employment conditions and are able to adapt their curriculum provision accordingly to supply the labour force in demand. By doing so, respondents felt that colleges facilitate the creation of 'sustainable jobs', and contribute to the social and economic sustainability of their communities by raising aspiration and attainment. Being financially sustainable was therefore perceived to improve a college's ability to more effectively fulfil its social responsibility, not least by continuing to 'exist', but also by linking its learners with employment opportunities based on the changeable needs of local industry. Adaptability was cited as one of the main incentives to improve college property through new 'fit for purpose', smaller, more appealing and more energy efficient developments. In one case, a new building development was specifically being designed to be more flexible so that it could cater for short-term courses and rapid changes in industrial needs:

"We're about to start on site with a new build and we've designed that specifically to have space that's flexible... [To changing demands]" (Interviewee 11, 25/10/2013).

While on the one hand, local external forces were seen by some as important for future opportunities, others believed that local external forces present a financial risk to colleges if local government and local businesses through the LEP's were to bypass colleges and forge direct links to determine the supply and demand of local vocational education needs:

“There is an increasing profile of the local enterprise partnership, potential that we will no longer be delivering apprenticeships, and no longer have the funding directly for apprenticeships” (Interviewee 8, 10/07/2013).

Therefore, the adeptness of leaders to “sell” their colleges within local business arenas was perceived as extremely important. Indeed, a respondent stated the future of the sector is dependent on the effectiveness of its leadership, and that *“more of the same [leadership] will not do” (Interviewee 14, 14/11/2013)*. While respondents stated that a college’s financial sustainability or more broadly, their future is determined by, and susceptible to external factors such as competition from the LEP and their leaders’ ability to navigate these factors, others stated that it is equally determined by internally facing factors such as the efficiency of a college’s campus and culture, which were seen to become more important in times of austerity. Participants who downplayed the risk posed by external forces made confident statements about the future of the sector such as, *“sustainability isn’t about the long term future of the organisation” (Interviewee 9, 16/07/2013)*, because colleges will continue to be required to train the country’s labour force: *“well they [colleges] actually have customers who are called students, so we’ll always have students, for the next 10 years we’ll have students, and our job with students will be the same” (Interviewee 2, 19/05/2013)*. It was these leaders that saw a leaner and more efficient business model as most important for safeguarding college’s financial sustainability and therefore feasibility as a sector, dismissing or disassociating the purpose and future of colleges from broader social issues such as sustainable development.

A college’s sustainability was cited as being integral to and interdependent with the overall health and wellbeing of its internal and external community and linked to an example of the importance of paying the living wage to all of its employees. However, sustainability as an explicit cultural and stakeholder engagement exercise was described as a ‘luxury’, that would only be considered for implementation when time and money were more abundant. Respondents stated their unease at appearing to dictate or legislate what constitutes sustainable behaviour and lifestyles, and that as a college its purpose is to educate its stakeholders so that they are able to make informed choices. It seems therefore that unlike social and economic leadership, participants felt uncertain or uneasy about a college’s role in encouraging what they perceive to be the more contentious issue of environmental leadership, or perhaps their uncertainty reflected their understanding of the cultural contention between

human and environmentally focussed decision. This disassociation from broader social issues and reluctance to encourage leadership of environmental sustainability could also be indicative of a perceived immunity from environmental change as a sector, or that the risks associated with environmental change are too distant for leaders to be concerned with now.

Other respondents stated that cultural development for sustainability would result in staff and students demonstrating inherent, but not explicitly 'sustainable', values and actions. While examples of what constituted a sustainable action were not given, sustainable values were seen as synonymous with knowledge of markets, energy efficiency and the financial bottom line. Not only were college workforces and internal culture perceived as being important for colleges to adapt to the changes taking place within the sector, it was also recognised that the nature of the workforce may need to change so that it is able to deliver the curriculum in demand and to the standard required. The college's internal culture is therefore both vulnerable to external forces, notably budget cuts and staffing efficiencies, but is relied upon to support and deliver the internal changes that result from business and income diversification:

"If we've got a right strategy in place, structure follows strategy, so we should have the right people in place and then financial should follow" (Interviewee 10, 19/07/2013).

"The second big issue for me is about focussing on having the right people and workforce skills organisationally to meet our aspiration in terms of what we want to do" (Interviewee 14, 14/11/2013).

Perceptions of eco-efficiency and sustainability

Discussions of eco-efficiency were centred on new building developments and the delivery and content of curriculum. New buildings were strongly perceived as being more conducive (than their existing buildings) for the introduction of technological innovation that in turn would introduce greater operational eco-efficiency, enhance the content of some curriculum areas, and facilitate leaner curriculum delivery methods. Campus eco-efficiency was cited as a significant contributor to the colleges' overall financial sustainability, especially to those colleges unsuccessful in their government capital grant applications and who instead, had to borrow money in order to fund new building developments. While this introduced further financial risk, respondents described new buildings as necessary for colleges to continue to be

sustainable by meeting the needs of all of its external and internal stakeholders, reinforcing that the sector's sustainability is also dependent on its appeal and relevance.

For a college to be sustainable, respondents stated that classrooms must be modernised (through technological innovation) to support and facilitate growing trends of online or distance learning and, the use of portable devices by students:

"Becoming more financially viable; we've got to pay for this building. And increasing our student numbers, becoming more focussed on the needs of employers and just kind of, keep evolving ourselves for the future" (Interviewee 15, 27/11/2013).

"I think there's a big issue around technology and keeping abreast of the latest technological developments and incorporating them into teaching and learning because if we don't, the students will, and we're going to get left behind aren't we?" (Interviewee 10, 19/07/2013).

The reduction in a college's paper consumption as a result of both trends, as well as other college strategies such as reducing photocopying, were perceived as direct contributions to a college's environmental and financial sustainability:

"It's a win-win for the college and the planet" (Interviewee 2, 19/05/2013).

"If you forget the sustainability side of it, you'll get your payback in money" (Interviewee 8, 10/07/2013).

There was also the perception that the growing trend of online or distance learning would result in fewer students needing to travel to site and would therefore have theoretical subsidiary impacts on travel habits, local congestion, and environmental sustainability. The point was raised however that a complete migration to online or distance learning could conflict with satisfying regulatory and inspection requirements, and as a counter measure, suggested that:

"There's a digital space for a college to be at, and there's an analogue space" (Interviewee 2, 19/05/2013).

Within discussions of curriculum content, respondents stated that a college is behaving sustainably by embedding sustainability into the curriculum demonstrated by

volunteered examples (that were either within vocational subject areas, or used vocational influences) of the installation of solar panels, rainwater harvesting, or new boiler technology. Some new buildings came equipped with these features, but in any case vocational classrooms were designed to include these features for demonstration and learning purposes. Operational initiatives such as ethical or local procurement of food within canteens or waste management were also cited to have educational benefits to the students.

Respondents stated that it is important to both embed sustainability into the curriculum, but ensure it is fit for purpose and therefore sustainable by meeting the needs of the local economy and responding to the supply and demand of local skills requirements. Statements such as *“the way we integrate sustainability into the curriculum”* (Interviewee 5, 17/06/2013) were supported by examples of linking curriculum development with industry and creating sustainability through employment. By supplying the local labour market, colleges are able to reinforce their sustainability by demonstrating their value to their local community and economy.

A college’s reputation and financial sustainability were also cited as dependent on the development and external assessment of the ‘quality’ of its curriculum:

“...Because that [Ofsted] grade determines [which] bids we can apply for, pots of money, projects, all of it, and working with employers. So clearly a major focus is to turn around that quality and improvement grade so that we can continue to develop our curriculum, and our bids, and our broader role within the community” (Interviewee 5, 17/06/2013).

Other key performance indicators such as student enrolments, student attainment, and numbers of employers engaged with and capital investment on new building developments were also cited as demonstrative of a college’s impact, important to a college’s reputation, and therefore its sustainability. It was recognised however that some aspects of a college’s social contribution to sustainability such as the internal culture and behaviours and how this may diffuse into the local external culture are immeasurable, but equally valid and necessary for a college to be sustainable. Though it was indiscernible to which definition of sustainability participants were referring, the fact that people and culture were perceived as important was an encouraging

recognition that the sustainability of a business and sustainable development require more than the management of quantitative indicators.

4.1.2 What are leaders' perceptions of power and leadership for sustainability within FE?

This section will provide an analysis of responses that describe leaders' perceptions of the role and power of colleges to achieve sustainability within the education sector, perceptions of how sustainability should be led within the FE sector, and what would encourage individual colleges to become leaders of sustainability.

Reflecting themes discussed in chapter 4.1.1, a strong theme to emerge within responses to questions concerning power reinforced the overall interpretation of sustainability being synonymous with the social and economic continuity of colleges and their communities, or as something that adds value to a college's social and economic sustainability. The latter of these was demonstrated by examples of eco-efficiency within a college's operations, or education about sustainability within curriculum areas that supply local labour demands. Perceptions of leadership and power dynamics were also revealed to differ depending on the respondent's interpretation of sustainability, and the seniority of the respondent; indeed, college Principals perceived sustainability within individual colleges as a shared leadership endeavour, whereas Vice-Principals stated it was the role of their college's leader.

Perceptions of FE colleges' leadership role within the education sector

Responses to this question were divided into two categories: firstly, some respondents did not perceive colleges as having a leadership role within the education sector due to the perceived investment required for sustainability to be implemented. Secondly, the majority of responses instead discussed their college's perceived role as a community leader, describing sustainability as the continuation of a college and its symbiotic relationship with local economic and social conditions, or as an activity that can add value to the processes of economic and social improvement either for the college itself, or to the local community through its students. In short, sustainability was either synonymous with the continuation of a business as usual scenario, or as a tool to enhance and refine a business as usual scenario.

An exceptional result was the perception that a college had suffered financially as a result of investing in sustainability delivery within the curriculum, only for it to be

undermined by a change in government policy. The strongest theme on the contrary was that sustainability is interpreted as a tool for social and economic improvement within a college, or as a literal term that by simply 'being', a college helps to sustain the local community.

Respondents who did not perceive a leadership role for FE within the education sector stated that HE and schools are better equipped to invest in sustainability as a result of their more favourable reputation and greater political influence (compared within FE) both of which, it is perceived, have translated into consistently better funding conditions. In this regard sustainability was interpreted as something that can only be demonstrated operationally. Other participants indicated a broader perception of sustainability than operational parameters but also stated that FE compared to other sectors is lacking in the knowledge of sustainability and therefore is unable to take a lead on it:

"...There are leaders in this [sustainability], and maybe we just don't know enough about it" (Interviewee 13, 08/11/2013).

Within the literal interpretation when discussing perceptions of power and leadership, respondents described colleges as role models to their local communities who depend on a college's success for continued economic and social development, providing the example of college students having a greater tendency to remain in the local community after gaining their qualifications (compared to HE), and therefore performing a greater role in the creation of local sustainable economies. This effect is enhanced through a college's relationships with employers, which then inform curriculum development to suit local skills shortages; therefore, colleges are helping to *"build sustainability into the workforce"* (Interviewee 15, 27/11/2013).

While respondents did not perceive colleges to have a leadership role for sustainability within the education sector because of a lack of funding or knowledge, respondents gave examples of how colleges are, or should be demonstrating leadership of sustainability *locally* through college eco-efficiency initiatives, inclusion within the curriculum, making curriculum fit for local purpose, or as a tool to enhance curriculum all of which were also cited as improving the employability of vocational students. Though this statement, *"being an educator means colleges should play a big role [for sustainability]"* (Interviewee 16, 10/12/2013), as well as another that stated the

importance of colleges leading by example to their stakeholders, examples in both cases discussed how the eco-efficiency of their new or existing college buildings was used as an education tool for students, staff, and the wider community. To lead by example was also to invest in sustainability even if it was not the cheapest option, however this was described as problematic for a college to remain financially accountable to the tax payer, and that sustainable decisions often conflicted with *"pragmatic financial decisions"* (Interviewee 15, 27/11/2013). The economic saving potential of introducing eco-efficiency within college operations was a strong theme to emerge, with the question being raised as to why some colleges have not pursued this more enthusiastically. Though the educational function of colleges as local leaders was perceived as important for the achievement of sustainability, the incentive to do so and the methods to achieve this was less clear. In summary, the clearest vision of a college's contribution to sustainability was as something that colleges should demonstrate visually as an operational function within its buildings.

Unlike perceptions of sustainability and curriculum focussed on the delivery of learning, perceptions of a college's power for sustainability instead focussed on curriculum content. For example, while technology perceived as a tool that should be used to make sustainability endemic within curriculum, for sustainability to be embedded within the curriculum, more needs to be done than *"just spending money on it [sustainability]"* (Interviewee 10, 19/07/2013). Teaching students about sustainability was cited as adding value to a student's knowledge and alongside other educational initiatives such as citizenship, health and wellbeing, and employability skills, students would be more adaptive, responsible and educated to contribute to a low carbon society. A weaker theme was that sustainability should feature in all curriculum areas and that while it is only currently taught within technology courses, the potential for it to enhance the curriculum would benefit students in their future employment. This perception also conflicts with those who believe a lack of knowledge, time and resources prevents sustainability's wider adoption within the curriculum.

It was suggested that younger people were more familiar with the sustainability discourse and that they could assist colleges in raising awareness and directing sustainability action. However, the opportunities available to students were portrayed to be limited as giving students 'a voice' within college, and responding to student needs often appeared later on in discussions, and were rarely cited as something that should be considered a college priority.

Perceptions of sustainability leadership within the FE sector .

Within discussions surrounding who should take leadership within the FE sector, a commonly cited issue that is perceived to prevent or delay leadership of sustainability was that of terminology. Respondents stated that sustainability has too many connotations and is misunderstood as something that only concerns the environment. Terminology issues were revealed within respondents' answers themselves where sustainability was interchangeably discussed as a business term, but supported by examples of eco-efficiency only. For example, the statement, *"I don't think I have to make this [sustainability] a priority. I think it is a given, if you like, in terms of survival"* (Interviewee 16, 10/12/2013), was undermined by using an example of sustainability being practiced through the design of a new college building, *"in terms of that new build we've got going on at the moment, I mean just working towards BREEAM excellent, excellent is it called?"* (Interviewee 16, 10/12/2013). Sustainability's integration as a college strategic objective was similarly perceived as being demonstrated by a single commitment, for example *"a commitment to taking an ethical approach to the environment"* (Interviewee 8, 10/07/2013).

Reflecting terminology confusion, on the one hand, 'sustainability' was perceived as becoming more important whilst on the other hand, it was perceived as something already integrated as *"the golden thread"* (Interviewee 12, 06/11/2013) throughout the organisation. A weaker but not insignificant theme was that of external interference, whereby leadership views sustainability from a broader perspective and as something that should *"be part of the lifeblood of what an institution does. I'd hate it if it was kind of imposed externally to us"* (Interviewee 5, 17/06/2013), but was juxtaposed against supporting examples of how college restaurants use a 'buy locally' scheme and other more operational management approaches.

Terminology issues concerning sustainability were perpetuated further as respondents stated that a consensus of meaning relevant to the context of colleges must be reached, redefining sustainability to reflect the sector's impact on the creation of sustainable communities. In this context, sustainability was described as a business term that all colleges must fundamentally demonstrate and integrate into the business strategy and objectives and its development plans and values, not left on the margins to be included only as a peripheral consideration - even if in practice, that appears to be exactly what happens when interpreting sustainability holistically.

Examining the perceived leadership role of the 157 Group specifically, respondents believed the group's purpose and role is conducive for leadership of the eco-efficiency interpretation of sustainability within the FE sector, specifically through the promotion of best practice, leading by example, and lobbying government on behalf of the sector. Suggestions of collaboration between 157 Group members were made for the purposes of sharing information and best practice for the benefit of the entire FE sector, and that a publication of such case studies could be presented to the government to progress leadership for sustainability and demonstrate the sector's leadership capabilities.

Whilst respondents stated that the sharing of information regarding sustainability within new building developments or operational improvements could have competition issues, it was suggested that championing the education opportunity presented by sustainability to government could help to generate political interest, and translate into additional funding opportunities, stating that the greater the shared knowledge of any subject dictates the importance of it across the sector. Volunteered examples of best practice referred to education about sustainability within horticulture curriculum, the college's catering provision, and that unsustainable practices such as printing off course materials could be reflective of an unfit for purpose curriculum. With this in mind, it was suggested that the 157 Group as customers of awarding bodies could make demands for qualifications and curriculum delivery to discourage unsustainable practices such as printing. Similarly, it was stated that there should be shared leadership between a college's senior leaders and vocational teachers to ensure that curriculum content is relevant and reflective of industry practices, but this was regarding the sustainability of the sector rather than for the shared leadership of education *for* sustainability.

Despite this enthusiasm, respondents perceived the responsibility of sustainability leadership as best belonging to a new sector based group made up of like-minded, passionate members whose colleges exemplify sustainability as sustainability is not and will not be high on the 157 Group's lobbying agenda because sustainability has "*gone off the boil*" (Interviewee 1, 09/05/2013) as a governmental priority. The responsibility for sustainability leadership was perceived to belong to another sector membership group, the AoC, and that the roles and responsibilities of all sector member or advisory groups should be more clearly defined.

Responses from non-157 Group colleges also cited the benefits of collaboration; while on the one hand it was stated that colleges should lead themselves by working together regionally through specific ‘sustainability’ forums, an opposing view was that that BIS should lead sustainability within the sector, and that top-down policy is the only method by which sustainability will gain traction and credibility. It was specifically stated that sustainability should be included within curriculum, but that many teachers do not understand the wider context or relevance to their subject areas and should receive guidance from the awarding bodies and government. Following industry’s lead to develop sustainability within certain curriculum areas was seen as important, but colleges would not be able to do this for all curriculum areas. Other respondents stated that it will be the expectations of students that will lead to sustainability being integrated into curriculum but in the meantime, sustainability is and will remain an add-on. This reinforces a consistent perception that unlike “sustainability” for which leaders adopt responsibility, the power for *sustainability* is perceived to rest with students, the government, and an individual within the college or group of individuals within the sector.

Other suggestions for leadership cited the benefits of individual experts within individual colleges and within the sector: *“someone needs to drive it, but not the Principal” (Interviewee 2, 19/05/2013)*, however it was recognised that designating responsibility onto an individual could perpetuate terminology and interpretation issues. Indeed, the consistent view was that leadership for sustainability must be distributed, that shared ownership achieves more than it being just one person’s role, and senior leaders must create a culture that supports and communicates the need for individual ownership of sustainability – however it was unclear as to which interpretation of sustainability they were referring.

What would encourage individual colleges to become leaders of sustainability?

The strongest theme to emerge within discussions of whom, or what would encourage colleges to become leaders of sustainability was the direct or indirect financial incentive, however overall sustainability was not expressed as something colleges (or their leaders) wish to lead on. Rather, it was perceived as a tool to assist colleges continued presence as leaders within the community. While the overall interpretation of sustainability was again synonymous with organisational survival, the financial incentive to engage with sustainability as a business enhancement tool (operationally

or through curriculum) for the overall sustainability of the business was the strong focus of responses.

Respondents stated that sustainability will become commercially advantageous, but currently is not, and that the impact of any sustainability investment must be measurable and deliver financial returns. Indeed, it was perceived that only when the sector's funding conditions improve would there be money *"to indulge in things like that [sustainability]"* (Interviewee 11, 25/10/2013). However, rising operational running costs and potential efficiency savings have already incentivised many colleges to invest in eco-efficiency within existing and new building developments. The pursuit of environmental management system (EMS) accreditation was seen as operationally important and could also generate some positive publicity. Indeed, publicity and recognition as an incentive for green initiatives was a strong theme with leaders stating it has had a positive impact on the college's brand identity.

Sustainability was also perceived to add value to existing curriculum and operational activities, specifically that by teaching students about sustainability could provide them with a competitive advantage when applying for jobs, which in turn could have a positive impact on the college's reputation. Increasing staff and student's awareness of sustainability when within college was also perceived as a method of improving overall efficiency and effectiveness. However, the sector's ability to teach sustainability was brought into question, and that nationally colleges do not receive enough direction in order to fill the existing sustainability knowledge gap.

In addition to the financial incentive, the customer demand incentive was also a strong theme whereby it was believed that colleges would be encouraged to engage more with sustainability as a result of the expectations of students and younger generations who have a better understanding of sustainability. Alternatively it was believed that a shift in culture and values, with bottom-up demands from staff and students would encourage colleges to engage with sustainability. This suggests a broader understanding of sustainable development than that which simply requires technological interventions. What was not clear however was what level of engagement with sustainable development participants believed is required for a change in culture and values. Finally, when asked if a commitment to sustainability should be mandatory, the prevailing response was non-committal, however the only alternative view was that it should not be mandatory.

In conclusion, leaders' perceptions of power and leadership for sustainability within the FE sector were dependent on the interpretation of sustainability. Leaders were keen to express responsibility and ownership of the sustainability of their college (recognised as also contributing to the overall sector's sustainability) when discussing business continuity, however within discussions surrounding the holistic understanding of sustainability, there was significant evidence of power pointing, largely directed at the government, where financial incentive and/ or rewards, as well as recognition were cited as the two most significant factors that would provide the impetus for colleges to invest in sustainability. The notion of investment however was contradicted by the use of terminology relating to the college and local community's sustainability, where the role of colleges to the sustainability agenda was perceived to be the continuation of educating local people to satisfy local skills and economic needs and therefore ensuring the sustainability of colleges themselves. To this, college leaders indicated a strong leadership role.

4.1.3 How are FE colleges perceived to contribute to sustainable development?

Reflecting the dominant themes to emerge within discussions of perceptions and power for sustainability, eco-efficiency and organisational sustainability were the two dominant themes to emerge when discussing examples of sustainability in practice. Respondents commonly gave examples of both, describing the implementation of eco-efficiency activities that were perceived to mitigate the environmental impact of existing college activities, and financial and socially embedded strategies to ensure organisational sustainability, for example: *"So at one level it's about buildings and the practical stuff, and at another level it's just a different way of operating within our community"* (Interviewee 16, 10/12/2013).

A strong theme to emerge within examples of sustainability in practice was waste management, most notably the introduction of recycling initiatives and recycling bins across college campuses (which was also cited as a tool to communicate the college's commitment to sustainability to stakeholders), with other examples of donating furniture to charity, composting food waste, and reducing paper waste through printing and photocopying strategies. Examples of using waste management within vocational curriculum areas were also given such as a recycled clothing project carried out by fashion students, and an initiative to fuel the college van from waste cooking oil and were also believed to be demonstrative of sustainability being embedded within the college's curriculum as well as important for raising awareness within the college

community: *"I think all the initiatives we're doing with the curriculum, things like 'mend not spend' and we started off running the college van on chip fat, that's then gone over to engineering and they're embedding that into the curriculum. I think what we've done in the curriculum is really, I think we've made some great, we've made some big strides there"* (Interviewee 8, 10/07/2013).

New building developments or building refurbishments was the strongest theme to emerge and was perceived as being the most significant contribution a college could make to sustainability by either the attainment of BREEAM 'excellent' or 'very good' standards, the inclusion of renewable energy sources, and reducing resource and energy demands through the introduction of rainwater harvesting or double glazing: *"I suppose our buildings are a good example of two new builds where sustainability has been embedded throughout the core of the development"* (Interviewee 15, 27/11/2013).

Introducing renewable energy sources was also cited as a teaching and learning opportunity, particularly for students within construction and engineering curriculum areas. New building developments were perceived to offer opportunities to develop in-house energy management systems and expertise to identify potential energy and cost savings that would also reduce the college's carbon footprint. The procurement of local goods, labour and services for the construction of new buildings, and the use of college or locally grown food within the college's catering provision were perceived to be both good for the environment, and the local economy. Similarly, the statutory requirement of all new college building developments to implement 'Green Travel Plans', often demonstrated through specific initiatives such as cycle to work schemes, car park management schemes, and reducing the cost of business travel were cited by several respondents as examples of environmental and financial sustainability in practice.

The alternative focus of responses surrounded sustainability being used as a term synonymous with business continuity, providing examples that described the refinement and improvement of existing college activities to ensure financial sustainability, or financial growth opportunities. Indeed, one respondent stated: *"What is sustainable growth? Is it growing 1-2% a year? My sense is it's just making sure that the business continues to be fit for purpose and respond to a changing landscape"* (Interviewee 14, 14/11/2013). Several respondents cited the increased ability of

colleges working as a group rather than individually to develop ideas that were cited as solutions to the sustainability of the sector: *“entrepreneurial leadership, different modes of delivery, procurement channels, they’re all aspects of sustainable development” (Interviewee 7, 02/07/2013).*

Further examples of college activities that were perceived to contribute to the overall sustainability of the college focussed on a college’s ability to meet local employment and economic needs through either the development of partnerships with local businesses, or ensuring the sustainability and adaptability of a college’s workforce to changing local needs through the development of teaching and learning improvement groups and staff training schemes:

“It’s really kind of looking at tapping into what an employer needs in a locality and developing a local workforce” (Interviewee 15, 27/11/2013).

“I think the training that we’ve done at senior management level is invaluable for raising awareness and changing mind-sets about what sustainable development is in terms of the whole corporate social responsibility thing” (Interviewee 8, 10/07/2013).

As part of its corporate social responsibility, another stated that the college had committed to paying the living wage to all employees as part of its local employment strategy.

Perceptions of barriers and solutions to sustainability in practice

Respondents did not distinguish any notable differences between perceived existing barriers to sustainability and barriers that may emerge in the future. In both cases, the most significant and commonly cited barrier was that of finance, but in itself was self-evident of other themes such as barriers of culture and terminology. Respondents acknowledged that the barriers to sustainability are dependent on its interpretation, and that cost and conflicting financial priorities are only barriers when sustainability is perceived as something that involves buildings and eco-efficiency. This perception revealed an additional terminology issue as those respondents discussing the barriers of terminology were interpreting sustainability as a term synonymous with business continuity. In these cases, respondents stated that there should not be any barriers to sustainability as every college will or should be thinking about sustainability, knowingly or not. Indeed, one respondent stated: *“I think if an organisation is run properly and*

works with industry appropriately, I don't think there should be any barriers to doing it actually" (Interviewee 11, 25/10/2013).

In those cases where it was perceived that colleges had exhausted short-term pay back efficiency improvements, it was cultural barriers such as resistance to change, rather than financial barriers, that presented a more significant challenge to colleges: *"So we've done that stuff that's within our control, so the next big barrier really is about existing cultural or individual norms" (Interviewee 4, 07/06/2013).* This perception again reveals an acknowledgement of sustainability not just being about operational savings, or that operational savings can only achieve so much, and that further operational initiatives that are within the user's control depend on cultural cooperation. Indeed, participants stated that cultural and attitudinal barriers were perceived to be due to and exacerbated by the esoteric language associated with sustainability: *"I think one of the issues for certain aspects, generational aspects really of people who work here is the notion of what sustainable means, and if they start to think about the green agenda you then start to make the quantum leap between the type of people who are into sustainability" (Interviewee 2, 19/05/2013).* Indeed, the negative connotations associated with sustainability have been further aggravated by the implementation of 'green' initiatives that enforced behaviour changes, and that schemes to reduce staff photocopying and printing allowances, and travel plan related initiatives such as the reduction in staff car parking availability, or reducing staff business mileage allowances have only strengthened cultural resistance.

Cultural changes were perceived to have been made even more difficult by national economic and political issues, stating that the combined impact of an economic recession and sustainability *"falling off the political agenda" (Interviewee 4, 07/06/2013)* has led to the perception that sustainability is not perceived as a priority, and can only be addressed when money is available. Indeed, respondents stated that sustainability would become more important over coming years as the economy recovers. Within this context, sustainability is perceived as an 'additional' activity requiring financial or human resource investment both of which are increasingly expected to do more with less: *"we're expected to deliver, all the time within an ever reducing amount of funding, and the funding that we used to be able to spend on employability or sport or sustainability or going to theatre, all that money went didn't it? That enrichment funding all went and now we're being squeezed on our programme of study, we're being squeezed on adult education, so finding the money to spend on*

delivering these [sustainability] ideas to students is difficult” (Interviewee 13, 08/11/2013).

Unsurprisingly the investment required for buildings to be brought up to standard or to change the curriculum was perceived to prevent colleges from engaging in transformative sustainability: *“It’s about that transformation of stuff, that’s the problem. You know, the normal kind of, reducing staff using their own cars and using buses is something we can do and we can initiatives and have incentives, but to really create that transformational change around design and delivery, we’d need a differently level of investment” (Interviewee 5, 17/06/2013).* Unlike earlier perceptions that acknowledged the importance and role of cultural attitudes, this perception aligns cultural change with the requirement to financially invest – something that would not be required under cultural conditions conducive for sustainable development.

Demonstrating value for money on sustainability investments was another issue that was expected to become increasingly acute as colleges are required to become more financially independent: in this context, barriers of organisational survival and competition were perceived as fundamental barriers to further engagement with sustainability. The value and return on investment of engaging with sustainability have also been negatively influenced by the conditions often attached to ‘sustainability’ funding streams, and the perceived lack of demand or interest from industry for students with skills in sustainability. Consequently sustainability is perceived to present an additional expense, and therefore the perception was that funding for sustainability initiatives would always be limited.

Competing priorities and demands were also perceived as barriers to implementing sustainability within the curriculum, and that these barriers are exacerbated by historic and ongoing changing government policies. It was this issue in particular that was perceived to have led to colleges being unable to predict longer term trends, and that the sector’s perpetual state of adaptation has led to the sector being driven by funding policy rather than education strategy, a state that is counterintuitive to the long term decision making required for sustainability. A less common but nonetheless interesting perspective was that the current funding system rewards unsustainability, but may be inhibiting positive examples of environmental and social sustainability at an individual college level. Nevertheless, statements such as *“I think the bit we’re not doing is giving our students enough information about this [sustainability] agenda, I think we’re not*

doing that, I think we've got to do more about that" (Interviewee 2, 19/05/2013), were overwhelmed by the opinion that a college's curriculum must remain focussed on local economic needs by providing employable students who can secure sustainable jobs.

Of note was the perception that the sector's reputation is a barrier to the sustainability of the sector itself, and that the perceived purpose and reputation of the sector is self-replicating as a consequence of the expectation of colleges to produce skilled labourers for the local economy only, and not the high profile, typically university educated leaders who develop, implement, and change policies that ultimately impact on FE colleges.

Perceived best methods of implementing sustainability

Unlike perceived barriers to sustainability, which were dependent on the interpretation of sustainability, leadership for cultural change was the strongest theme to emerge as a solution to overcoming barriers for sustainability irrespectively of its interpretation.

The role of leadership for creating organisational cultures conducive for sustainability was strongest perceived solution to overcoming financial and cultural barriers, however there was disagreement as to whether this should be through distributed internal leadership, or external leadership direction from the local business community. An additional and related perspective emerged whereby it was believed that a college must focus on what it delivers rather than how it is delivered, therefore requiring less attention on new buildings and a college's physical identity and greater collaboration and diversification with local business to ensure that students leave college with the appropriate skills to meet local economic needs. Pedagogical content is therefore being thought about, but only in socio-economical terms, and therefore not education *for* sustainable development. The role of a college's workforce for achieving organisational sustainability was also discussed and that for a college's pedagogical offer to remain relevant, instead of teachers the sector requires a workforce of practitioners with up to date industrial experience: *"a lot of the staff we employ came into the sector to teach, and the new Ofsted framework and everything else is now very much focussed on learning, rather than necessarily teaching" (Interviewee 7, 02/07/2013)*. This perceived requirement was discussed as being culturally contentious and presents a challenge when considering the demographical nature of FE teaching staff. Nevertheless, in order to overcome cultural barriers to the changes required for organisational sustainability, respondents stated that it is the role of college leaders to communicate the rationale

for change, and that resistance to change is often as a result of mismanaged cultural expectations, particularly in the transition between old and new ways of working and indeed old and new workplaces: *“it’s around recognising that more of the same won’t sustain itself; there’s the need for more flexibility in terms of working, in terms of the contracts that we offer and the recognition that you know, there’s an agility to get to the market place in terms of how and what we deliver needs to change”* (Interviewee 14, 14/11/2013). Though discussing organisational sustainability, this statement would indeed also be relevant for the changes required for *sustainability*.

When discussing solutions to the cultural barriers experienced towards sustainability as a holistic term (rather than as a term synonymous with organisational sustainability), compelling senior leadership support and endorsement of sustainability was perceived as critical in order for it to be perceived as a priority: *“I think it does get disseminated down, where there is genuine support for it, from the top coming down”* (Interviewee 6, 01/07/2013). Respondents stated that to overcome barriers to engagement by senior leadership teams and governing bodies, the reputational and financial benefits of engaging with sustainability should be demonstrated, again revealing a terminology issue that sustainability is something that requires significant investment. This perception was supported further by statements which focussed on distributed leadership and innovation for sustainability: *“so you need your senior management team to be totally committed, on board, and to motivate and encourage the staff to find ways of doing things, because that’s what FE is really good at isn’t it; finding ways of doing things when you haven’t got any money”* (Interviewee 13, 08/11/2013). Indeed, respondents stated that sustainability is affordable and should be integrated into optimising the efficiency and effectiveness of all college products and services, or as one respondent stated: *“sustainability, it’s just good housekeeping and makes good economic sense”* (Interviewee 3, 22/05/2013). However, a countering view was that such language leads to negative cultural perceptions that sustainability is expendable during times of austerity.

While senior leadership was perceived as the most effective method of endorsing sustainability at an organisational level, respondents stated that for raising awareness and implementing sustainability at an operational level, distributed leadership through dedicated ‘sustainability officer’ posts, internal champions, or in house expertise were required for building leadership capacity throughout the organisation. Distributed leadership and education were also perceived as the most effective methods of

resolving the inaccessibility of sustainability terminology. Respondents stated that educating staff and students through the adaptation of language and incentives relative to individual or departmental contexts are more effective methods of engagement than dictating behaviour. Indeed, it was hypothesised that the current definition of sustainability evokes negative perceptions amongst staff due to the implementation of initiatives that have led to financial sacrifice or personal inconvenience.

The role of strategy and strategic planning to ensure leadership and accountability for sustainability using both of its interpretations was discussed whereby it was either perceived to be integral to the organisational purpose, the core objective, or the strategic ambition of the college, or included within other strategic objectives to ensure it is considered as a strategic, rather than silo activity: *"In a college environment, you have got to work to understand why or how it's a strategic priority, not as just a standalone but as part of your other strategic priorities. What part does it play?" (Interviewee 4, 07/06/2013).*

The inherent nature of leadership as the most common solution to overcoming barriers to sustainability relies on power and its distribution within a college, however this was undermined by perceptions that the locus of leadership rests with external stakeholders of the college. For example, the barriers of time and money would be overcome if prospective students were to demonstrate a demand for sustainability from colleges, or if the government was to produce sector specific guidance and leadership: *"there are no clear signals are there? Only when it comes to buildings: there are no clear signals about curriculum, teaching and learning, cost effectiveness" (Interviewee 13, 08/11/2013).*

Though it was believed that colleges would gain greater positive publicity if they were graded on sustainability as part of the government's inspection framework, this came into conflict with the perception that colleges should decide upon their own priorities irrespectively of government policy: *"I suppose I could argue that it's about time we started getting in front of government thinking, rather than wait for it to be done to us, now that's always a very easy thing to say and very difficult to do, but the more that we can sort ourselves out, the less reliant we become on the political agenda" (Interviewee 7, 02/07/2013).*

To conclude, FE colleges are perceived to contribute to sustainable development externally through their continuation and therefore contribution to local economic and societal sustainability. They are also perceived to contribute through internally led eco-efficiency initiatives such as the introduction of waste management practices and the improvement of existing or new buildings to reduce energy consumption. Commonly cited barriers to a colleges' ability to contribute to sustainable development were largely financial, however participants recognised that barriers to sustainability were dependent on its interpretation and if interpreted in its literal sense, there should be no barriers as all colleges should be prioritising their sustainability.

4.1.4 Conclusion

Perceptions and strategy

Dominant perceptions of sustainability as a term were largely synonymous with business continuity and maintaining (but improving) the status quo. Such improvements were believed to be achievable in part through the other dominant perception of sustainability, which was based on eco-efficiency. Therefore whilst participants indicated two interpretations, it became clear that environmental sustainability was perceived as an important factor in achieving overall organisational sustainability.

How sustainability is interpreted emerged to be the most significant factor when determining whether or not it is perceived as an explicit or implicit issue for colleges over a strategic time frame. When considering the mid to long-term issues facing colleges, leaders described issues only that referred to the social and financial facets of sustaining the college as a business. References to a more holistic interpretation of sustainability were limited to examples of eco-efficiency, described as part of the overall solution to reducing costs and achieving financial sustainability.

This reveals a disconnect whereby participants referred to both sustainability and energy efficiency, differentiating sustainability as a business term from the wider, more holistic notion of 'sustainability' which was often disjointed from the main narrative. This suggests that while the sustainability of colleges is of critical importance to its leaders, the holistic interpretation of sustainable development is not being addressed when considering how the sustainability of a college will be achieved. It emerged as being important to many of the respondents that their college buildings are "fit for purpose", "suitable for the 21st century" and able to "meet future needs", but suggests

that only college buildings and their environmental footprint (including how curriculum is delivered) are viewed as demonstrative of a college's sustainability. This management approach reflects one of the most common management approaches identified within HE by Hopkinson et al (2004), Brinkhurst et al (2011) and Bessant et al (2015) previously mentioned in chapter 2.2.1; namely, this approach focuses on campus operations and environmental management to reduce the environmental impact of university activities.

Despite this seemingly noble intention, references to reducing a college's environmental impact were in all cases portrayed as a 'bonus' to existing plans rather than a motive in itself. The purpose of sustainability is to ensure – at minimum – business survival, but ideally to facilitate business growth, and was not perceived as being counterintuitive to environmental protection.

Perceptions and power

Discussions surrounding power and leadership for sustainability were dependent on the terminology used; while leaders described a clear leadership role within the local community, this was exclusively referenced as being for the benefit of local economic and social sustainability. Participants' responses suggested uncertainty concerning their leadership role with respect to sustainability as a holistic term; indeed, participants stated that their leadership role depended on the interpretation of sustainability. On the one hand, leaders belonging to the 157 Group were uncertain about the group's leadership role with respect to sustainability as a holistic term. Other than lobbying awarding bodies to discourage unsustainable practices across the sector (such as printing and photocopying), a general consensus emerged whereby sector sustainability leadership was perceived to be the role of either the AoC, or a new group made up of 'like-minded' individuals. Such perceptions of responsibility passively suggest the perception of a common barrier held by academics within HE, which, as identified by Dawe et al (2005), Jones et al (2010), Safarzynska et al (2012) and Christie et al (2014) (see chapter 2.2.1), whereby a lack of sustainability engagement is due to a perceived lack of awareness or expertise. By extension, this is suggestive of the perception that sustainability is a 'niche' subject, to which one must become expert in order to practice. Extrapolating this further, sustainability is therefore perceived as a linear, rather than systemic concept. This is discussed further in chapter 5.1.1.

When using sustainability as a business continuity term, leaders belonging to the 157 Group stated that the group had a leadership role in ensuring that the curriculum provided by colleges remains relevant and reflective of industry practices. Conversely, when discussing the more holistic term, participants expressed concern that unless endorsed or encouraged by government or industry (and with financial incentives for doing so), or demanded by students (who were perceived to know more about it), sustainability would struggle to gain traction. Indeed, the perceived lack of political interest was also cited as having exacerbated barriers to sustainability within the sector such as cultural resistance. Participants stated also that only if colleges were to be graded on sustainability through the regulatory framework would sustainability be taken seriously, however it was also stated that a college's role is to educate so that informed choices could be made, and not to legislate what people should and should not do. This conflicts with the perception that sustainability is the responsibility of a designated person, (suggesting that it is not the Principal's role), though there was recognition of the limitations that this would bring to the role and how sustainability is perceived, reinforcing Krizek et al (2012) whereby ordaining responsibility to an individual or specific group can restrict a wider appreciation that it is everybody's responsibility.

On the whole, when discussing perceptions of power for sustainability leadership, a consensus was revealed whereby distributed leadership was seen as necessary in order to overcome some of the cultural barriers associated with either interpretation of sustainability, as both require changes to existing practices. Indeed, whilst it was stated that it is a leader's role to provide strategic visioning within a college, distributed leadership is more appropriate for the implementation of change at a more operational level. Though this is heartening in some respects, reflecting the need for distributed leadership but senior led endorsement as identified by Ferdig (2007) and Brinkhurst et al (2011) in chapter 2.3.2, the fact that such perceptions of 'shared ownership' typically came from Principals themselves, this could be construed as their lack of ownership, possibly because of a perception that sustainability is not a priority worthy of their time or focus.

Perceptions and practice

Perceptions of sustainability in practice were again dominated by the dual interpretations of sustainability. Respondents began by stating that sustainability is not just about eco-efficiency initiatives such as recycling or building improvements, and discussions broadened out to reveal a wider recognition of holistic sustainability, cultural change and multi-level leadership. However, in almost all cases, initial statements of sustainability not just being about eco-efficiency or buildings were later undermined by volunteered examples of how colleges are contributing to sustainable development exclusively referring to eco-efficiency initiatives. Such perceptions reflect those given by leaders within HE in Wright and Wilton's 2012 study whereby senior leaders considered their commitment to sustainability sufficient if campus greening initiatives were being funded.

Sustainability and eco-efficiency though referred to as separate concepts were described as having a compatible relationship whereby eco-efficiency is able to assist in the refinement of business models and therefore assisting in the college's overall financial sustainability. With pride and purpose, respondents described their college's accountability to the social and economic wellbeing of their communities, using the term sustainability to describe the improvement and longevity of the college and its community, and referencing the purpose of eco-efficiency and environmental mitigation as contributing to the further development of both. This further highlights an emerging trend that the economic and social performance of colleges are seen as vital to ensure the sustainability of the college with environmental sustainability only adding value, where possible, to this endeavour. While this conflicts with another common perception that finance is a barrier to implementing sustainability (a common barrier perceived by those in FE as identified by Kythreotis [2011]), cultural barriers were frequently cited as the next significant barrier reflecting the most common barriers identified within HE (see chapter 2.2.1), inflamed by the terminology and connotations associated with sustainability and sustainable development. Interestingly, some believed that the reputation of the sector itself is a barrier to the sectors' sustainability.

When discussing eco-efficiency and the importance of external relationships, respondents did not clarify whether these are necessary in order for a college to be sustainable, or, that because eco-efficiency and building external relationships are core

college activities, by virtue colleges are behaving sustainably, or are taking the necessary steps to achieve sustainability.

4.2 Focus group results

The following section presents the analysis of dominant themes revealed within focus group discussions, with sub-chapters corresponding to an over-arching theme interrogated within the research questions – perception, power, and practice.

4.2.1 Sustainability perceptions and practices

When participants were asked to describe their interpretations of sustainability, discussions focussed on the environmental facet of sustainability, most notably eco-efficiency. Included within all discussions were examples of more efficient use of energy and resources (some participants alluded to the Brundtland definition stating resources should be saved for future generations), reducing and recycling waste, reducing the college's carbon footprint, and developing renewable energy. Where responses were less specific, participants stated sustainability is synonymous with "something that lasts" (FG1 15/11/2013, FG4 01/04/14, FG5 29/05/2014), "the environment and green issues" (FG1 15/11/2013, FG2 20/02/2014, FG3 19/03/2014), "maintaining a balance" (FG 5, 29/05/2014), or to "reduce the impact we're having on the environment, not carry on as we are" (FG 1, 15/11/2013). Though this could be as a result of the majority of focus group participants belonging to operational functions, such as estates and buildings or facilities management, this dominant interpretation reflects those revealed within the analysis of leadership interviews and publicly available documents. In only one focus group did a member of the senior management team participate, and academic participants were from construction and the built environment, enrichment and tutorials, art and design, or business studies. These trends are again reflective of the common perceptions of academic relevance, and correspond with examples of sustainability in curriculum practice.

Discussions focussed on sustainability within the college, and quickly evolved from perceptions of the meaning of sustainability, to a perceived conflict of interest with college and economic development. While respondents stated that sustainability is about personal and sector survival, an implicit consensus emerged where sustainability was perceived as something that should add value to existing processes, but not hinder or reverse economic development: "We can't move backwards, we have to move forwards so we have to manage it [the environmental impact] as best we can" (FG 1,

15/11/2013). Additionally it was stated that a certain level of environmental impact as a result of lifestyles and development was inevitable, but could be compensated for by behaving more sustainably in other areas, for example, through the installation of more efficient light bulbs.

Contrastingly other discussions stated that sustainability should go beyond environmental indicators and must also mean becoming more socially aware and responsible as individuals and colleges. Participants went on to describe the moral duty of colleges as educators to develop sustainable communities, and to educate learners about social responsibility and global citizenship, and not just teach for the attainment of qualifications. While the perception was that sustainability is included more comprehensively within primary schools' core curriculum, participants stated that current college trends to teach it only through enrichment activities such as tutorials is insufficient. However, when asked to discuss sustainability as a college priority, discussions continued the theme of eco-efficiency, stating that financial sustainability is and should be the college's highest priority. Introducing eco-efficiency measures contributes positively to the colleges overall financial health and consequently is highly valued by college senior leadership teams, as well as the subsidiary marketing benefit of using eco-efficiency measures for the attainment of sustainability awards.

There was some uncertainty of how colleges impact on the environment, specifically stating that colleges are neither big polluters nor consumers and therefore there was uncertainty about where and how colleges fit into the sustainability agenda. However there was a countering opinion that colleges are as 'bad' as other industries, but competing priorities and the need for development removes the choice of any business becoming sustainable.

Reducing paper consumption was a popular example of how colleges have contributed to sustainability, but was also used as an example to demonstrate cultural issues and perceptions of sustainability. The observation was made however that although there had been a significant reduction in paper consumption, the college's consumption remains huge as a result of cultural resistance to the initiative, which was largely perceived as an inconvenience. Similarly, other initiatives implemented under the banner of sustainability such as car parking charges or reductions in car parking availability have damaged cultural perceptions of sustainability. Participants stated that college staff "put barriers up when they hear the term sustainability because of what

they perceive it means” (FG 1, 15/11/2013), but prior to that there was already a perception issue about “what is perceived to be sustainability and what isn’t” (FG 1, 15/11/2013). On the whole sustainability within all discussions was strongly agreed as a priority for colleges, and that it must be clearly defined for it to become a priority to individuals and the college. However these broader opinions were in some ways undermined by the comprehensive use of sustainability practice examples within a building and operational context only: “Within the built environment it [sustainability] makes sense because there’s usually a good payback, and even when there isn’t, often these jobs need to be done anyway and it makes sense to do it sensitively” (FG 2, 20/02/2014). Indeed, participants stated that a tool to compare resource use of colleges would be beneficial to understand college’s sustainability impact and encourage competition within the sector, reinforcing a predominant physical interpretation of sustainability.

Evidence of sustainability as a college priority was typically demonstrated through examples of eco-efficiency. Participants stated that technological changes had been easier to implement than cultural and curriculum changes, the latter of which several colleges stated they had struggled to engage with. However it was also believed to be an emerging priority due to the evolution of values and behaviours demonstrated by the cultural shift to recycling; less than a decade ago it was rarely considered by colleges or individuals, but college stakeholders now expect recycling facilities to be available. It was believed that a college had become a sustainable business due to its decision to implement a more efficient IT server system. Other eco-efficiency examples included the installation of more efficient lighting (the most commonly cited example), the establishment of a carbon footprint and reduction targets, reducing paper consumption and the move to using recycled paper only, increasing waste recycling, the implementation of green travel initiatives (such as cycle to work schemes and pool cars), new, more efficient, college building developments with green credentials such as solar power or rainwater harvesting, and the introduction of sustainability into the college catering facilities by reducing the use of non-recyclable packaging.

Examples of sustainability within the curriculum to support sustainability as a college priority similarly referred to eco-efficiency, most commonly within the construction curriculum through examples of using eco-friendly equipment and materials. Other examples referred to the teaching of alternative energy and technologies within science subject areas, the use of eco-friendly products within hair and beauty

curriculum and the requirement to study a module of sustainability as part of some construction and horticulture qualifications. Students participating in community-based litter picking events were also cited as good examples of sustainability being introduced within extra curricula activities.

Despite the dominance of eco-efficiency examples, participants did reflect upon whether these initiatives were legitimately sustainable, for example new buildings and the increasing use of technology were discussed as having a detrimental impact on energy savings and carbon emissions. Instead, it was suggested that colleges' contribution to sustainability is cultural, and their duty as educators should be to take a leading role in promoting and encouraging sustainability: "FE is a good environment to set examples and nurture the values needed [for sustainability] as you have your audience" (FG 1, 15/11/2013). Participants went on to describe that rather than superficial initiatives and campaigns, colleges must adopt an incremental approach and focus on cultural changes. One suggested method of doing this was for a college to employ staff with sustainability values, and to include sustainability within job descriptions and college policies. Several comparisons were made to the equality and diversity agenda, which had been similarly integrated in recent years from a peripheral consideration into a more legislative bound cultural practice.

Following on from these discussions, examples demonstrating how sustainability had been culturally embedded as a college priority were given, such as the establishment of college sustainability groups, hosting community sustainability meetings, and increasing cultural awareness through dedicated sustainability themed events, the sharing of information and showcasing the sustainability features of new building developments. However, a conflict emerged between the perceived cultural role of colleges and their requirement to also be financially sustainable. Indeed, cost and financial issues were cited most commonly as barriers to implementing or engaging with sustainability, however financial austerity was also perceived to be positive for sustainability whereby reducing commodity overheads (such as paper consumption) would release capital to be spent in other areas. The strongest theme to emerge from discussions however was that the economic recession had placed additional financial burdens on colleges and therefore a negative impact on sustainability. Sustainability initiatives were discussed as being more expensive to implement and their benefits being too slow to materialise, furthering cultural resistance: "The problem with

environmentalism is that the results aren't immediate and obvious" (FG 2, 20/02/2014).

Statements such as those listed below further reinforce a terminology and interpretation issue where sustainability is perceived as a physical activity only:

"Being 'green' is more expensive which is a barrier" (FG 1, 15/11/2013)

"The motive is long term cost rather than sustainability" (FG 4, 01/04/2014)

"[We] can't lower our [environmental] impact because of the cost of implementing sustainable initiatives" (FG 5, 29/05/2014)

"Being sustainable is sometimes more expensive. It isn't a cheap alternative" (FG 2, 20/02/2014)

Overridingly participants stated that their colleges' primary concern for all decisions was cost and protecting the bottom line, consequently the driver for any proposed sustainability projects would need to be economical or reputational. Conversely, while the availability of funding and resources was commonly referred to, participants deliberated that the real barrier may be cultural, as other initiatives that have been focussed on and invested in by management have been successful. Indeed, discussions revealed that inherent cultural barriers dominate more inadvertent human resource barriers such as time management, time constraints, and a lack of expertise, notably the connotations of it being perceived as an inconvenience (discussions focussed on examples of public transport, photocopying and car parking), the undesirable reputation of sustainability enthusiasts being seen as 'hippies' or 'tree huggers' and a consequent lack of commitment and buy-in.

When discussing barriers to implementing sustainability within college curriculum, barriers of perceived relevance, and the time constraints for both staff and students as a result of an already crowded curriculum were the strongest themes. On the one hand, it was believed that colleges should implement operational sustainability to showcase the college's commitment and inspire college stakeholders to get involved, whilst on the other hand participants believed that this tactic was at risk of furthering perceptions that sustainability is synonymous with housekeeping and buildings only. It was stated that buildings and operations must be sustainable before work can

commence on curriculum, but that this should be the start, and not the sum of a college's sustainability commitment.

When specifically discussing curriculum, examples and ideas of integrating sustainability referred to curriculum delivery rather than its content. However, participants stated that sustainability (as well as equality and diversity) should not be a curriculum bolt on, and must be embedded for it to become a cultural norm.

4.2.2 Power for sustainability leadership

Irrespective of the question asked, the most dominant theme to emerge from all focus group discussions was that of power and where leadership responsibility for sustainability lies. The responsibility and power of the government to more actively advocate sustainability not just within the FE sector, but society in general was frequently discussed. Participants stated that the government should lead by example and embed sustainability across all sectors as well as education. It was believed that because there is no management lead in sustainability, nobody is setting an example, and it is therefore a market forces issue.

Another strong theme to emerge was the perception that sustainability is currently low on the government's priorities, and FE policy arrangements notably funding reductions and the drive for improved quality in existing qualifications, prohibit colleges becoming more sustainable. Though participants felt that colleges have neither the money nor incentive to teach sustainability, others believed that if local industry were to become more focussed on sustainability, this would act as an incentive for colleges to follow suit. There was also the converse belief that colleges must reclaim some autonomy from the government over the content and delivery of education that would allow the introduction of sustainability within more curriculum areas. A less dominant theme was the perception that it is not the job of education to teach environmental, social and economic responsibility, and instead these should be values taught at home; others believed both share the responsibility.

There was some discussion on the perceived susceptibility of younger generations to consumerist messages and their consequently less sustainable behaviours and values. Equally however participants stated that responsibility for creating a more sustainable future lies with younger generations who are more aware (citing examples of sustainability and the 'environment') of sustainability rather than existing leaders:

“Students need to drive environmental sustainability because it’s their future” (FG 3, 19/03/2014). Indeed, there was the perception that while ever government leaders seem to be focussed on economic growth and are linked to destructive industries, their vested interest would be to continue consumerism and therefore prevent sustainability. Some scepticism was similarly revealed when discussing education and how the government perceives its role. Participants stated that “the government has made education a commodity rather than something to enjoy or inherently worthwhile” (FG 2, 20/02/2014), which was perceived to be largely responsible for the increase in demand for higher paid jobs, perpetuating higher impact lifestyles.

Returning to discussions of power dynamics within colleges, there was much discussion of the importance and requirement of in-house expertise such as sustainability champions or experts. Participants stated that current arrangements in many colleges delegate responsibility for sustainability to existing job descriptions, which is insufficient. While it was recognised that having a dedicated sustainability role leads to the perception by college staff and particularly college leadership that responsibility for sustainability rests with that person alone, it was also believed that without such a role, college sustainability would be lost altogether, though the role should be more senior and with a higher profile to therefore exert more influence. The matter of juggling competing priorities was subsequently raised and that sustainability is not the only subject that deserves or needs to be led as a priority and questioned whether it could ever be justifiably placed ahead of other college priorities.

Academic participants reported a significant curriculum gap across all disciplines with regards to sustainability, and it is important that this is addressed, though it was acknowledged that sustainability expertise does not necessarily change behaviour and sustainability efforts are often countered by consumerist messages within the public domain. Participants stated that only legislative interventions would lead to behaviour change, evidenced by increased sustainability accountability within the public sector as a result of legislation, notably changes within building regulations.

Operational staff frequently stated that their academic colleagues are responsible for the most unsustainable behaviours within colleges, notably housekeeping, and that sustainability is evidently of low importance on the academic agenda. Operational staff stated that it is critically important to educate academic staff about sustainability so

that they can raise awareness amongst their peers and with students: “[we have] tried to engage academic staff countless times, but it hasn’t worked” (FG 2, 20/02/2014).

While it was agreed that changing culture, particularly academic cultures, is difficult, participants had issue with blaming others and stated that individually, everyone has the ability to do more to improve their own sustainability than they behave: “There’s always someone else to blame” (FG 2, 20/02/2014), “It’s easy to push the blame on someone else” (FG 4, 01/04/2014). This does however conflict with the perceived role and responsibility of sustainability champions which was stated as being to ensure that members of staff make sustainable decisions such as reducing energy and paper consumption, and encouraging more sustainable procurement. Though there was the anomalous view that social sustainability was taught more widely within college classrooms than in other organisations, the majority of perceptions reflected a more environmental and operational understanding of sustainability.

Though the majority of discussions focused on lateral power distribution amongst individual colleges, there was some discussion of the collective ability of colleges to lobby government for more support to implement sustainability. The significance of colleges’ contribution to sustainability was questioned, but was agreed as significant when considering the collective impact of all college stakeholders. Participants stated that the lobbying role rests with college Principals, but internally, there was no consensus of whether sustainability should, or would be most effectively led by committee or the college leadership.

4.2.3 Conclusion

Perceptions of sustainability largely focussed on eco-efficiency with much less focus on business continuity, though focus groups reiterated senior stakeholder views that sustainability adds value to existing processes and assists in protecting the bottom line. As a general trend, it is notable that focus group participants’ responses suggested a less variable perception of what sustainability means, where generally answers related to environmental matters and initiatives. This is understandable given the specialism of the focus group participants who were mostly operational staff. The correlation with senior leaders’ perceptions suggests that the dissemination of information regarding operational sustainability within colleges has been bottom-up, with operational departments informing leaders of progress.

Though there was some uncertainty about how colleges impact on sustainability, notably the environment, it was suggested that the responsibility of the college is to contribute to cultural sustainability rather than environmental sustainability. It was recognised that current trends to teach students about sustainability through enrichment activities, or as a bolt on to existing curriculum areas was deemed insufficient, however no suggestions were given on how to overcome the most commonly cited barriers of staff expertise, an overcrowded curriculum, or academic relevance, echoing those cited by Dawe et al (2005), Jones et al (2010), Safarzynska et al, (2012), and Christie et al (2014).

Themes of eco-efficiency dominated perceptions of sustainability as a definition and how it is practiced, and was therefore consistent with one of the dominant themes to emerge from senior stakeholder interviews.

Irrespective of the question asked, discussions surrounding the power and responsibility for sustainability leadership were most frequently discussed. Unlike themes to emerge from interviews, focus group participants focussed more on external leadership dynamics, notably the responsibility of the government to lead the sector on sustainability. The only internal stakeholder group that was repeatedly discussed as having a leadership role was the student body; participants felt that younger people were more familiar with the terminology of sustainability and its meaning. While it was believed that legislative pressures would increase colleges' accountability to sustainability, the personal and professional responsibility of all staff was seen as key for developing the cultural conditions required for sustainability.

On the whole, focus group participants did not reach a consensus about the internal location of power for sustainability leadership. However, reflecting Goldberg (2009), Blincoe and Spangenberg (2009) and Kythreotis (2011) there was a stronger expectation of external intervention, by which the government should be leading the sector, possibly through more legislative measures, in becoming more sustainable.

4.3 Content analysis: the perception of sustainability and key themes of sustainability communication and practice

The following sub-chapters provide an analysis of perceptions of sustainability as portrayed by the information publicly available on the examined websites of all colleges whose leaders or employees have participated within interviews or focus

groups. How sustainability is communicated and practiced will be explored through the accessibility, location and nature of sustainability information available. Specific or inferred ownership or responsibility for sustainability will also be examined in order to determine how published content relays this responsibility to their stakeholders, intentionally or not.

4.3.1 Sustainability communication

The websites of the twenty colleges participating in this study were searched for the communication of sustainability to determine what this communication might suggest about their perceptions, and how this is communicated to the public. One of the twenty college websites examined had no publicly accessible reference to sustainability, sustainable development, or the environment. Searches of the remaining nineteen colleges yielded results relating to sustainability, with coverage and patterns of sustainability communication found to be within three main categories:

1. News stories and curriculum links only (ten colleges)
 - a. Reference to environmental/ sustainability policy documents (two colleges, one publicly available)
2. Webpage within college website as well as news stories, policy documents and course links (seven colleges)
3. Separate websites linked from college website (two colleges)
 - a. Reference to environmental/ sustainability policy documents (six colleges, all publicly available)

Sustainability within the most dominant method of communication, which was through the use of news stories and curriculum links, was found to be subsidiary to the main focus of the search result. In one example, website searches using the terms sustainability, sustainable development, or environmental yielded only results within course descriptions, and yet, highlighted on the main home page, was a news story that contained within its title 'corporate social responsibility' and two uses of the word sustainability within the content. This news story was an anomalous result compared to all other colleges where news stories regarding sustainability were found using website searches (where this function existed).

The details of this story are reflective of a wider pattern where all news stories referred to either the achievement of awards for eco-efficiency initiatives within college

operations, student union led engagement initiatives or wider curriculum engagement initiatives typically within vocational curriculum areas that correlate with website search links to courses. These too were within largely vocational curriculum areas such as 'construction and the built environment', 'engineering', 'land-based studies', 'tourism', 'geography', or 'catering and hospitality', where sustainability was stated as being an add-on module to existing curriculum. In a small number of cases, there were also links to courses specifically tailored to sustainability within existing curriculum areas such as 'environmental studies', or 'renewable energy'.

Renewable energy and energy efficiency were also the key themes of remaining news stories which in several cases referred to the commissioning of 'sustainability' or 'STEM' (Science, Technology, Engineering, and Mathematics) centres, exclusively for the use of vocational curriculum areas such as 'construction and built environment', though the indirect learning benefits to other college stakeholders were also cited. Similarly, several other stories focussed on the opening of new college buildings that had also achieved 'excellent', or 'very good' BREEAM environmental building standards. In both cases, these news stories often cited the economic benefits to the college through either efficiency savings, or by providing a skilled workforce to local industry.

The other method of communicating sustainability was the use of a separate webpage embedded within the college's website. In all cases, search results also revealed news stories and policy documents which were linked to the sustainability webpage; searches also displayed links to curriculum course descriptions, though these were not direct sustainability communications.

While two of these seven webpages (category two) were embedded within the 'Estates' webpage, the focus of all seven-college webpages was sustainability within college operations, typically waste management, travel, energy reduction and efficiency, carbon reduction, 'Fairtrade', and stakeholder engagement, and in one case, entirely about their accommodation strategy. Five of the seven webpages also discussed sustainability within curriculum, stating that embedding sustainability within curriculum was a key aim of the college, but provided examples only of add-on courses or initiatives typically within vocational curriculum areas, most commonly 'construction and the built environment'. Only in three cases did a college's sustainability webpage focus solely on operational sustainability.

Two colleges had separate websites for sustainability linked from the main college website, though in both cases the link was difficult to find. One website provided information on sustainability within both the college's operations and its curriculum, whereas the other website discussed operational sustainability only. Within all dedicated webpages or websites, there was a variety of language used when referring to sustainability. A small number of colleges discussed the environmental, social and economic aspects of sustainability:

"As a College, we're committed to improving our sustainability. This involves making sure we always operate in a way that's both supportive and protective of the environment, while considering the various economic and social impacts" (college 3 website)

Whereas the majority used terms such as 'eco, or 'carbon neutral', denoting a more environmental and operational focus:

"Staff and students all have a role to play in creating an eco-friendly College and adopting more sustainable lifestyles. We are proud of our eco-credentials, but there is always more work to be done" (college 4 website)

"Becoming a carbon neutral organisation reinforces our excellent reputation as a socially and ethically responsible organisation" (college 12 website)

"Our commitment to the environment - As a key educational organisation and employer in the city, we are determined to play our part in contributing to a healthier, cleaner and greener environment" (college 13 website)

"Our sustainable strategy seeks to reduce our CO² emissions to a point where we become carbon neutral, and encourages all our staff, students, visitors and partners to contribute to this aim" (college 13 website)

"We are helping to meet the Government carbon emissions reduction targets to support future generations" (college 12 website)

In all cases, irrespectively of the language used, the nature of the information available and the difficulty in locating it, which in most cases separated sustainability from the main college website narrative, reflects and reinforces emerging perceptions that sustainability is managed as an additional activity to a college's operations and

curriculum. This perception was reinforced further by policy documents, located either within the separate sustainability webpage, or in one case, an environmental policy and green travel plan were located within the 'policies and procedures' webpage. In all cases, policy documents where available were a combination of energy policies, environmental policies, 'Fair Trade' policies, 'Green travel' plans or policies, or sustainability strategies.

The key themes of these policies and examples of sustainability practice will be discussed subsequently.

4.3.2 Sustainability in practice

In order to discern how colleges perceive they practice sustainability, focussed sustainability communications were examined for references of initiatives and activities, the common nature of these activities, and what (if any) management approach to sustainability their activities indicated. Policy documents where publicly available were examined in order to determine the nature of sustainability being practiced within the college, and to which activities the college considered itself accountable. In total, policy documents were publicly available from seven college websites.

Dedicated webpages, sustainability strategies and environmental policy documents where available were dominated by operational sustainability through key themes such as resource conservation, building management, procurement, travel, waste, stakeholder engagement, and management systems. In a minority of cases, health and wellbeing was also referenced as a college objective, typically through the encouragement of healthy eating within the college catering provision. Similarly, in a small number of cases, biodiversity objectives were included within policy documents and webpages where colleges sought to enhance the biodiversity of their estate and consider further biodiversity opportunities.

All dedicated webpages, policy or strategy documents and a small number of news stories referenced waste management as a headline theme. Most commonly, communications referred to the implementation and successes of college recycling and zero-landfill waste contracts, and commitments to increasing recycling and reducing waste by raising staff and student awareness through waste management campaigns. Though waste reduction was also commonly cited, only a small number of examples

were given, and in the majority of cases referred to the reduction of paper waste typically achieved through the management of staff and student printing allowances. A small number of colleges also gave examples of the management of college furniture waste through either donation to local charities, or the repair and reuse of furniture and equipment to be reused again by the college.

Aims and objectives to encourage environmentally friendly or more sustainable business and commuter travel behaviours were also referenced by all colleges, set out either within separate 'Green Travel Plan' policy documents, as a single objective within other policy documents, or promoted within sustainability webpages. All methods of communication included the promotion and encouragement of alternative modes of transport to staff and students through the introduction of discounted rail and bus tickets, or free breakfasts offered to those travelling to college by foot or bicycle. In a smaller number of cases, video conferencing was promoted to eliminate the need to travel.

There was also a strong emphasis on facility investment to support alternative travel arrangements such as cycle parking, lockers, showers, dedicated car share schemes (often facilitated by an external service provider), the replacement of college fleet vehicles with electric vehicles, and in one case, using waste vegetable oil from college canteens as fleet vehicle fuel. Other management changes such as the introduction of cycle business mileage allowances, and the reduction of car business mileage allowances were referenced in a small number of cases.

All webpages and policy documents included either plans to introduce environmental management systems, or reported progress against environmental management practices such as the ISO14001 standard, or internally developed 'carbon management plans'. These often included statistics against key performance indicators to reduce waste to landfill, utility consumption and CO₂ emissions, and to increase recycling, space utilisation, and energy efficiency either through renewable energy initiatives or new building developments. In a minority of cases, external funding or internal financial savings targets were set to enable the college to re-invest in renewable technologies, and often communicated the business motive to engage with sustainability.

Policy documents and webpages also made reference to natural resource conservation and pollution prevention. While there was a strong commitment to remaining legally compliant with relevant environmental pollution prevention laws, natural resource conservation was communicated as something that the college aims to do wherever practicable. Some colleges stated they would develop strategies for sustainable energy, resource and water consumption. A small number of colleges also stated they would avoid the use of non-renewable resources where feasible, and ensure the prudent use of resources. Though this would appear to suggest a nod towards more transformative measures (i.e. doing better things rather than doing things better), it is perhaps more reflective of the enthusiasm or ambition of the person responsible, rather than a sincere commitment of the college's leadership.

Many colleges made statements regarding sustainable procurement practices which often referred to the selling of 'Fairtrade' or locally sourced products within the college's catering facilities; several colleges also had publicly available 'Fairtrade' policies. Sustainable procurement practices were also synonymous with the procurement of local goods and services but often with the proviso that this should not conflict with achieving best economic value for the college.

Within all dedicated sustainability communications and policy documents, the management of existing buildings or new building developments was cited as a key contribution to a college's sustainability. Reducing energy consumption through either the better utilisation, or retro-fitting of renewable or more energy efficient technologies into existing college buildings, or designing energy eco-efficiency into new building developments (for example, through rainwater harvesting or renewable energy sources) were the most commonly cited themes. Other more ambiguous statements such as simply "being aware of" and "reducing a buildings environmental impact", or "improving and maintaining a college's internal and external environment" were also included within several college policies, and were sometimes linked to the college's 'Health and Safety' policy. The indirect curriculum contributions of the sustainability credentials of building refurbishments or new building developments often simultaneously referred to curriculum engagement, particularly for vocational students, raising awareness of sustainability to all staff and students, and the college's contribution to the local economy as part of the local labour eco-system. For example, the opening of 'eco-centre's' or 'STEM' centres designed specifically for the teaching of low carbon skills within vocational curriculum areas such as 'construction and the built

environment' were cited as being important for local businesses and the local economy. Indeed, stakeholder engagement was another commonly cited theme within sustainability objectives, with the majority of colleges focussing on external relationships, and working with other local businesses and contractors to promote and encourage local networks of sound environmental practice.

Curriculum engagement

A minority of policy documents included curriculum objectives in addition to operational objectives but were more limited in scope and in detail. Specified curriculum engagement initiatives or objectives to include sustainability within curriculum areas were typically discussed as an add-on to vocational curriculum areas only, such as construction, hair and beauty, or land-based studies. Where curriculum was not specified, policy objectives that referred to indirect teaching and learning through stakeholder engagement sought to raise sustainability or environmental awareness with staff, students, and the wider college community. In the absence of policy documents, or reference to sustainability within policy documents, curriculum was similarly communicated on college websites either as something that is included within vocational curriculum areas, or as an extra-curricula activity involving initiatives that supported operational sustainability. For example, many colleges stated they had conducted 'switch-off' campaigns or a 'sustainability day' to raise awareness of energy usage and "to promote sustainability with the aim to embed sustainability as an integral part of the business of the college" (college 17 website).

Many webpages and some policy documents stated either that the college intended to, or had successfully embedded sustainability within all curriculum areas; that specific courses relevant to sustainability *were going* to be developed; or, that sustainability *would be* promoted to staff and students through separate communication channels. In the former case, several colleges claimed to have successfully embedded sustainability within their curriculum, or were seeking to embed sustainability within its curriculum. However, with the exception of business management, examples of 'embedded' practice exclusively referred to vocational curriculum areas such as 'STEM' subjects (engineering, computing, and motor vehicle), construction and the built environment, land-based studies, hair and beauty, hospitality, tourism and sport. One college explicitly stated that it would ensure "all vocational programmes cover their sectors latest practice on environmental sustainability" (college 13 policy). Those colleges who stated that specific courses would be developed focussed on dedicating curriculum to

the perceived green energy, low carbon or alternative technologies skills required for a low carbon economy.

Other approaches to sustainability within curriculum were more environmental or globally focussed, with a college stating “students would be provided with opportunities to raise awareness on environmental issues through the incorporation of environmental and sustainable development material into courses” (college 1 policy), the “inclusion of environmental awareness issues in curriculum delivery where appropriate” (college 13 policy), and more ambiguously in one case, a policy document stated the college would “incorporate sustainability into curriculum wherever possible” (college 20 policy). Two other colleges stated that staff and student awareness of global environmental issues and global citizenship would be raised through environmentally themed initiatives, such as promoting sustainability to staff and students through separate communications, typically focussing on staff development programmes where staff would be asked to participate in a voluntary environmental or sustainability module. Conversely, in several cases, colleges stated that students would be taught sustainability as part of their compulsory tutorial programme, separate to their core curriculum choices. A small number of colleges stated that students would be given tours of the low carbon features of their college buildings, and would further promote sustainability through events throughout the academic year.

4.3.3 Ownership of sustainability

Key themes of perceptions of sustainability and examples of sustainability in practice have been examined based on publicly available information found within college webpages. Evidence of power for sustainability where specified or inferred within the examined publicly available information will be examined here, focussing on the location of sustainability information within college webpages and the ease of access. The information itself will be examined for common themes of explicit or implied references to where within the college the responsibility for sustainability lies.

Of the twenty college websites examined, dedicated sustainability communications were located within seven embedded webpages and two separate websites linked from the main website. Six of these nine colleges also had publicly available policy documents, and the majority of the nine colleges also had news stories or links to courses that referred to sustainability, sustainable development, or the environment.

Though a further ten colleges had only news stories or curriculum links to sustainability, all of which were located by using the website search function, two of these colleges also referred to sustainability or environmental policy documents, one of which was publicly available.

Within all of the examined college websites, sustainability information was not easily accessible or signposted from the college homepage unlike other subjects such as equality and diversity and safeguarding. In several cases, sustainability webpages, news stories and policy documents were only accessible using college website search functions and could not be located through navigational searches where in the majority of cases, information was located within college website 'about us' section, providing links to sustainability and other webpages. In one case policy documents were located within the 'policies, procedures, and staff unions' section, accessible from the 'corporate information' webpage. In two other cases, sustainability information was found using the website search function, but was found to be embedded within the 'estates and buildings' section which in one case, was signposted from the website home page.

The location of information within 'estates and buildings' webpages infers operational responsibility of sustainability, supporting a dominant perception that it is synonymous with buildings and eco-efficiency. In the majority of cases where information was located within 'about us' pages, responsibility was not specified and instead referred simply to 'the college'. Only one of the six policy documents available was signed, denoting responsibility of the policy and its objective by its patron, the college Principal. In four of the remaining cases, policy documents were unsigned and in two cases, were also undated. In one case, a policy had been dated but its review date had expired and a superseding document was neither located nor referenced.

Three policies were neither signed nor dated, but referenced responsibility of their objectives belonging to the 'Green team', the Energy officer, Estates manager, or the Director of corporate services. Another policy objective stated that the college Director of planning and performance should establish and lead a 'sustainable development group' to develop and monitor actions, referring to an environmental policy, curriculum strategy and green travel plan, the links to all of which were no longer available.

Of the twenty websites examined and the information contained therein, nine did not specify power and responsibility for sustainability. In the ten cases that did, management responsibility was given primarily to members of staff within the operational and non-academic functions of the college, reinforcing the dominant perception that sustainability is an operational issue and back of house function. Specifically named positions of responsibility were the Director of Sustainability, Director of corporate services, Sustainability manager, Director of Property, Property services manager, Director of planning and performance, Health and safety manager, 'Estates' management, Energy office and Estates manager, Director of Estates, Health, safety and environment manager, and in one case, simply 'middle management' and the Student Union.

Though only two colleges had only policy documents available, in the remaining nine cases where more extensive sustainability information was available in addition to policy documents, the absence of designated responsibility aside from policy documents suggests that it is perceived as a management activity only. Another policy objective referred responsibility to college staff members, for example: "All budget holders should consider the carbon footprint and recyclability of products prior to placing orders". However, as many of these policies were neither unsigned nor specified overall responsibility, enforcement or monitoring of the policy objectives is ambiguous.

In most cases, explicit references to individuals with operational responsibilities for the management of sustainability reinforces the presence of power pointing either to an individual or particular area of the business, whereas the implied or ambiguous responsibility for sustainability suggests that it is a shared responsibility, and it is up to the enthusiasm of interested individuals to take leadership.

4.4 Perceptions of sustainability at a regime and landscape level

The availability of sustainability information within the websites of organisations operating as representatives or leaders of the FE sector depended on the interpretation of the term sustainability itself. If interpreted literally as a term to describe business continuity, information was more plentiful than that regarding the holistic term, though this was not hierarchically dependent. For example, only within the AoC website was specific information regarding sustainability as a holistic term located.

Websites belonging to the 157 Group, the Department for Education (DfE), the Department for Business, Innovation and Skills (BIS), the Education Training Foundation (EFA) and Education and Training Foundation (ETF) did not contain any remaining publicly available information specifically regarding sustainability and the FE sector. Likewise, though the SFA website did not contain any specific reference to sustainability, it was felt pertinent to explore available documents in greater detail given that this organisation replaced the LSC who had up until their dissolution, had taken an increasingly strong lead on sustainability within the sector.

At a regime level: The 157 Group and AoC

Searches of the 157 Group website only yielded results that referred to sustainability in its literal sense. In all five cases, sustainability was either used to describe sustainable funding, employment, or learning. In one case, a paper was described as “a commercial strategy for sustainability” (157 Group, 2016), referring to a more streamlined finance, Human Resources and payroll management system for colleges.

The AoC

Reflecting but not necessarily concurring with the carbon and economically biased nature of BIS communications which are discussed shortly, the AoC within their archived document ‘Greening FE: creating a carbon reduction culture’ 2010 state that the key drivers for the government are carbon reduction, rather than skills or curriculum. Despite BIS indicating that college’s contribution to sustainability is through their estates and facilities functions, the AoC suggests that the sector’s role to sustainability is broader than carbon reduction. Nevertheless, the emphasis of other archived and existing AoC documents is carbon and eco-efficiency focussed.

Searches of the current AoC website revealed a webpage dedicated to the communication of sustainability. Key themes within this webpage reveal a CSR or STEM

bias, where sustainability is perceived as something with which colleges must remain compliant in order to achieve business aims, or synonymous with ensuring the employability of students.

Linked from the webpage are several 'sustainability briefings', the key themes of which were also found to reflect those revealed at a niche level: climate change, green and low carbon skills, student leadership, offshore energy, and biodiversity. Perceptions that sustainability is the responsibility of estates and facilities management is further supported by advertised sector sustainability meetings being combined with existing estates manager's network meetings.

The webpage also cites an ambiguous statistic stating: "some 99% of colleges already have sustainability as a key aim identified in their strategic plans" (AoC website, 2016[a]). Though the statistic is not referenced, this could reflect the previously discussed terminology issue whereby sustainability is used as a literal, rather than holistic term within college strategic plans. An analysis of this study's participating college strategy documents was conducted to test this theory. Annual reports, mission statements, strategy documents, and the college's aims and values where available, were analysed for reference to sustainability. In ten of the twenty examined cases, sustainability was not referenced in either interpretation, and was mixed within the remaining ten cases. Where sustainability was either referenced in its own section, or as part of the estates section within the annual review. In one case, sustainability was only mentioned with regards to the achievement of a sustainability award within its construction curriculum. In other cases, sustainability was a core value within the college strategy, but the term was also used with strategy documents in a literal sense, often referring to financial sustainability, or sustainable growth. On two occasions, a strategy document and an annual report referenced sustainability within the curriculum, but within the typically cited areas of added-value modules such as employability, or areas that teach green skills. In the remaining three cases, sustainability was found to be used only in the literal sense either as a core value, or to describe objectives within annual reports.

In addition to the existing AoC sustainability webpage, key themes contained within three guidance documents that are no longer available on the AoC website, published in 2007 and 2008, reflect and also could be partially responsible for those themes that have since emerged at a niche level. For example, the best practice examples of sustainability in FE, showcased within the 2007 AoC 'Green colleges' brochure focussed

on buildings, paper reduction strategies, recycling initiatives, student campaigns, green travel, greenhouse gas reductions, and within curriculum, additions to existing areas such as land-based studies, specific sustainability courses on renewable energy, or including global citizenship within tutorial programmes.

The 2008 'Achieving Green Colleges' AoC short to long-term strategy document, produced to guide colleges in becoming sustainable institutions also focussed on identical themes. Additionally, the vision that it sets out within this strategy document commits to achieving carbon-neutral college buildings as a long-term objective, and to use sustainable development within all curriculum areas to enhance the UK skills base and ensure economic prosperity. This vision reinforces perceptions that sustainability is vocationally embedded, typically used to add-value to existing business and economic processes.

When describing trends in sustainability practice to denote the progress of the sector, one example of leadership, nine examples of buildings, four examples of transport, and two examples of curriculum were given. The curriculum examples also echo those given within the 'Green colleges' brochure, where examples either included extra-curricula activities, land-based studies, renewable energy, or dedicated, short-term, sustainability courses. Indeed, two graphs denoting curriculum areas in which colleges have adopted sustainability reinforce the emergent trend that the most common areas of adoption are construction and the built environment, land-based studies, humanities, travel and tourism, and enrichment or tutorial programmes.

The strategy document also states that research conducted by the AoC revealed that the most common barriers to implementing sustainability within colleges are financial, but could be overcome by changes within government policy. This reinforces previously highlighted dominant perceptions of barriers by college Principals, but also that sustainability is something that must be invested in, and is therefore only something that can be physically demonstrated. Seeking changes in government policy to overcome barriers of implementing sustainability is evidence of power pointing at a regime to landscape level. Power pointing is further demonstrated within this document, where it states that to help colleges achieve sustainability and overcome already busy agendas, colleges require sustainable development champions'. Not only is this demonstrative of sustainability being perceived as one person's responsibility, but also is misaligned with the long-term goal stated within this document of colleges

becoming carbon neutral; a goal that cannot be the responsibility of one person.

Themes within the 2008 AoC South West colleges' case study were again similar to those already identified. The most commonly cited examples of sustainability in practice were energy management, recycling and waste management, green travel plans and initiatives, environmental policies and management systems, building improvements or new building developments, carbon management, student union initiatives and 'Fairtrade', the employment of sustainability professionals, or recruitment of sustainability 'champions', sustainable procurement, renewable energy, paper consumption management, sustainable construction 'centres', biodiversity, enrichment activities, and a 'healthy college' initiative. Though this case study document reflected all of themes identified within the 2007 brochure, and the 2008 strategy document, it also highlighted that the majority of common barriers are within the responsibility of colleges leadership and management; notably, their financial decision making.

Another atypical statement made within this document was the recognition that colleges have extremely active relationships with local businesses and their communities, however this engagement was not centred on sustainable development per se, rather these relationships were perceived to be important for the financial sustainability of colleges. This reflects a terminology trend used by leaders interviewed as part of this study, which emphasised the importance of strong external relationships for the literal sustainability of colleges.

At a landscape level: the SFA, EFA, ETF, DfE and BIS.

The SFA

All available SFA annual reports were therefore examined for evidence of sustainability. Though there were several common themes throughout, it is suggested that there was a gradual distancing of the SFA's role to sustainability through education as annual reports (and the organisation's purpose) matured. For instance, in the final chapters of the two earliest reports (2010/11, 2011/12), there was the subheading 'Environmental, social and community issues' which in three bullet points, stated the following:

- "The Agency continues to implement policies (developed under the LSC [in 2010/11 report only] to reduce waste, improve use of resources and support local communities.

- The Agency has played a significant role in the development of the learning and skills of the nation. Note 4 to the accounts on pages 67 to 71 shows the range of programmes that were funded in 2010-11.
- Agency staff and their friends and families routinely took part in many charitable fund-raising events and were duly celebrated in in-house communications” (SFA, 2011:13; SFA, 2012:11).

It is encouraging to see social and community issues being discussed alongside environmental issues, and that social issues such as the contribution colleges make through their provision of teaching and learning was described using language that alluded to the intrinsic worth of education (irrespective of whether it is education for sustainable development). Though similar headings (though increasingly slimmer in their content) were contained in subsequent reports, the nuances of each gradually changed to reflect a more economical focus of the contribution of further education. For example, the 2014/15 omitted the ‘environmental, social and community’ sub-heading altogether, and instead discussed these issues as part of ‘social, community and human rights issues’. In four paragraphs, the sub-chapter discussed how FE creates skills that contribute to economic growth and prosperity, and that enable people to act as productive citizens and employees. Additionally, Agency members of staff are able to participate in social, environmental and economic initiatives within communities as part of their staff development programmes. Later annual reports also omitted sustainability and environmental issues from their achievements, despite the Agency having met its carbon emissions reduction target in 2014/15.

The 2012/13, 2013/14 and 2014/15 reports also referred to a sustainability report further on in the document which in each, contained the following key features:

- Electricity and gas consumption, business travel, waste management, procurement, and the use of recycled paper were the only factors discussed within each of the reports. Wording within each annual report was almost identical, but later reports also included a ‘Biodiversity’ subheading stating, “The Agency has a minimal external estate and therefore has not been involved in biodiversity action planning” (SFA, 2013:36).
- Later reports also included a ‘sustainable procurement’ subheading, referencing sundry expenses such as travel, conferencing and stationery, however the Agency stated that accountability for the sustainability of each of

these contracts rests with the Crown Commercial Service who conducted the tender exercises.

- Within the 2014/15 annual report it was stated that the Agency's single target to reduce CO₂ emissions by 25% by 2016 had been met. However there was no indication of subsequent targets or their application to other environmental aspects and impacts of the Agency. Indeed, it was stated within this report that the Agency's main and direct impacts are due to its electricity and gas consumption and business travel.

In summary, the SFA's annual reports have gradually distanced themselves from a more holistic recognition of sustainability and the role of education (the work of the LSC), to a more operationally focussed interpretation, but focussing on the narrow scope of direct impacts only and displacing responsibility of other or indirect emissions that do not fall under the legislative requirements of the Carbon Reduction Commitment to other departments. Additionally, the Agency stated that many of the emission savings have been achieved by estate rationalisation, not estate improvements, or better still, cultural changes. Even though 'sustainability reports' are only a relatively recent addition to the annual reports, their depth and length of content has narrowed compared with earlier reports that did not contain 'sustainability reports'. It does not discuss the social impacts of the education it is funding, the focus of skills and economic growth, or how and where it invests its money. In its description of improvements it also uses vocabulary that will only resonate with those within support estates functions, or put another way, the language used would be inaccessible to those unfamiliar with the legislation or terminology – even if they had an active interest in sustainability. While the Agency's annual reports only concern the activities of the Agency itself and not the sectors it funds (to whom it only provides environmental sustainability guidance relating to capital developments), and although sustainability within these reports has been communicated in an inconspicuous manner, they are nonetheless within the public domain. Therefore should anyone read one of these annual reports and take note of the sustainability approach of the Agency towards its own activities, it would perhaps reinforce perceptions that sustainability is process of environmental management only. Such patterns of communication are likely to have contributed to the reason why many of the study's participating colleges consider sustainability to be the role of operational management; indeed, because much of the language used within discussions of sustainability is specialised, a senior

leader without specialist knowledge is likely to pass on (instead of digesting) the information to someone they feel is qualified.

The EFA and ETF

Searches of the EFA website using the same search terms did not generate any results other than sustainability being used as a literal term within Agency guidance documents. Similarly, searches of the Education and Training foundation (though there was a separately signposted section within their 'About us' webpage dedicated to Equality and Diversity) were fruitless, and sustainability was not discussed or mentioned within their five-year plan (2015-2020). Only once was sustainability referenced, and this was within the 'How to write a successful bid' webpage where sustainability was mentioned as a prefix to the following statement: "We look for bids that have the potential to be sustainable or have considered an exit strategy". It is not clear to which interpretation of sustainability this refers. The website did however have a dedicated webpage to 'Equality and Diversity' signposted from the 'About us' section but adoption or reference to the sustainable development work carried out by the Foundation's preceding department, LSIS, could not be located.

The DfE

When searching the website of the DfE, 205 results were generated when using the search terms 'sustainability', 'sustainable development', and 'environment'. The majority of the 205 search results were generated as a result of documents using the word sustainability, but as a literal term within generic reports concerning all other facets of the department's responsibility. Only a minority of the search results referred to sustainability as a holistic term, but were guidance documents specifically developed for schools. 'Top tips for sustainability in schools' and 'Top tips to reduce energy and water use in schools' were both published in 2012 and focussed on the same themes as information found within individual college websites: carbon reduction, energy and water reduction, sustainable purchasing, sustainable travel, reducing waste, catering and food, and global citizenship.

BIS

Searches of the BIS website generated 1111 results, however sustainability was either referred to within paper titles concerning economic growth, growth of industries, or within the terms of reference for the 'Green construction board'. In one case, a paper referred specifically to sustainability and further education, but used only economically biased language: "Skills are vital to our future and improving skills is essential to building sustainable growth and stronger communities. A skilled workforce is necessary to stimulate the private- sector growth that will bring new jobs and new prosperity all over this country. And a strong further education and skills system is fundamental to social mobility..." (BIS, 2010: 3). This paper, entitled 'Skills for Sustainable Growth' is also referenced in the archived (but still available online) 2010 'Carbon reduction delivery plan' (CRDP), where BIS state that in addition to new buildings, leadership and the delivery of skills for a low carbon economy are also required.

The CRDP sets out carbon reduction targets for all sectors under the responsibility of BIS, and on page 63 of the 63-page document, specifies its targets for the FE sector. BIS states that it will share the responsibility for achieving the carbon reduction target with the FE sector by continuing to fund the capital investment programme; a fund available to FE colleges for the development of new, more efficient college buildings. This eco-efficiency focus with particular attention on carbon emissions whilst frustrating, could be reflective of the areas of responsibility the department has which, as stated by Beltran (2013) often dictates the focus and terminology used. The particular focus of BIS been examined but not challenged by the House of Common's environmental audit committee who stated, "The lesson for BIS is that increased economic growth (an aim underpinning much of its policies) can have both potentially good (e.g. increased employment or social cohesion) and bad (e.g. emissions) sustainability consequences" (HOC, 2013: 10). This may have compounded perceptions that sustainability is not only synonymous with climate change and greenhouse gas emissions, but is the only direct way in which BIS and all of its departments contribute to unsustainability.

4.5 Results conclusion

Sustainability means strategy, but must not change strategy

Results to emerge from interviews, focus groups and content analysis correlate with the findings of Stavins et al (2003) and Lozano (2008) whereby perceptions of sustainability commonly adhere to a conventional economist perspective and a non-environmental degradation perspective. This study has demonstrated that the two ways in which FE leaders (interchangeably) interpret sustainability reflect a perception that it is compatible with existing development paths and/ or is something that concerns the natural environment only (Cullingford, 2004[a]; Lozano, 2006; Dade and Hassenzahl, 2013). As will be discussed in the subsequent chapter, this environmental focus of the more holistic interpretation of sustainability is unfortunate given that it is to this that each management level of FE demonstrated least accountability. However, using the analytical lens of the TMF it is suggested that the overall management approach to sustainability is still dependent on how it is interpreted. For example, discussions of strategic sustainability with leaders and the analysis of documents produced at a landscape level of leadership referred exclusively to the literal and conventional economist interpretation of sustainability, whereby sustainability is either simply the continuation and success of current business practices, or can be used as a tool to enhance economic development in order to ensure the continuation or sustainability of colleges as businesses. In this regard, perceptions of sustainability reflect a tactical or even strategic leadership approach because they are setting longer-term goals and considering ways in which to build business resilience.

However, examples of sustainability in practice (explicitly and implicitly suggested through each data set) were limited to operational activities within niche environments only. This therefore suggests that non-environmental degradation perspectives are resonant with an operational management approach. Perceptions of uncertainty and financial concerns are the most significant issues for FE leaders over a mid-long-term time frame, which may exacerbate perceptions of the relevance of sustainability as both themes are products of and perpetuate short term, reactive tendencies, as highlighted in sub-chapter 2.3.1 by Doppelt, 2010, Loorbach, 2010, and Ryan and Cotton, 2013.

As examples of environmental sustainability are limited to an operational level only, this could suggest that environmental sustainability is not seen as critical to the sector's strategic sustainability.

As long as it pays, it is Estates' job

Perceptions of sustainability were certainly found to have bearing on how responsibility for sustainability was perceived. Indeed, this changed depending on the level of leadership being examined. At a college level, leaders indicated clearly their personal responsibility for the financial sustainability of the college, but expressed a need for others to direct or assign responsibility, or 'power-pointing' with regards to holistic sustainability. When interviewing Principals, this direction of power pointing was usually upwards to the government, but some leaders also pointed downwards to interested or enthusiastic individuals within colleges. Not one college Principal claimed responsibility for their college's sustainability approach and instead, indicated only transactional leadership approaches (Loorbach, 2010; Sedlacek, 2013) that favoured the responsibility of sustainability belonging to a specific individual. Therefore, if leadership is "a process of influencing others towards a common vision" (Middlebrooks et al, 2009), then college leaders are not demonstrating a leadership towards holistic sustainability, only financial sustainability.

In the few instances where Vice-Principals or Directors were interviewed instead of Principals, responsibility was perceived to rest with the college Principal. Focus group participants on the other hand strongly indicated that it was both the responsibility of the government to introduce the necessary incentives for sustainability to gain traction within the sector, which within their college should be led by the Principal. Focus groups were also more consistent in their perceptions of sustainability as a term whereby their focus was on the holistic rather than literal term, and on the whole referred to operational examples of sustainability in practice.

Explicit and inferred references to those responsible for sustainability within online and published content found that the dominant trend was the specified or suggested responsibility of operational business support areas, such as the Director of Property, or less commonly, dedicated sustainability roles such as the Director of Sustainability, or Sustainability manager. Indeed, where information existed on college websites and webpages, it was typically located within 'Estates and Buildings' webpages and in all cases, did not denote senior endorsement of the practices being described. The endorsement was implicitly suggested to rest with the operational function of the college. Indeed, sustainability portrayed by websites at a regime and landscape level was anonymously published and projected the ownership and responsibility for sustainability leadership either onto individual colleges and individuals within colleges,

or more broadly, stating that this guidance should be sufficient for colleges to self-lead on its implementation. While the AoC did state that they believed a college's sustainability role goes beyond eco-efficiency, examples of good sustainability practice provided within AoC publications and online typically reinforce an eco-efficiency and operational bias. This may be reflective of a gap between rhetoric and reality, or the theory of sustainability and how it is practiced, as reported by Wals and Blewitt, (2010), Stevenson, (2007), and Shiel (2013).

Issues relating to power are suggestive of a lack of confidence and uncertainty of how colleges are able to contribute to sustainable development, which may be inhibiting leaders to seize autonomy at a more local level. Perceptions of power may therefore be based on convenience by all leadership levels if there is widespread uncertainty of how the sector is able to contribute to sustainable development.

Old habits die hard

Despite the different emphases of perceptions of sustainability as a term, when discussing the holistic interpretation, all levels of management indicated a perception that sustainability is an add-on to core business or core curriculum and can only be a peripheral consideration to college priorities. Examples of sustainability in practice consistently reflected a focus on operational eco-efficiency initiatives, or referring to curriculum engagement which was also dominated by 'added on' eco-efficiency projects or modules within vocational curriculum areas, teaching students and staff about sustainability rather than transforming education so that it educates for sustainability (Sterling, 2013).

The similarities and trends identified in information held at a niche, regime, and landscape level may be reflective of individual colleges adopting and continuing practices and perceptions based on the information advocated at a regime level particularly, within the period 2005 – 2010. This continuation and focus on largely operational activities may be prolonging the perception laterally and hierarchically within the sector that colleges should and continue to demonstrate interest in sustainability within their operations, and overlooking any niche level demand or interest for sustainability to be integrated more into college curriculum. In other words, because current practices in sustainability have generally established themselves as being supportive of the broader sector agenda of making efficiencies to ensure business continuity, there may be little management interest or time to consider the

resources required to develop a more holistic approach to sustainability across the sector. This resonates with Fien (2002) and Sterling (2013) who believe universities and colleges find it easier to 'tackle' campus greening and eco-efficiency rather than to instil the cultural and behaviour changes required to embed sustainability holistically and systemically within institutions.

Chapter 5. Discussion

This chapter presents the thesis discussion and is split into three sub-chapters: the first sub-chapter discusses the study's findings under the three dominant themes explored by the research questions – perceptions of sustainability, power and practice – with each sub-chapter discussing areas of congruence with existing key theories regarding sustainability and leadership within education speculating on the potential reasons behind the study's results, or put more simply, the *why* behind the *what*. The second sub-chapter distils the discussion in order to answer each of the study's research questions specifically, and provides an answer to the study's research objective. A final concluding chapter summarising the research findings and its most dominant themes ends the chapter.

5.1 Perceptions, practice and power; an issue of the perceived diminishing return of environmental responsibility.

This chapter contextualises the research findings and areas of congruence with existing key theories regarding sustainability and leadership within education. The chapter is split into two sub-chapters, which respectively discuss the dominant themes to emerge from perceptions and practice of sustainability, and how power and responsibility for sustainability is perceived and actually distributed within the sector's leadership hierarchy. Each sub-chapter is then distilled to provide specific answers to each of the study's research questions in the following chapter.

5.1.1 The adoption of sustainability to refine unsustainability

It is ironic that the term 'sustainable development' was conceived as a reaction to an increasing awareness of environmental degradation (Strong and Hemphill, 2009), yet as demonstrated within this study, the term has also been adopted to mean the continuation of practices that directly or indirectly perpetuate environmental degradation. As discussed previously (and will be in greater detail subsequently), this could reflect a gap between the rhetoric and reality of sustainability as identified within HE by Loorbach, 2010 and Sedlacek, 2013. More specifically though, this study has shown that FE leaders also demonstrate a broader conceptual understanding of sustainability than how they believe it is practiced within their institutions. However, more worryingly there is a sector trend particularly within the higher echelons of FE leadership, of sustainability being purported as a tool that is conducive with sustainable development, oblivious to the reality that it is in fact only refining unsustainability.

This observation is partially based on the different emphases each management level placed onto their interpretation of sustainability, for example, interview participants indicated a less consistent perception of sustainable development and interchangeably used different interpretations, often within the same sentence but did not discuss (and did not acknowledge that they were doing it) the conflict that this presented. Most commonly, leaders referred to the interpretation that sustainability is a synonym for the continuation of existing development paths, reflecting the understanding of HE academics studied by Reid and Petocz (2006) and Christie et al (2014), that is essentially, to keep something going. However leaders also commonly referred to the interpretation whereby sustainability concerns the natural environment only (Doppelt, 2008), the protection of which is not incompatible with existing development paths. These interpretations resonate with the conventional economist perspective (Stavins et al, 2003; Lozano, 2008) to which sustainability serves as an efficiency tool to existing development paths, or a non-environmental degradation perspective, which focuses on environmental, issues only (Cullingford, 2004[a]; Lozano, 2006; Dade and Hassenzahl, 2013). Not only do both interpretations continue to serve the existing paradigm of industrial development and consumerism (Quilley, 2009), but they also reinforce Wals and Jickling (2002) and Cullingford (2004[a]) who suggest that contradictory interpretations of sustainability are used to suit different agendas that typically remain centred on a human worldview placing emphasis on 'sustained' or 'successful' growth as an indicator of economic development (Williams and Millington, 2004; Waas et al, 2011). Focus groups discussions more consistently referred to environmental sustainability both as a concept and in practice, however the emphasis remained – as did the interview discussions - on a human worldview, whereby continued economic growth was perceived as not being mutually exclusive from environmental protection.

Overall, unless referring to sustainability as an activity that can lead to financial savings to support an organisations' sustainability, its relevance to FE as a holistic concept was dismissed. This suggests that learning about sustainability within FE has stalled at simply accommodating convenient aspects of sustainable development. More broadly, this also indicates that the crisis of perception of sustainability identified by Sterling (2004) – over a decade ago - which revolves around the common assumption that sustainability can be achieved by simply 'adding it' to existing structures and processes, withstands.

What subsequent discussions will highlight is that this perception is not necessarily based on a lack of understanding that the current paradigm is unsustainable, instead it is that the current paradigm remains comfortable to those individuals, societies and institutions and countries in power it serves. The incentive to shift perspectives from a human centred worldview to an ecological worldview is neither perceived nor desired, especially so if it is recognised that the campaign for sustainability is one of austerity, not abundance (Monbiot, 2006). Reinforcing Cullingford (2004[b]) who also believes that sustainability is often just associated with personal inconvenience, participants of this study stated that the activities carried out under the name of sustainability already evoke negative perceptions of financial sacrifice and personal inconvenience. This therefore does not instil the optimism that society wants sustainable development enough to make the necessary changes for it to happen.

Furthermore, even if incentivised financially, this suggests that it is only perceived as a worthy endeavour if everyone else is doing it (Monbiot, 2006), and not as something that is intrinsically worthwhile. Indeed, the fact that participants stated that the personal or business gain from implementing sustainability initiatives is slow to materialise suggests that the motive for such initiatives, particularly at an organisation level, is financially or reputationally driven rather than driven by a desire to reduce dependence on fossil fuels and behave more sustainably. As recognised by Banerjee (2008), there is not the instant reward or gratification from implementing sustainability initiatives beyond the 'lower hanging fruit'. This is problematic given that the more difficult measures beyond accommodating sustainability are undoubtedly less appealing to those in positions of power as "there is a mismatch in timing between the environmental and electoral impact" (Monbiot, 2006: 22).

Furthermore when sustainability is referenced as something that can be 'indulged' in only when everything else is 'sorted' (Phillips, 2009[a]), it does not instil confidence that voluntarism rather than coercion (Carroll, 1999) will be forthcoming at an organisational or societal level. More worryingly, given that this indulgent activity can only be in reference to the environment, as everything else concerns matters that have immediate impact on humans – i.e. social wellbeing and financial security, by the time society is ready for either coercion or voluntarism, it may be ecologically too late.

What this study reinforces is that sustainability does not just suffer from a crisis of perception, but that the paradigm within which western society operates implicitly

purports environmental unaccountability. In other words, even if an individual or organisation understands and is prepared to take the necessary steps towards sustainability, they or it cannot transition to paradigmatic change at a rate “faster than society as a whole” (Sterling, 2004:58). As discussed in chapter 2, values are slow to change but they are still capable of change (Shields et al, 2002; Loorbach, 2010) and while this may be the most realistic speed at which social and economic systems can incrementally adapt and change, it is suggested that it is an insufficient speed for the prevention of further environmental damage that may subsequently exceed tipping points of system collapse (Monbiot, 2006; Kumar, 2009; Westley et al, 2011). It is likely then that a transition to a more sustainable paradigm can only take place at a speed that is unable to prevent further species loss and ecological damage. Even then, people will only act when everyone else is perceived to be doing so, and this therefore relies upon the sharing of power by those whose interest is to do precisely the opposite (Monbiot, 2006).

A human worldview of sustainability

Leaders and focus groups shared the perception that colleges are unsustainable through their environmental impacts such as resource use and campus operations. Therefore colleges could become more sustainable through the better management, or improved eco-efficiency of these activities. This resonates with one of the five most commonly identified approaches to sustainability taken by universities, as described by Hopkinson et al (2004), Brinkhurst et al (2011), and Bessant et al (2015):

- Education and teaching students about sustainability, which may also be reflected in some changes within academic curricula.
- Sustainability-focused research.
- Campus operations and environmental management which seeks to reduce the impact of the universities activities
- Engaging with other businesses and the community on sustainability issues.
- Policy and administrative based planning for sustainability.

College websites and policy documents also focused on environmental management in their implied or explicit reference to sustainable development, but with more consistency than interview and focus group participants. Furthermore, websites and policy documents indicated a more environmentally focussed approach whereby references were made to protecting and reducing risk to the natural environment,

reflecting language also found within environmental management frameworks such as ISO14001 (Wang, 2010).

Whereas policy documents stated that the environment should be protected, interview and focus group discussions remained human focussed, suggesting that producing less waste and mitigating humans' impact on the environment is as far as we should be expected to go if human living standards are to be improved. Indeed, participants likened sustainability activities to health and safety and equality and diversity activities, both of which were seen as new but important issues that have gradually become integrated into college activities. Participants stated that although colleges were incentivised to act on health and safety and equality and diversity by legislation (and the fear of litigation), which at the time was perceived as a nuisance and an extra that could not be resourced, sustainability would eventually become integrated in the same way. This reinforces Goldberg (2009) whereby government interventions may be seen as inefficient or incompetent, but are perceived to hold responsibility for solving social problems.

This human worldview held by participants became clear when discussing that not only should some environmental impact of human activity be expected, but that it is necessary in order to maintain or improve current standards of living, or aid social improvement. This perception held by many interview and focus group participants, that the current business paradigm is not mutually exclusive with environmental preservation because "we recycle", reinforces Gambini (2006) who stated that activities such as recycling are often perceived as a sufficient response to making lifestyles sustainable, a response also that only mitigates some of a product's environmental impact and only once the procurement decision has already been made. It also reinforces a lack of systemic understanding of the impact of the educated and the education sector on continued unsustainability and the persistent problems that contribute to unsustainable development (Orr, 1992; Westley et al, 2011).

The emphasis on direct environmental activities of many participants suggests an insular, cause and effect focus and not the less tangible indirect ways in which college activities (i.e. through what it teaches) perpetuate global issues such as environmental, social and economic decline. It is perhaps inevitable that participants of focus groups were more operationally focused than their leaders, who during interviews mirrored the rhetoric at a landscape level, which focused on the positive social and economic

contribution colleges have on the sustainability of local communities through the provision of education and training. As stated by Wright and Wilton (2012), this is in part symptomatic of the different issues particular jobs are exposed to, for example what may be a priority for a facilities manager may be an unfamiliar term or concept to a senior administrator. Within this study, leaders' predominant reference to the continuation or 'sustainability' of the organisation mirrored language used at a landscape level, which although could only be interpreted through document and website analysis, exclusively referred to sustainability in the literal sense of the word. It is perhaps then circumstantial of the role of Principal or senior leader within a sector that is so responsive to government policy that the language adopted by leaders reflects what they believe they should be saying, rather than taking time to reflect what they believe the term to mean.

Funded to be unsustainable; funded to fuel unsustainability

At a landscape level, sustainability was similarly perceived to be compatible with existing development paths, evidenced by government online content's only reference to environmental sustainability in relation to historic and current eco-efficiency targets for the FE estate. Most dominantly however, governmental departments referred to the literal use of the term, suggesting that sustainability is not only understood to be compatible with existing development paths, but is largely used as a synonym to describe the endurance and refinement of existing development paths and processes, to which a non-environmental degradation perspective can assist.

This is also indicative of a conflict between short-term reactive and long-term strategic decision-making. Reductions in funding for example was often expressed as a short to mid term concern because inevitably the long-term financial position of the sector is beyond the tenure of the interviewee's current position. This approach combined with the short-term policy changes the sector often experiences with each change of government do not encourage the longer term thinking that sustainable development requires (Ballard, 2005; Loorbach et al, 2009; Davies, 2009[a]; Morris and Martin, 2009; Middlebrooks et al, 2009; Shiel, 2013). In other words, "leaders continue to centre their efforts along one line of industrial thinking" (Piasecki, 2000:115), demonstrated by leaders' focus on the innovation of income streams to ensure financial sustainability in light of continued government funding cuts; focus on developing student employability to satisfy the current economic skills requirement; and to drive innovation within curriculum delivery as a key quality indicator and to achieve competitive advantage.

The real impact of power, based on the government's perceived role of the sector, means that not only is education disassociated from environmental decline, but also its perceived purpose is inherently at odds with the principles of sustainable development. Colleges are practicing the social aspects of sustainability by seeking to improve social inclusion, and the social and economic fortunes of individuals and communities, but rely on the continuation of the unsustainable paradigm in order to fund their sustainability as a business. While they may not be enthusiastically pursuing environmental sustainability, it may be a case of being too busy fire fighting the demands placed on them in order to fulfil their social purpose that prevents them doing more.

Even if they did make this link, to change their purpose would ultimately lead to their demise, or their continuation would rely on the simultaneous paradigmatic change across society as a whole in order to fulfil their purpose of meeting students, employer's and governmental needs.

This raises the question of whether the sector is inadvertently yet fundamentally at odds with sustainable development while ever it remains so dependent on government funding, i.e. the sector is responsive rather than self-directed. Indeed, leaders hinted that the current market stifles their ability to develop a long-term vision or strategy for their college because decision-making instead is prioritised to ensure the college's more short to mid term survival. Within this context, activities relating to sustainable development were included within descriptions of 'nice', less urgent things, that can be considered once the college's future has been secured, and of course if funding conditions allow. It is therefore suggested that the subservience of environmental sustainability to financial sustainability and the social purpose of colleges is an inevitable product of the chaotic position colleges remain in by trying to satisfy the conflicting needs of prospective students, local businesses and the government (Panchamia, 2012). Perhaps then colleges like universities have simply done what they must in order to survive the current climate, to which they "currently do not have the choice to opt out" (Bessant et al, 2015: 6).

Thriving on unsustainability

Rather than ignorance of what constitutes sustainable development, participants are merely reinforcing what Strachan (2009), Tomkinson (2009), and Doppelt (2012) term a reductionist view of the world. This view does not dismiss the importance of the natural environment (i.e. all humans enjoy the direct and indirect benefits of the natural environment, from a walk in a park, or breathing oxygen) rather, it purports a view that places value onto individual components of the natural environment, and fails to recognise the interconnectedness between it and us (society). Therefore, while participants indicated their value of the natural environment, they failed to associate the impacts of colleges on continued environmental degradation. Their focus on mitigating waste and emissions is evidence of a reductionist perspective as it essentially focuses on things that can be easily seen and measured – such as amount of waste produced – but ignores the difficult to distinguish interconnections and feedbacks that produces the waste in the first place (Doppelt, 2012).

The risk of sustainability was similarly assessed as being based on quantitative factors such as economic conditions, and the need to build resilience in response to the perpetual reduction in government funding. Participants did not discuss the wider risk posed by environmental or social unsustainability to colleges, the FE sector or education as a whole, and their discussion in isolation suggests that the business case for reducing a college's environmental impact is more tangible than the risks of the impacts themselves.

Indeed, only within the realms of economic sustainability was the role of college education discussed by college leaders - in other words, education for economic sustainability. Focus group participants and some online content referred to the embedding of sustainability into curriculum areas, but such examples were of education about sustainability. This was better than some though who did not discuss the college's role as an educator, and in a small number of cases, participants stated that environmental sustainability is not something that has a direct impact on students - unlike economic sustainability. This reinforces that when conceptualising the literal term of sustainability, i.e. to keep the college going, college's decisions are based on external factors such as local labour markets and skills requirements. However, when discussing the holistic interpretation of the word, the majority of discussions indicated a more internal, operational, focus on the refinement and environmental mitigation of existing processes in isolation from other college activities. In other words, where

recognised, the focus of colleges' contribution to sustainability is essentially through reducing their abstract environmental impacts on a detached environment. This detachment reinforces Kenrick (2009) who states that environmentalism has failed to engage western societies – to whom carbon remains an abstract and impersonal term (Whitmarsh et al, 2009) – and nor has it explained or demonstrated the short and long term gains of a more sustainable society (Blincoe, 2009). Instead environmental impacts remain abstract to the majority of those who live most beyond their means, whereas those who are least responsible for environmental damage are the most likely to suffer its effects (Monbiot, 2006).

It is perhaps therefore counterintuitive that a greater understanding of unsustainability will lead to appropriate action for sustainability (Strachan, 2009), when a reductionist view continues the emphasis of doing things better, rather than doing better things (Sterling, 2004). This first order change as described by Doppelt (2012:6) focuses on “improving the efficiency of a system without fundamentally changing its goals, structures or ultimate outcomes”. Indeed not only is relative stability maintained with the existing paradigm (Sterling, 2004), but as stated by Bawden (2004: 30) “We can be sure that any attempt to bring about sustainability will meet enormous resistance from many people and vested interests, and that includes resistance even to the very idea of encouraging or allowing learning systems to engage with sustainability as a topic of discourse, with the risk that new insights for action that might disturb the ambitions of the powerful could indeed emerge”. Indeed, as expanded by Polistina (2009:121) “cultural and social power-brokers may safeguard the prominence of their power positions by discrediting, ridiculing and devaluing groups they perceive to be a threat”. After all, “the main motivation of political leaders is to remain in power” (Kiraly et al, 2017:135).

Not only therefore is there a lack of tangible external incentives to make the necessary changes for the transition to sustainability, there is no internal incentive either, as colleges, as part of western economies, are actually thriving by being unsustainable, even though this is at the expense ultimately of all living things (Kenrick, 2009; Doppelt, 2012). As this study demonstrates, the issue with an accommodative response being perceived as sustainable development in practice furthers the perception that technological or political interventions are able to protect society from the very consequences of unsustainable practices (Kenrick, 2009; Monbiot, 2006). For example, cleaner cars may have in some areas reduced air pollution, but this does not negate the

environmental impacts of the cars being manufactured in the first place, or the social impacts of cars being used for journeys that could otherwise be made on foot or public transport. Similarly, recycling waste fails to address the issue of why the waste was produced in the first place. More relevantly to this study, participants indicated a belief that if colleges can reduce the amount or mitigate the impacts of the physical environmental aspects and impacts to result from college activities (i.e. the college outputs), this amounts to colleges practising sustainable development. Participants did not discuss the potential for their inputs and core business processes (i.e. students and education respectively) to generate more meaningful and more sustainable contributions to sustainable development.

It should be expected then that sustainability behaviours generally stop at an accommodative response because it does not threaten the current paradigm, indeed, doing things better actually increases the efficiency of existing processes and assists in maintaining the dominant paradigm's stability (Sterling, 2004). Therefore even though some participants acknowledged that sustainability does not just concern buildings, how a college feels it can practice sustainability may be limited to eco-efficiency, because anything more is in danger of deviating from its core purpose and priorities set by government, and therefore presents a financial risk. Historical trends (which will be discussed subsequently) may also explain why financial issues are seen to prevent further engagement with sustainability (echoed by Wright and Wilton, 2012; EAUC, 2015). However, this is also assuming that there is a demand for further engagement with sustainability. In many ways, results from this study suggest that the demand will be generated if there is an incentive, but in their absence, college leaders' main concern and focus is the organisational sustainability of colleges. Therefore whilst the power for incentivising engagement may rest with the government, it raises the question of if, when, why and how the government will incentivise colleges to engage with all facets of sustainable development. Perhaps the power for change actually rests on cultural and societal demands, as with the organisational sustainability of colleges. For instance, it was to improve attractiveness to prospective students that served as the main motive for colleges to refresh their estates. Part of this refreshment included being 'fit for purpose' and the ability of classrooms to be modernised to suit pedagogical innovations (how students learn, not what they learn), which themselves are reflective of wider societal technological trends. Reflecting a consistent trend throughout this study, sustainability, through the application of eco-efficiency is perceived as a refinement tool for existing processes and systems that are dependent

on and perpetuate the need for technological innovation and economic growth (Dunphy et al, 2007). To reiterate Sterling (2004) and Garud and Gehman (2012) this highlights the difference between innovating *within* current systems and innovation *of* current systems. With the exception of the funding model of colleges, research participants within this study have not suggested that existing systems need to change or recognised that sustainable development is dependent on it.

The vicious circle of relevance and responsibility

The incongruous application of sustainability as a concept to the FE sector is consistently confined to an eco-efficiency approach, which undoubtedly purports the view that sustainability concerns only environmental issues, yet as previously discussed, it is to the environment that colleges in practice demonstrate the least accountability. This confinement to environmental issues was certainly demonstrated by college websites and policy documents, which revealed a more consistent portrayal of sustainability (than by interview and focus group participants) by using eco-efficiency terms such as “greening the campus”, or “environmental management”. Such terms, as stated by Dade and Hassenzahl (2013), may alienate or be inaccessible to those who are more interested in the social and economic aspects of sustainability, and may also reinforce the notion that conceptually, sustainability is limited to eco-efficiency, therefore precluding its perceived relevance to the core business or purposes of colleges (Ryan and Cotton, 2013; Sterling, 2013).

The relevance and therefore responsibility of sustainability was also demonstrated by the location of sustainability information within online content. For example, it had to be assumed that the information would be located within webpages belonging to ‘estates and facilities’ suggesting that unless the intention was to find sustainability information it is unlikely to be found. In other words, if the college had sustainability information it wanted to publicly convey, its location would be more easily accessible, as stated by Scott and Gough (2004:243), “University’s websites represent the view they want the world to have of them, and by and large sustainable development is a minor constituent of that image”.

It could therefore be legitimately argued that college’s neither market nor recognise the value in marketing their current approaches to sustainable development. Dade and Hassenzahl (2013) also observed this trend within university websites, whereby universities were often doing more with regards to sustainability than their website

suggested. This ineffective communication may be a result of those who are managing sustainability working within back of house functions that typically may not have exposure to or experience of communicating to the wider college community, or that those controlling website content focus only on the perceived interests of prospective students which will undoubtedly overlook any back of house support function such as estates and buildings. As pointed out by Velazquez et al (2005), communicating sustainability within universities is made more difficult by decentralised information sources and a lack of communication between departments.

In those instances where college websites did communicate their approach to sustainability, they often included statements such as this: "As a College, we're committed to improving our sustainability. This involves making sure we always operate in a way that's both supportive and protective of the environment, while considering the various economic and social impacts" (college 3 website). In reality however, and as will be discussed in greater detail subsequently, it is the environment that falls subservient to economic and social considerations. Website statements are however not necessarily intentionally misleading; it is suggested that it is the human worldview from which sustainability is interpreted that leads to the perception that a positive intent towards the environment is as good as positive environmental action. This is perhaps why policy documents often used terms such as "we will" or "we're going to be" rather than "are doing", however as stated by Bawden (2004:21) "having a firm resolve to achieve anything gives little evidence of how it might actually be achieved in practice even if we could agree on what it was we were hoping to achieve".

Poor communication was reinforced by some focus group participants who indicated that a method of comparing college environmental impacts would be beneficial, negating the fact that all colleges in the UK are required to submit annual environmental data as part of the 'eMandate' database (AoC, 2013) and therefore reinforcing the issue regarding decentralised information sources and the lack of awareness other than by those directly responsible.

Furthermore, this also reinforces that it is only a college's direct and quantifiable environmental impacts that are generally considered rather than the indirect but more substantial environmental impacts of its education provision. Therefore while the perpetuation of unsustainability was not linked to education, it was still considered to be a topic that was worthy of some attention within certain curriculum areas. Indeed,

in some cases sustainability was described as being “dedicated” to sustainability, evidenced by the teaching of low carbon technologies and eco-efficiency within what Sterling (2013) describes as the ‘likely’ curriculum areas that are generally vocationally or environmentally focused.

Scott and Gough (2010) also identified this vocational focus, suggesting that the task-specific nature of vocational curriculum does not lend itself to the interdisciplinarity that education for sustainability requires. Therefore the approach taken by colleges that have focused on including sustainability within vocational curriculum areas, mirroring the college’s operational activities – such as teaching construction students about photovoltaic panels, or using installed energy efficiency features as part of the hidden curriculum - have reinforced sustainability as a topic that only concerns eco-efficiency issues, thus precluding its perceived relevance to academic subject areas.

Though there were more general sustainability and education statements on websites that made ambiguous references to ‘global citizenship’ or ‘global issues’, they did not provide the detail on how these would be taught, or within which curriculum areas. This however may be evidence of website communication trends which may have been influenced by the requirement of legislation and benchmarking exercises to have some information publicly available Davies (2009[b]). Such requirements may have exacerbated perceptions of how sustainability is defined and who within an organisation may be responsible. In other words, if sustainability is perceived to be synonymous with eco-efficiency, and there are only legislative requirements relating to eco-efficiency including how this is publicly and internally communicated, then those who are responsible for this one facet of sustainability eventually become the face of all sustainability (within an organisation).

Indeed, the location of such information mirrors the trend of focus group (and a small number of interviews) participation whereby most who attended were operational and facilities management staff, which is the likely explanation of the building and operational bias of conversations but itself is a likely result of previous sustainability drives which will be discussed henceforth. While interview participants gave a less consistent interpretation of what they perceived sustainability as a term to mean, one of their two dominant interpretations also focused on eco-efficiency and operational matters. It is suggested that this pattern is self-perpetuating and reflective of the concept’s origins within the environmental movements and initiatives of the 20th century. As stated by Kenrick (2009), environmental concerns such as reducing ‘our’

environmental impact gained traction and led to positive financial outcomes for businesses through eco efficiency, but remained – and continue to remain - subordinate to growth objectives (Schneider et al, 2010). This was indeed evidenced by those interview and focus group participants who indicated a broader understanding of sustainable development, but nevertheless stated that financial sustainability remained and should continue to remain their college's priority.

The enduring connotations of historical exposure to sustainability

The focus of past initiatives and interventions such as the capital programme to which the majority³ of colleges in England participated has clearly had a lasting impact on how the sector perceives and therefore practices one of its two most common interpretations of sustainability. The programme entitled 'Building Colleges For the Future' was motivated by the widespread deterioration of the FE estate and the reputational issues this was causing to the sector (NAO, 2008). Indeed, while 48% of programme participants stated that the most important motive was to replace buildings that were unfit for purpose, 76% stated their main motive was to improve attractiveness of buildings to potential students. Additionally, some colleges were also influenced to improve their infrastructure by their decision to provide HE courses (NAO, 2008).

Six years into the programme in 2007, an additional and mandatory objective became "to support sustainability and reduce the carbon footprint of the FE system, and to encourage innovation in sustainable design and construction" (LSC, 2008:4) though the LSC recognised that this focus was on environmental sustainability, and not sustainability issues in the broader sense.

As a condition of funding, new buildings were expected to achieve high environmental performance ratings, the long term efficacy of which would be demonstrated (or not) by the additional mandatory requirement for colleges to provide annual data on new building running costs (through an estate database called 'eMandate') (NAO, 2008; Foster, 2009). Further incentives to reduce running costs (by reducing energy consumption and therefore carbon emissions) were offered later in the programme, following poor energy efficiency results of earlier completed projects to emerge from the eMandate database (NAO, 2008). While this was successful in leading to the

³ 330 of the 376 English colleges in 2008-2009 (NAO, 2008: 4). The reduced number of remaining colleges is as a result of institutional mergers and college closures.

implementation of eco-efficiency measures such as renewable technologies (for which colleges could receive a 10% boost of their overall project funding), this did not necessarily lead to reductions in energy consumption. Indeed, in some cases energy consumption increased (IPD, 2011; BIS, 2012), and the introduction of renewable technologies did not necessarily lead to a reduction in costs, mainly because of rising energy prices, but also because of building management errors (BIS, 2012).

Therefore, while environmental sustainability was a parameter assessed to determine the success and value for money of the capital programme, exclusively under what the LSC called the 'property case' (NAO, 2008), it was only a small part of the economic and reputational motive for colleges to participate in the programme. The most plausible evidence as to why environmental sustainability performance became mandatory within the programme in the first place was likely as a result of the 2007 Climate Change bill, which set carbon emission reduction targets including all new non-domestic buildings to be built to zero carbon (LSC, 2008). The government department responsible for schools at the time, set out a target for all new schools to be zero carbon by 2016 (NAO, 2008; LSC, 2008), and the LSC followed suit, producing a 'Zero Carbon FE Colleges Policy Framework' in 2008, stating all new college buildings must be zero carbon by 2016. Though there is no evidence available publicly (see chapter 4.4 and appendix four) that either of these targets were met/ or that the 2016 target is still active, results from this study suggest that the sustainability policy vacuum that followed the LSC's closure in 2010 has meant that only one of two specific and contextually targeted exposure of sustainability to the sector was through this incentivised programme.

This also supports the expectation that the government should provide incentives or a prescribed approach for implementing sustainability, since this is exclusively the approach most⁴ existing college leaders will have experienced previously. Whilst this does not explain either a) the focus of environmental sustainability by the government, or b) the absence of any policy since the LSC and LSIS were closed, it goes some way to explaining how perceptions of sustainability have become almost self-perpetuating.

For instance, even though reduced running costs were the driver for sustainability, the rhetoric across the sector (such as the peak in sector based publications on

⁴ Proportionately, the majority of colleges remaining in the sector will have participated in the scheme.

sustainability in the mid-late 00's) allowed running costs to become synonymous with eco-efficiency, which then became about sustainability, even though the LSC pointed out that the programme was not about sustainability in its broadest sense. Consequently, when asked to demonstrate in subsequent funding bids about how the college is demonstrating sustainability/ or is behaving sustainably, eco-efficiency (including eco-efficiency within curriculum) has been the natural 'go to' response, especially so in the absence of anything else. This study therefore supports Christie et al (2014) and Davison et al (2014), whereby the combined pressures of regulation, reputation and the financial incentive have favoured campus greening and eco-efficiency over a wider engagement with sustainability. It is suggested that it is indeed this phenomenon that is likely to have contributed to the delegation of sustainability to an individual within an organisation who then becomes (or is perceived to be) the sustainability 'expert' (Hoover and Harder, 2015), thereby relieving everyone else of the responsibility of having to think about it.

Environmental unaccountability

It is paradoxical that the 'Building Colleges For the Future' programme and its (albeit late) introduction of environmental requirements into the capital programme, forced environmental sustainability onto the agenda of all 330 colleges that benefited from the programme (NAO, 2008), and may therefore be partly responsible for the synonymy of eco-efficiency operations with sustainability expressed by many research participants. It may also be partly responsible therefore for some of the cynicism expressed towards sustainability and its value for money because as discussed previously, the realisation of these savings was often not met. As confirmed by Schneider et al (2010: 511), "expectations of win-win, sustainable growth through technological and efficiency improvements have not been fulfilled". Negative perceptions may have been further fuelled by points made in two post-capital programme reviews published by LSIS (2009), and Foster (2009) who stated respectively that a new focus on sustainability and green technology and adjustments to policy around specialisations and sustainability standards were contributing factors to the programme's demise, as they were expensive distractions from the programme's original purpose.

More broadly, this signifies the difference between being designed for efficiency and being used efficiently, both of which are reflective of the common practice of innovation and sustainability of existing processes and not the introduction or pursuit

of new processes altogether. As put by Sterling (2004), doing things better remains favoured compared to the more difficult *doing better things*, but will not be enough long term as efficiencies within existing products and processes are exhausted (Garud and Gehman, 2012). The irony is therefore that while the purpose of the programme itself may have been to refresh and renew the sector's estate, reputation, and therefore future, little consideration was or has subsequently been given to the broader role of colleges for the sustainability of all living things (Bawden, 2004). Furthermore, despite the consistent focus of this study's research participants to environmental sustainability, it is to precisely this that they perceive individual, organisational or societal behaviour to be least accountable evidenced by perception that the environment can and should be protected within the current economic paradigm. As stated by Harvey (1996:148) "Thus, the debate about resource scarcity, biodiversity, population and ecological limits is ultimately a debate about the 'preservation of a particular social order rather than a debate about the preservation of nature *per se*".

The fact that a college's contribution to economic and social sustainability was perceived by leaders and focus group participants to take precedence over environmental sustainability, and that colleges are only accountable for their direct campus based or quantifiable environmental impacts, which themselves can be managed in isolation without impacting on or questioning a college's purpose, presents two, self-fulfilling issues that reinforce Fagan (2009: 200) "the change required is profound and is based on an acceptance that learning from within old paradigms will lead to the perpetuation of that which has led to the current crisis". The first of these issues is that sustainability is perceived as an extra 'luxury' and supplementary activity to regular business activities, which, in times of austerity can be put on hold until everything else is 'sorted' (Phillips, 2009[a]). This perception that confines sustainability as an investable eco-efficiency measure, which when compared with what is the celebrated purpose of colleges, that is for the social and economic sustainability locally and nationally, suggests that sustainable development as a term, is not relevant. Therefore it can only be deduced that it is to environmental sustainability that colleges feel their role is unaccountable, even though perceptions and examples of sustainability throughout the study focussed on environmental issues. This disconnect demonstrates that when colleges and their leaders do not consider themselves as part of the problem, it is only logical they do not consider themselves as part of the solution, as stated by Bawden (2004:23): "universities must accept that they are now as

much part of the problem as they were once an almost unrivalled source of the solution [to society's problems]".

This continued focus on economic growth perpetuates the notion of the environment being a subset of the economy, not the economy as part of the environment (Sterling, 2004). So it is therefore unsurprising that the management structure of FE continues to focus on eco-efficiencies, the responsibility for which naturally lends itself to operational staff, whether or not it is a true reflection of the priorities or values held by individuals in management positions, as stated by Doppelt (2012: 24) "most of us are not so self-centred as to say that we completely ignore the natural environment or other people...but if your focus is mostly limited to your personal or organisational desires, then time and time again you will think about little else and fail to see how your activities affect other people, the natural environment, or even yourself".

5.1.2 The confinement of sustainability responsibility: a cause or effect?

It was surmised in the previous sub-chapter that the lasting connotations of previous initiatives have led to a self-perpetuating cycle of how sustainability is perceived, which has consequently led to the compounding issue of where and with who the responsibility for sustainability management is perceived to rest.

The enduring perception of sustainability within FE concerning operational eco-efficiency activities only naturally lends itself to the management of operational business support departments such as 'estates and buildings' or 'facilities'.

If the capital programme was not the root of this perception then it has certainly not discouraged it - nor the synonymy of sustainability and eco-efficiency. For instance, it is suggested that as a result of the LSC's drive for sustainability which influenced and ran parallel to the capital programme, the initial pursuit to develop internal environmental sustainability strategies, formal environmental management systems, carbon management plans or policy statements to fulfil external funding or legislative requirements, or simply because it was at the time, a sector trend, were done so by those whose role it was perceived to be. As the environmental performance parameters set by the capital funding programme naturally lent themselves to be the responsibility of estates and operational staff, by association or by habit, environmental sustainability has subsequently been managed in isolation by these back of house support functions. This is also congruent with an observation made by Scott

and Gough (2004:237) who state: “estates managers do have to deal with environmental management whether they are interested or not because their jobs require them to in an era of increasingly demanding legislation and regulation”.

Consequently, sustainability policies are often developed without wider college consultation or communication (see Velazquez, 2005 in previous chapter), and are often plagiarised from other policies shared within the sector, which is justified (and often encouraged) by the attitude of ‘why re-invent the wheel?’ However, many of the specific aims of such policies are derived from the scope of environmental management system standards and are therefore environmentally biased. Participants like those who participated in Wright and Wilton’s (2012) study therefore spoke of commendable environmental achievements, typically reducing resource use, but did not discuss the social, cultural or economic factors of sustainability. Relating back to an earlier point of how sustainability is communicated, when such perceptions are invested into the management of sustainability and portrayed within sustainability communications, it reinforces the synonymy of sustainability with the environment, and thus precludes any consideration of the social or economic facets of sustainability.

Whilst on the one hand it is evident why the responsibility of sustainability has naturally lent itself to those in operational roles, and indeed, it should not be anything less than a full time job for at least one person within a university (Dade and Hassenzahl, 2013), it does further the perception that sustainability is an operational task that can be sufficiently dealt with by a one or a small group of people, therefore relieving everyone else of this responsibility. Indeed, sustainability was compared with equality and diversity and health and safety, both of which were initially perceived as peripheral tasks, managed by an individual or small team, that were legislatively rather than voluntarily driven. Participants stated that an externally driven, prescribed and ‘top- down’ process would therefore lead to the same integration of sustainability management. This is perhaps why websites often include specific, more easily accessible references to health and safety and equality and diversity; on the Education Training Foundation website for example, equality and diversity has its own web page, signposted from the website home page, but no reference at all of sustainability or the environment.

What all participants failed to acknowledge however was that even though health and safety and equality and diversity are human focussed (albeit perhaps driven by the

economic risk of litigation), they are founded upon cultural awareness, respect and behaving conscientiously and so are therefore already promoting behaviours required of for sustainable development (Polistina, 2009).

Rarely though are there individuals within colleges whose sole responsibility is the management of sustainability, reinforcing that unless told to employ such a role, colleges will not. Instead, sustainability is often part of an existing role, often within estates and facilities departments (EAUC et al, 2015). This was demonstrated within this study when college Principal's thought that interview participation would be more appropriate for the Director of Estates or similar, reflecting Bardati (2006) who identifies that sustainability is often perceived to be someone else's responsibility, which in this instance is notably not the Principal's. This reinforces Blincoe and Spangenberg (2009) who state that a lack of leadership and expectations of government and legislative intervention prevent personal action; the expectation is that someone will take the lead and demonstrate what is required, however nobody wants to take responsibility for starting this process. It also reinforces that investing in and being accountable to environmental impacts arising from college activities is not a priority.

The muted ascendance of sustainability responsibility

Though it was unclear to which interpretation of sustainability participants were referring, many stated that it was beyond the responsibility of a single individual within a college to lead on sustainability. However when discussing environmental sustainability specifically, there was a clear trend amongst participants that correlated with their seniority, for example, Principals generally stated that it was responsibility of an enthusiastic individual within an operational function of the college and may report to the Director of Estates (or similar). Vice-Principals on the other hand stated that it was the role of the Principal to lead on sustainability, perhaps because Vice-Principals have witnessed previous sustainability attempts that may not have been successful without the Principal's awareness or endorsement.

This would mirror an overall sector trend whereby Principals seemed unaware of previous attempts to provide a more prescribed process within the sector, notably the two sector wide attempts to stimulate interest and provide support that were led by the LSC through its 2005 strategy entitled 'From Here to Sustainability' (which ran parallel with and had influence on the last few years of its capital building programme),

and the 2010 programme led by LSIS called 'Leading and Learning for a Sustainable Future'. It will remain unknown if interest from either attempt may have endured were it not for the closure and replacement of each organisation in 2010 and 2013 respectively. When the organisations were closed, so too were the sustainability programmes. It is worth noting that not one interview or focus group participant mentioned the more recent sustainability programme led by LSIS 2010-2013, despite in some cases, members of staff belonging to participating colleges had held high profile regional roles as part of the programme. However, it is possible that the programme's emphasis on curriculum and regional collaboration meant that unlike the LSC programme, senior leaders had no exposure to the LSIS programme, or because of the less tangible nature of the programme's results, senior leaders simply remained unaware of it. By association however, sustainability related elements of the LSC's capital programme have endured to this day. As the programme matured, funding criteria for capital grants increasingly raised the profile of eco-efficiency, or as it was referred to 'environmental sustainability', reflecting the gathering of pace of the LSC's sustainability work.

No sooner had this pace been gathered, the LSC was closed in 2010 and replaced with the SFA. Analysis of the SFA's annual reports reveal that some of the language associated with sustainability remained in use for the first year – for example "LSIS was formed to develop excellent and sustainable FE provision across the sector" (SFA 2011:87). However any mention of the LSC or LSIS's sustainability strategies were dropped from subsequent annual reports, indicating that these strategies did not align with the SFA's purpose or priorities. Indeed, the achievement of the SFA's internal carbon emissions target was not included within the 'achievements' section at the start of the 13/14 annual report unlike earlier reports, reinforcing that the meeting of such target was an internal matter only, and not representative of the Agency's core purpose. It was only to the Agency's internal environmental sustainability that responsibility was acknowledged; the leadership or responsibility of sustainability within either HE or FE was neither specified nor discussed.

This gradual changing of language within government reports resonates with Bessant et al (2015) who believes that it is a reflection of the perceived changing purpose of higher education. Indeed, the terms 'education' and 'universities' have actually been dropped from the sponsoring government department of HE whose name 'The Department for Business, Innovation and Skills (BIS) – also the sponsoring department

of FE, reflect a repositioning of higher and further education as elements of the knowledge economy, used to enhance the country's economic prosperity. As stated by Bessant et al (2015:7) "This overriding focus of the government to rebuilding the economy does little to support universities who are attempting to holistically address societal, environmental and economic concerns". This change in rhetoric was also identified by Scott and Gough (2010: 3740) who state that this "reflects the priority given by colleges to current vocational needs in response to government policy directives on skills, employers' needs and workforce development, with an understandable priority placed on current economic drivers rather than on the wider dimensions of education for sustainability".

The economic motive for introducing eco-efficiency was disappointingly reflected in the only and most recent reference to 'holistic' sustainability (aside from those brief statements within annual reports), which was within the Agency's 2015 capital funding specifications for new buildings and refurbishments: "The Association of Colleges and Skills Funding Agency are placing increasing emphasis upon funding applications being supported by comprehensive statements of sustainability strategy and future intent. These statements should set out measurable targets which indicate significant reduction in the current carbon footprint, providing a comparison between the pre-project data and that which will be achieved as a result of the project" (SFA, 2015[b]: 7). This trend is particularly unhelpful not just in countering existing narrow perspectives of sustainability, but also those perspectives that have yet to be formed – namely, of the students studying in FE colleges. Rather than colleges identifying their own leadership role in educating for sustainable development, several research participants stated that the ability of colleges to achieve the eco-efficiency targets attached to new campus funding conditions, as well as their own internally developed targets, were sometimes constrained and undermined by the expectations of other sector stakeholders, including inspecting and awarding bodies, as well as an apparent lack of demand or interest from students.

A specific example was given in reference to awarding bodies that continue to require paper copies of documentation for auditing purposes. While this may be implicitly at odds with elements of eco-efficiency, it is not mutually exclusive from behaving as a sustainable organisation, but is indicative of both a narrow view on how colleges can contribute to sustainability, and that what are perceived to be conflicting expectations lead to the subservience of sustainability to other priorities. Even if leaders perceive

sustainability to be conceptually worthy, it can be quickly dropped if barriers make it appear insurmountable or even controversial to a college's reputation. Echoing Wals and Blewitt (2010:70), "sustainable development is as expendable as anything else if it does not pay its way".

The inevitability of FE's sustainability approach

The opportunity for colleges to take a stronger interest in sustainability has been taken from the sector by the closure of the LSC and LSIS, who have historically facilitated or supplemented further sector engagement. This may have compounded the perception of colleges that they cannot self-lead on sustainability, perhaps because of a confidence issue, or perhaps because of a perceived resource issue. Indeed, college leaders indicated a passionate commitment to their role as contributors to local economic and social sustainability, to which environmental sustainability through eco-efficiency could assist and be demonstrated through the development of new more efficient campuses, which not only enhance local appeal, but could also potentially reduce running costs (and therefore contribute to the financial sustainability of colleges). It seems therefore that the capital programme has led to the enduring perception that 'new' is synonymous with 'sustainable', evidenced by the fact that not one research participant questioned or discussed whether refurbishing an existing space might be more sustainable than building new. Quite the contrary; in many cases the sustainability of new, more efficient college campuses was being used as a marketing tool and perceived to be demonstrative of the highest level of leadership commitment to sustainability.

This reiterates the previously discussed observation that colleges when considering sustainability focus on the end of a decision making process, and not the beginning, almost as though sustainability in reality is a subsidiary consideration that can present a bonus to a pre-determined motive. For example, as illustrated by a survey conducted by NAO (2008) it was the improvement of a college's reputation that served as the main motive to pursue new campus developments, which 'sustainability' could assist with in meeting the additional and subsequent motive of reduced running costs. Indeed, this highlights the ironic twist in the use of 'sustainability' as part of the business case for building new, rather than refurbishing old. By focusing only on eco-efficiency parameters, 'sustainability' serving as a method of reducing a buildings' running costs and increasing the projected lifecycle of a building, has counter-productively worked in favour of building new, rather than refurbishing old.

Whether or not it is the sector's perceived inability to self-lead on sustainability, or a lack of interest in self-leading in sustainability due to issues of relevance, the sector's various management tiers each 'power points' (Hoover and Harder, 2015) to those found external to the sector such as students or employers, at those higher within the FE governance hierarchy, typically the government, or internal to and further down the college hierarchy, namely enthusiastic individuals or existing students. Only when discussing financial solvency did college leaders accept full responsibility.

To summarise therefore, leaders' perceptions of power and leadership for sustainability within FE focussed either on i) external issues that dictate internal environmental sustainability, or ii) external issues that dictate the overall sustainability of individual institutions and the sector.

Predictably when discussing environmental sustainability, perceptions of power over the legitimacy of eco-efficiency initiatives was perceived to rest with the sector's funding bodies due to the amount of investment participants perceived is required to appropriately demonstrate sustainability. In this instance sustainability is regarded as something that can contribute to the overall sustainability of the business but requires investment in order to realise this contribution. However, because sustainability by some participants is perceived to be unrelated to curriculum and to have no direct impact on students, without the aid of additional and specific 'sustainability' grants or income, investment in sustainability often cannot be justified. Additionally, the conditions attached to colleges' primary funding allocations prohibit expenditure on anything other than the delivery of qualifications and learning outcomes, which is perceived to not include sustainability. This strikingly suggests that sustainability is perceived as something that must be externally led or encouraged, but only as a refinement measure. Therefore, in the absence of incentives, the default position of many participants was that sustainability should remain outside core business, to be picked up when the necessary resources became available. Such resources were not exclusively discussed as being financial; participants also discussed the necessity of individual responsibility and that the lead would often have to be taken by those who are passionate about sustainability. Specific examples referred to students leading on student union sustainability initiatives (funded by national NUS schemes) were mentioned on several occasions, specifically providing examples of eco-efficiency projects such as recycling schemes, or 'embedding sustainability into the curriculum' through biodiversity projects.

All of this suggests and reinforces that sustainability enthusiasm is often transient, running parallel with funding opportunities, and is perceived as a silo activity to core college business. The power for sustainability responsibility is therefore perceived to rest outside the core business.

Power pointing at a regime level

It is pertinent to note specifically the perceptions of power relating to answers given by participants belonging to 157 Group colleges when asked whether they perceived the group to have a sustainability leadership role within the FE sector. Individually, leaders did not reflect the 157 Group website which only made reference to the literal understanding of sustainability. Instead leaders offered a slightly broader understanding, but only as far as reinforcing the perception that FE is only able to contribute to sustainability as a silo activity through physical interventions, and not through its education provision. This perception therefore led many participants to the belief that sustainability leadership cannot be part of the 157 Group's role because of the investment sustainability requires; instead leaders suggested that because universities and schools are in a stronger financial position than colleges, they would be better equipped to be leaders of sustainability within the education sector from which colleges would indirectly benefit.

It is worth pointing out however that the 157 Group on its website states that the core function of its members is to secure and deliver the highest quality of teaching and learning and are strategic leaders within their communities. Furthermore, the role of member colleges and the group as a whole is "to be at the leading edge of the sector in terms of thought leadership, practice improvement and policy influence" (157 Group website, 2016). In other words, there's money for what they want to do. If sustainability were perceived to be a topic that could enhance thought leadership, improve practice or policy development perhaps then it would be something the group would claim ownership of.

Interestingly a small number of participants discussed the ethical position of colleges and speculated whether it would be appropriate to dictate sustainability to others, stating it would be inappropriate and unwelcome if this was imposed on them. Cotton and Winter (2010) also identified this issue and stated that teaching about sustainability is often linked with the controversial nature of environmental issues in particular. This again highlights the issue with the synonymy of sustainability with only

environmental issues, which precludes its relevance or interconnectedness with wider societal issues, and alienates it as a concept from those who are more interested in social or financial matters (Dade and Hassenzahl, 2013). More broadly, this also highlights the “double edged sword” (Newman 2009:99) educational institutions face when it concerns teaching sustainability whereby “if [sustainability] values were explicitly incorporated in the curriculum, they would be accused of imposing ideologies on learners. But if all mention of values is expunged from education, then this leaves little choice than for learners to draw their values from the unsustainable society around them, or their college’s hidden curriculum” (Newman, 2009: 99).

What these 157 Group participants may be suggesting is that the power for sustainability’s acceptance lies with society more widely, and in which case, colleges will subsequently follow suit either through student’s demands or government expectations. In the meantime therefore, while sustainability remains as both a perceived and practiced optional ‘extra’ to core business activities, it presents a perceived financial risk that leaders are not prepared to take on during already uncertain financial times. However, this again highlights either the problem of how sustainability is defined, or if not that, then the intangible risk presented by unsustainability. Many leaders for example discussed the need for colleges to build resilience and to have the confidence to operate more strategically in order to get ahead of government trends (rather than being subservient to them); therefore college leaders see the value of operating strategically, but only for their college’s socio-economical stability and gain. What this reinforces is that the environment is neither perceived to be strategically important, nor as something that could pose an inherent risk to all other strategic priorities.

Conversely, in a small number of cases 157 leaders stated that the group’s role is conducive with being sustainability leaders within the sector, and suggested that this could be demonstrated through the sharing of best practice, leading by example and lobbying government. Collaboration between members was also suggested in order to share information and best practice, a publication of which should then be presented to government to demonstrate the sectors’ leadership capabilities, which in turn could generate further funding opportunities. However, as stated by Stephens and Graham (2010), sharing best practice makes assumptions of what is determined as ‘best’, and in this case would only perpetuate that sustainability is something that must be physically demonstrated. Indeed, participants perceived that the group could lobby awarding

bodies to encourage more sustainable practices, for instance, to reduce the current unsustainable reliance on paper. So on the one hand, while it was suggested that the sector had conceptions of how sustainability is best practiced, other participants suggested that the sector needs to develop a consensus of meaning, and that despite offering best practice examples, there is in fact a lack of clarity regarding the contextual relevance of sustainability. Not only does this fail to acknowledge previous attempts made by the LSC, LSIS and the AoC of defining sustainability and how it relates to colleges, but it could also signal an avoidance tactic. Of course it is important for all stakeholders to understand the contextual relevance of sustainability (Glavic and Lukman, 2007; Peti, 2012; Sterling, 2013), but too often the time consuming process of defining sustainability gets in the way of strategies for action (Dunphy et al, 2007; Cook et al, 2010; Christen and Schmidt, 2012; Peti, 2012).

The contrary use of the term revealed by this study however suggests that perhaps it would be worthwhile the sector revisiting or being reminded of its role in sustainable development, because while volunteered examples of eco-efficiency allude to a wider understanding of sustainability than its literal meaning, on the whole the term is being used to steer action that is antithetical to sustainable development. Who might be best placed to remind the sector of its role is however unclear since the majority of 157 respondents felt that it was not the role of the 157 Group, and instead stated it was the role of a separate interest group or the AoC. While none of these participants referred to the SFA or BIS, they did state that a top-down methodology was the only way of gaining traction and credibility.

This conflicts with the philosophies of both sustainable development and the TMF, which require leadership and support from actors throughout hierarchies, not the dictation of those identified by hierarchy or job description (Loorbach et al, 2009; Phillips, 2009[a]; Barth, 2013; Davison et al, 2014).

For instance, it is the perceived responsibility of awarding bodies to provide colleges with curriculum guidance on sustainability. However these respondents later contradicted themselves by stating that it will be the expectation of students that drives sustainability higher up the agenda supporting Kythreotis (2011) whereby the development of a 'greener' curriculum was perceived by colleges within his study to be dependent on demand or external direction. What is clear overall is an avoidance of accepting responsibility and instead, power pointing at other sector stakeholders.

The persistence of power pointing: an inherent problem of purpose and agency.

With the exception of eco-efficiency to which leaders recognised the value in taking responsibility (as a contributor to overall organisational sustainability), the funding that sustainability is perceived to require was the most commonly cited reason that leaders of individual colleges and as part of the 157 Group felt that prohibited colleges from being appropriate candidates as leaders of sustainability either within the FE sector or education sector more widely.

When discussing who might be more appropriate to act as leaders of sustainability within the education sector, schools or universities were seen as suitable candidates because of the relatively better financial position they are in compared to colleges. As an aside, what this also indicates is that education about sustainability (rather than for) is not perceived as something that ought to be a constant thread throughout the education system and instead is perceived as something that should remain compartmentalised for those who have the sufficient resource to either teach or demonstrate it.

It is hardly surprising that schools or universities were perceived as being more suitable for the leadership of sustainability when at a landscape level, the small number of references to holistic sustainability concerned environmental sustainability guidance for schools only. Reinforcing earlier chapters, this indicates a perception that holistic sustainability has little to do with colleges whose purpose is to satisfy skill demands, and therefore sustainability in the literal sense. When evidence suggests that schools are perceived to have more of a role, at least to warrant the publication of guidance, it could be deduced that perhaps FE's role is perceived by the government to be more elementary than that of schools or universities. However, to reiterate an earlier point, whereas education should be a social endeavour there to help resolve the issues of the time (Bessant et al, 2015), the pursuit of skills and training is increasingly an economic endeavour placing education as a means to a financial end (Cullingford, 2004[a]). This is not just a phenomenon exclusively taking place within colleges whose role has arguably always been to satisfy the needs of local employers and economic conditions (Treat and Hagedorn, 2013), it is also becoming the goal of all universities, and may simply be the product of natural development in an increasingly commercial and competitive world (Cullingford, 2004[a]).

When discussing who might be better suited to leading sustainability within the FE sector, 157 Group leaders perceived this role to rest either with the AoC, or a new sector 'interest' group, reflecting that the ownership of sustainability rests with 'others' and by implication, is not relevant to be managed as part of existing roles and responsibilities. Rather than it simply being a finance issue, this strongly suggests that it is also an issue of relevance or knowledge of sustainability, indicated by the perceived need for a group of 'enthusiasts', or as stated by focus group participants, requiring guidance and demand from either the government, the student body, or industry. Interestingly, not once did a focus group participant state that the leadership of sustainability should come from their colleges own leader, though there was power pointing between academic and operational participants, each stating that a change in their behaviours would make sustainability more achievable. These perceptions again indicate that intangible factors such as culture or knowledge are more significant barriers to sustainability leadership than a lack of finance. Within discussions relating to the literal use of the term sustainability, individual leaders demonstrated fervent responsibility to the sustainability or longevity of the sector and the local socio-economic contribution it makes, and believed they were *already* demonstrating sustainability simply by remaining in business. Leaders perceptions of their own leadership role therefore appear to be more comfortably applied at a niche rather than regime or landscape level, and are perhaps reflective of a lack of confidence or aversion to risk regarding perceived extraneous topics.

Uncertainty of individual agency was coupled and perhaps compounded by an uncertainty of purpose of the sector, for example, are colleges there to meet local needs, or to satisfy national policy demands. This was reflected by a subtle language change; when discussing local needs leaders more commonly used the term 'education', but when discussing national needs, the acquirement of 'skills' was the more commonly used phrase. If Moodie's (2002) distinction between technical and university education withstands (assuming that this is perceived to be the most dominant characteristic of FE, and not its academic [A' levels and HE] provision), then the transient and trend based skills demands of the government, who perceive the country's skills base as an essential vehicle for economic growth may render its perceived purpose of FE incongruent with sustainable development. This landscape perception of the purpose of colleges unfortunately corresponds with Batterham, 2003, Cullingford, 2004(a), Leitch, 2006, Davies, 2009[a], Waas et al, 2010, and Lozano et al, 2013 and Bessant et al (2015) whereby the production of knowledge must be

optimised to suit industrial needs, themselves which fulfil the demands of consumerism and technical solutions.

This highlights a conflict experienced more acutely by colleges than universities, though as stated by Stephens and Graham (2010), adaptations to university funding sources mean that universities are also subject to tangible short-term influences. FE colleges who still receive the majority of their funding (though it is perpetually decreasing) from the government experience such short-term influences, and are under pressure to diversify other areas of income to make up for this shortfall whilst simultaneously satisfying all the current demands attached to existing funding to demonstrate the sector's purpose, responsiveness and importance. This conflict between striving for financial autonomy and remaining urgently responsive to the government means that a more local focus of power for financial autonomy can only happen slowly and incrementally, at best keeping up with the reductions in government funding.

It is therefore perhaps understandable why the government is perceived by leaders to hold such power over colleges while they remain so dependent on its funding, which is itself driven by wider landscape economic and social trends. Furthermore, while ever the perceived or actual role of colleges is primarily about the creation of skills and a technical labour force to suit these landscape factors, then colleges in the absence of an alternative dominant funding source will need to demonstrate their performance against government priorities (of which holistic sustainability cannot be counted) in order to remain relevant against growing competition within the sector. Arguably therefore, the government does indeed hold ultimate power over the sector's relationship with sustainability because while ever it is perceived to, or actually dictates the future of the sector overall, college leaders are going to do all they can to remain relevant and therefore sustainable. To reiterate and support Bardati (2006), sustainability projects and sustainability as a holistic term is rendered subservient to the strain of other priorities, which ironically in this case, is to the other interpretation of sustainability about which leaders throughout the sector hierarchy are very passionate.

5.2. Answering the research questions

The purpose of this chapter is to formulate conclusions to each of the study's research questions and highlight the sector's management approaches based on how it perceives sustainability, how it practices sustainability and how it perceives power for sustainability leadership. The order in which the questions are answered is different to the order in which they are asked in sub-chapter 2.4.1. This is because the themes to emerge from discussions of perceptions and practice as discussed in sub-chapter 5.1.1 impact strongly on the theme of power discussed in sub-chapter 5.1.2. In other words, as the themes have emerged it is evident that how sustainability is perceived and how it is practised is both because of, and dictates perceptions of power and responsibility for sustainability leadership.

5.2.1 Research question one; what is the dominant perception of sustainable development in FE leadership?

Though there were nuances between the focuses of each data cohort when defining sustainability, perceptions of sustainability were tactically based on the interpretation that it is a process synonymous with business survival and longevity, a process that can be refined using (the alternative interpretation of) sustainability through eco-efficiency measures. The incentive for the sector to sustain its growth and self-sufficiency resonates with Lozano (2008), led many participants to the belief that sustainability was therefore a 'given' in all that colleges do, as their primary concern is to remain relevant and in business. What this precludes however is the perception that sustainability requires or should necessitate altogether new processes or paradigms, or as put by Sterling (2013: 32), "something that should or is able to question the institution's consensual given".

If not using this literal term of sustainability, the alternative dominant interpretation was that sustainability has "primarily environmental connotations" (Lozano, 2008:1839). This interpretation has been referred to as a 'holistic' understanding of sustainability throughout this study, even though it is only loosely a more holistic understanding than a term to simply describe business longevity. It was used by research participants and within online content in reference to eco-efficiency projects that were not only perceived as having a positive contribution to sustainability and evidence of colleges behaving sustainably, but also a measure capable of enhancing financial performance and a colleges reputation and therefore the sustainability of the college overall. As stated by McCauley and Stephens (2012), one of the issues with

sustainability being perceived only as something that is physically demonstrated or implemented is that it neglects the social and cultural elements and values pertinent to any transition. Furthermore, and as evidenced within this study, such perceptions perpetuate and validate the locked-in flaws of the existing paradigm and its processes instead of challenging them (Loorbach et al, 2010).

The more consistent reference to eco-efficiency within focus groups and online content suggests that sustainability as a business term may have influenced college leaders from a landscape level where there is prolific use of the word sustainability, evidenced by the (in some cases) thousands of results returned from website searches. Indeed, leaders' tendency to interchangeably use both interpretations of sustainability is indicative of a lack of confidence surrounding the sustainability discourse. For example, discussions that touched upon a larger conceptual understanding of sustainability were often rushed, or quickly reverted back to discussions surrounding more operational issues, usually concerning eco-efficiency projects. One leader expressed their doubt about the sector's leadership ability because they believed the sector knows nothing about sustainable development. Another leader described how it is now a familiar concept within the sector that a sustainable college should appear as one that is aware and addressing its carbon footprint. This again reinforces that sustainability is perceived as something that 'looks' a particular way.

A lack of confidence appears to have been compounded by sector-shared connotations of what sustainability means. On reflection, if participants had been offered choices of sustainability and sustainable development definitions with more time for reflection, a different overall perception may have been revealed. As it stands, existing sustainability terminology is itself prohibitive, either because as stated by Christie et al (2014), participants within this study are more comfortable with the literal meaning of the term, or that they consider mitigating environmental impacts of new developments or existing activities to be sustainable. Beyond discussions of sustainability and the scope of this study, the question must be raised about whether it is the sector that comprehensively lacks confidence in all that it does, as illustrated by several college websites stating their college was "striving to be good".

A lack of confidence both of how the sector is perceived, and of the sustainability discourse was reinforced when examining perceptions against the TMF. Consequently, participants indicated a tactical management approach to either interpretation of

sustainability evidenced by their concern not with innovating or catalysing changes at a landscape level, but instead evidencing their achievement of shorter term targets (such as their contribution to sustainable economic growth or sustainable jobs) to win or retain favour with those funding the sector at a landscape level. There is therefore neither incentive nor motive for the sector to innovate beyond the parameters that the sector is judged and understood.

It is suggested that this is an inevitable symptom of short-term political tenure at a landscape level and the perpetual motive of any decision making to demonstrate quick results (to which the FE sector must contribute) for the retention of political power. At a landscape level this is reflected by the government's priority for FE to remain as a contributor to a skilled workforce and therefore the economic sustainability of the country.

At a regime and niche level, the 157 Group, AoC and individual leaders are concerned with relationship building not just with the government, but other key sector stakeholders in order to build financial resilience and security and demonstrate the relevance of the sector to the landscape level. Though the focus of leaders at a college level was shorter term than the regime because of the consistent perception of sustainability being an operational activity, the fact that this was ultimately referenced as a tool to enhance the college's overall tactical gain by improving relationships with students and employers and therefore positively contributing to the reputation of the sector overall reinforces a more tactical approach.

Perceptions of sustainability therefore focus on continuity, and refining and enhancing this continuity using eco-efficient activities that are also perceived to amount to being demonstrative of sustainable development.

5.2.2 Research question two; how are FE colleges perceived to contribute to sustainable development?

Reinforcing perceptions of sustainability, examples of sustainability in practice were almost exclusively limited to examples of eco-efficiency, often involving waste management or new building developments, both of which also serve as a helpful analogy in highlighting the sector's management approach to the practice of sustainability. Examples of sustainable waste management practices often involved the introduction of recycling schemes to more responsibly deal with waste. However, with the exception of paper use within the classroom, focus groups and interviews omitted altogether the decision making processes that generate waste within colleges, suggesting at conception, the waste generated by traditional or business as usual processes is not considered. While it may be somebody's job to demonstrate the financial savings made against more eco-efficient processes, the decision-making behind much of the waste that is generated (of any kind, human, physical, financial) in the first place are likely to remain unchallenged.

Similarly, the construction of new college buildings was motivated by reputation rather than a desire to behave more sustainably, that eco-efficiency projects could be included as part of the process was an insight that came several years into the LSC's capital programme. Based on this alone, it is no wonder that finance is perceived as the most dominant barrier to "implementing" sustainability, since for many it is synonymous with major capital developments or investments, and remains the only exposure many within FE have had with the term. This 'tinkering around the edge' (Shriberg, 2002) approach to the practice of sustainability at an individual college level is the same approach FE leaders perceive the government takes in its management of the FE sector where the creation and abolishment of departments in charge of funding and steering the sector, and the frequent changing of priorities is nothing more than a superficial "change within changelessness" (Sterling, 2013:33).

As a result of sustainability not being the primary motive behind many of the examples given of sustainability practice, which were often referred to as sustainability 'initiatives', an absence of longer-term considerations during their implementation has resulted in the expected or predicted eco-efficiency advantages of such schemes often not being realised, leading to the perception that sustainability is unreliable, a passing fad (Lozano, 2006), or something that is only really worth investing in if there is additional money available. The irony of course is that buildings – the typical 'go to' for

examples of sustainability practice, often underperform on running costs because of the limitations associated with perceiving a sustainable building as one that has renewable technologies and other additional 'features', rather than the durability or practicality of the fundamental design, mechanics or use of the building - not to mention the curriculum that is taught within the building's classrooms.

When a decision to invest in sustainability is based entirely on the financial incentive, it puts into doubt the achievement of sustainability when its cultural and social value cannot be easily quantified. Put another way, financial barriers are perceived to be the most significant reason that colleges cannot engage with sustainability, therefore, it is unlikely even if the sector had more money available that colleges would independently self-lead on integrating sustainability into its purpose and paradigm when the wider benefits of doing so appear not to be recognised. This is evidenced by the focus of research participants on operational activities and the associated financial barriers, negating the cultural and educational contributions towards FE colleges can make in combination with environmental sustainability. The social and cultural value of colleges were recognised by most leaders interviewed but understood as factors that contribute to the organisational sustainability of colleges and were not relevant to the alternative interpretation of sustainability.

Present day trends of sustainability in practice remain heavily influenced by the trends of historic leadership interventions, and are used to satisfy the drive for financial sustainability for which FE leaders at a niche level want to be recognised, but have expressed specifically that this is not their aspiration with respect to holistic sustainability. Indeed, eco-efficiency measures such as reducing carbon emissions were recognised to be beneficial to the 'environment', but an environment from which participants suggested a detachment from, or its deterioration unaffected by. Instead, and ironically it was either supplementary funding opportunities or austerity measures that have engaged leaders with the more holistic sustainability discourse, but only superficially as a method of refining processes through eco-efficiency. Arguably therefore it is financial stability rather than austerity that stifles the need for change, even though throughout this study sustainability has been consistently cited as unaffordable. It is worth positing the question that perhaps the challenges and complexities at a landscape level are not challenging or complex enough to warrant significant change at all levels of society, and in this case, for FE leaders to really

question what the alternative may be. In other words, the incentive for change remains intangible or is rationalised as being part of a problem belonging to 'someone' else.

Taking into account the dominance of operational examples of sustainability in practice, it is suggested that the management approach of FE based on how it perceives sustainability is practiced within the sector (operational activities within niche environments only) can only be operational. Furthermore, this indicates the more superficial philosophy of a non-environmental degradation perspective due to its resonance with an operational management approach, which as indicated by the TMF, tends to serve shorter time scales and therefore is managed more reactively than how it is perceived. In other words, there is a disconnect therefore between how a leader perceives sustainability, and how this is practiced, not just within individual organisations but the wider discourse at a regime level amongst FE leaders.

At a regime and niche level where colleges have greater autonomy, sustainability is discussed in greater detail than at a landscape level and in practice has been demonstrated in wider variety of methods, but remains restricted to operational management as it remains within the remit only of a minority of practitioners across the sector. Though best practice is shared amongst practitioners, there appears to be an absence of wider cross – institutional awareness, interdisciplinary collaboration or strategic cohesion. But at a regime and niche level, the interpretation and incentive to action sustainability within these parameters has been left wanting since many leaders perceive engagement with either to depend on higher levels of capital investment. The answer to research question two is therefore centred on eco-efficiency, with colleges' predominant focus on environmental impacts at an operational level distracting the possibility of other areas of responsibility that could address the less obvious but more damaging impacts of the education and values colleges propagate.

5.2.3 Research question three; what are leaders' perceptions of power and leadership for sustainability within FE?

Responsibility for solving sustainability was advertently or implicitly perceived by all levels of the FE management hierarchy to belong to 'others'. Given that the environment was perceived to be the most pertinent aspect of sustainable development, inaction/ limited action and power pointing suggest that the value of personal agency is either recognised nor valued, and instead meaningful action can only come from legislative or political interventions.

The most notable power struggle was dominated by an uncertainty of ownership and power for the sector overall, whereby despite leaders claiming responsibility for their individual college solvency, discussions made it clear that external forces undermine individual leaders confidence of purpose, as well as their perceptions of sector's purpose overall. Though specifically discussing the failings of the LSC's capital programme, Foster (2009) specifically states that previous government changes have led to concern and trepidation within the sector, echoing research participants of this study who stated a preference for a consistent negative approach rather than frequent and often conflicting policy changes. Yet a neediness of the sector towards central government, either for incentivised prescriptive guidance on sustainability, or for funding and direction in order to remain relevant to government priorities and therefore ensure organisational sustainability was very apparent. This focus of power at a landscape level is often at odds with local, regime level power dynamics. As both are externally focussed, this reflects the vulnerability and appeasement of colleges to external rather than internal forces, evidenced by leaders' consistent and frequent use of phrases such as 'meeting the needs' of the government/community/ businesses/ students.

Though implicit, it is suggested that where power and leadership for sustainability is perceived to reside will be reflective of an overall management approach to sustainability. For instance, if a leader demonstrates ownership of sustainability, it suggests recognition of the strategic, tactical or operational advantages of doing so. However, results from this study reflect a recurrence of power pointing taking place at all levels of the FE management hierarchy in relation to holistic sustainability. For example at a landscape level, the absence of sustainability guidance except within guidance notes for capital funding bids, reinforces that FE's funding bodies do not perceive sustainability as something that concerns colleges, whose priority is instead to

contribute to economic growth, as identified by Scott and Gough (2010). Therefore colleges must be expected to lead on this themselves, and by extension therefore, power for sustainability from the landscape level is directed at a niche level. This is reinforced further by bureaucratic reorganisation in 2010 and 2013, which led to the subsuming of previous sustainability initiatives. All remaining uses of the term 'sustainability' are limited to eco-efficiency, reinforcing that the implementation of such initiatives are for the refinement of existing processes to support the sector's purpose.

Collectively at a regime level, interest groups of colleges (such as the AoC or 157 Group) through perhaps strength in numbers or the pooling of resources and expertise indicated a more tactical approach as representatives of the sector, using their power and influence to have more of a diplomatic relationship with the landscape level of management, especially over issues that have generated enough concern at a niche level. *Sustainability* however was not one of these issues, or perceived as something that the 157 Group should take leadership of because of the investment required to be legitimate leaders. This corresponds with Banerjee (2008) whereby few organisations are willing to consider the levels of investment or long time scales required for environmental sustainability improvements. The only leadership role that 157 Group leaders perceived they could contribute was to work with colleges to collate examples of sustainability in practice and relay this to the government as further demonstration of the sector's intrinsic value. More widely however leadership for sector sustainability was perceived to rest either with the AoC or a separate interest group of 'enthusiasts', but for either to be perceived by the rest of the sector as important enough to take action on would ultimately require the government to encourage sustainability practice through the provision of financial incentive, or indirectly by making it commercially advantageous for colleges to teach sustainability (through either add on courses or STEM courses).

Similarly at a niche level, college leaders indicated a strong sense of responsibility for the financial sustainability of their college, seen as important not only for business continuity, but also demonstrative of colleges' relevance and therefore worthy of continued funding. While at a niche level there was a similar consensus that it was the responsibility of the landscape level to provide direction and funding to facilitate college engagement with sustainability, vice-principals and focus groups indicated that it was the Principal's role to lead on sustainability. To the contrary, Principal's if not

suggesting that it was the role of the government, suggested instead that student demand or enthusiastic members of staff should catalyse college engagement. Though the dominant trend was to direct power up through the FE leadership hierarchy, Principal's suggestions that leadership would emerge from students or other staff member's mirrors the approach taken by the landscape level. I.e. it is not a subject that is worthy of their leadership.

Some college leaders expressed a desire to do more to integrate sustainability into college strategy and activities though they did not state whether they would take personal responsibility for this. Irrespectively however, if they would like to do more but are not doing, it suggests that they are waiting for either what they perceive to be the right conditions, or directions. In other words, the power for action does not rest with them.

Power for either interpretation of sustainability is therefore perceived by the regime and niche level of FE management to rest at a landscape level, as even the perceived need to demonstrate the intrinsic local economic and social value of colleges reinforces the power of the landscape level. While ever colleges remain so reliant and uncertain of their financial position, it is suggested that as a sector, the management approach to sustainability will always match that of the landscape level – its relevance limited to an efficiency measure, managed operationally within existing business models. The fact that the landscape is looked to for the funding incentive for engagement with sustainability reinforces that sustainability is perceived as something that must be invested in and by association, is measureable rather than values based. Furthermore, this reinforces that the perception of sustainability is to do things better or more efficiently, rather than to do better things altogether (Sterling, 2004; Doppelt, 2012).

The answer to research question three reflects the answers to research questions one and two whereby responsibility and leadership for organisational financial sustainability is vehemently accepted by FE leaders, but power pointing between all levels of FE leadership is prolifically evident with regards to taking responsibility for the sector's leadership role for its own environmental sustainability and its wider role in developing a more sustainable society as a whole.

5.2.4 Answering the research objective: the dominance of power

The management approaches indicated by perceptions and practice of sustainability reveal that while either of the two dominant interpretations of sustainability indicate a more tactical approach to sustainability in theory, in reality sustainability is practiced in the same operational manner irrespective of how it is conceptualised.

Therefore while the relationship between how it is conceptualised and how it is practised may be weak, the reason for this lies with the inherent power dynamics of the FE management structure, and the implicit power pointing taking place between all levels of FE leadership regarding the responsibility of sustainability.

Indeed, it is perhaps its practice that prevents a deeper understanding and responsibility of sustainability (when considering that responsibility for its leadership was not taken by any of the sector's leadership hierarchy), but also that this is convenient because current practices enhance models and methods of business that few want to/ feel incentivised to change. Furthermore, this is evidence of continued reductionist thinking which prevents or distracts from the systemic thought required that could help resolve societies complex issues. FE is therefore no more or less ready for a transition to sustainability than any other sector or sub-sector, however, its funding structure renders it more susceptible to the political landscape and rapid policy changes that undermine many of the skills required for sustainable leadership.

Using the prevailing management approaches of the landscape, regime and niche levels of FE leadership identified in the previous sub-chapters, it is now possible to answer the research objective:

“To determine if there is a relationship between Further Education leaders’ perceptions of sustainable development, and the nature of its practice within FE colleges”

It is suggested that the relationship between awareness of sustainability and its practice is weak, due to the tactical management approach demonstrated when conceptualising sustainability but the dominance of operational management approaches in practice. In a smaller number of cases where perceptions of sustainability using the literal interpretation alluded to a more strategic management approach, perceptions of holistic sustainability were conversely discussed more operationally as a method of reinforcing the economic position of colleges. On balance however, the timescales that underlined most discussions of sustainability in either

interpretation were limited to tactical parameters, which has been surmised are reflective of the political timescales realistically upheld at a landscape level. Furthermore, it is fair to conclude that because interpretations were consistently favouring a conventional economist perspective or non-environmental degradation perspective, sustainable development and the equal consideration of economic, social and environmental impacts is not being managed by the FE sector.

To some degree this study concurs with Wals and Blewitt (2010), Stevenson (2007), and Shiel (2013) who refer to a dichotomy between the rhetoric and practice of sustainability, a phenomenon that is indeed reflected by a wider conceptualisation of the term compared to how it is demonstrated at a niche level. However throughout the sector, particularly at a landscape level, sustainability and sustainable development as terms faithful to those definitions highlighted in chapter 2.1 are being fundamentally misinterpreted and are used instead to indicate the intended longevity of the status quo. Perceptions at a niche and regime level were slightly broader as they frequently made reference to 'the environment' or 'environmental', however as discussed by Shriberg (2002:158), "opting to use the term 'management' or 'environmental' instead of 'sustainability' may be more resonant with people's comprehension of the term, however since sustainability is qualitatively different from "environmental responsibility", campus leaders might attach different meanings to questions based on their interpretations, none of which might approach theorists' and practitioners' meaning of 'sustainability'.

These interpretations and the potential role that colleges could perform in their advancement are lost on many if not all leaders at multiple levels and society as a whole. As stated by Rotmans and Loorbach (2009) and Markard et al (2012), the persistence of current problems caused by unsustainability cannot be solved using current policies and mechanisms and reliance on neoclassical economics. Perceptions of uncertainty and financial concerns are the most significant issues for FE leaders over a mid- long-term time frame. This may exacerbate perceptions of the relevance of sustainability as both themes are products of and perpetuate short term, reactive tendencies. Indeed, the dynamics of power revealed in this study reinforce a widespread lack of understanding of the term because if this were not true, then power pointing would not exist. Alternatively, as surmised by Cullingford (2004[a]), it could be that the implications of the term are understood but are too intimidating or

abstract for individuals to comfortably grasp, therefore the term because of its real significance, is misused.

In the meantime, it is likely that only those who take an active interest either professionally or personally understand the faithful meaning of the term (Jones et al, 2010; Brinkhurst et al, 2011), though while ever power pointing persists, these people are likely to remain restricted or 'locked in' at a niche level because that is where they are perceived to belong, as stated by Doppelt (2012:29), "Policy makers approach economic, social welfare, public health, and environmental problems as if they are distinct from each other and require different remedies. The media, economic theory, and our political discourse reinforce this belief of separation. A reductionist view purports the notion that dividing the world into little pieces helps us understand and control our environment".

Based on this, it is suggested that niche level developments that reflect a more environmental bias are unlikely to take hold even though ironically this is the bias most participants revealed throughout the study. However due to the operational management approach taken by the sector in the practice of sustainability, environmental sustainability is evidently not seen as something that is strategically relevant to the sector's longevity.

Though often discussed as separate topics from environmental sustainability, the social and economic contributions colleges make locally are perceived as significant to a college's longevity and purpose but not understood as being important elements of sustainable development. This unequal emphasis of social and economic considerations compared with their environmental impact reinforces that perceptions of sustainability within FE are centred on a human worldview, placing emphasis on 'sustained' or 'successful' growth as an indicator of economic development, both of which do nothing to diminish the continued demands of the Earth (Williams and Millington, 2004; Waas et al, 2011). It is therefore less the acknowledgement and active engagement with a college's social or economic responsibilities, but a problem of environmental responsibility. Indeed, when discussing the purpose and paradigm of colleges, a conflict emerged between colleges taking ownership of their financial sustainability, but expressing a need for others to direct or assign responsibility, or 'power-pointing' with regards to holistic sustainability.

This suggests a lack of confidence and uncertainty of how colleges are able to contribute to sustainable development, which may be inhibiting leaders to seize autonomy at a more local level. Perceptions of power may therefore be based on convenience by all leadership levels if there is widespread uncertainty of how the sector is able to contribute to sustainable development and may not, as suggested by Christie et al (2014) be reflective of an alibi from having to consider the concept more widely. Instead it is suggested that it is an issue of confidence – both of the term itself and its relevance to the sector, reinforced by the unexpectedly interchangeable use of interpretations, and is disappointing – that at the time of research in 2013/14 such uncertainty could withstand.

Historical sustainability 'initiatives

It is suggested that the positive and negative connotations now associated with sustainability as a result of previous surges of activity and interest have led to or reflect issues of relevance, themselves which have led to a stagnation of ownership. For example, the two most significant endorsements of environmental sustainability were driven from the landscape level but were relatively short lived and ended with a bureaucratic reorganisation. It is clear that whatever resource or incentive that inspired such landscape leadership has since been missing, which has also led to the deceleration and stalling of consistent engagement and practice of sustainability at a regime and niche level. This suggests that without landscape endorsement colleges perceive they are unable to take the initiative themselves, reinforcing why current political inertia presents a real problem to the likelihood of a transition to sustainability within FE. Indeed, this was implicit throughout this study whereby leaders were happy to provide examples of niche level sustainability activity, but did not acknowledge that they are being undermined, or progress stalled by their own lack of leadership and ownership – i.e. they leave the relevant member of staff to get on with it, missing the point and wider relevance of sustainability entirely.

As stated by Garud and Gehman (2012), for a transition to take hold at a landscape level requires the ability to sustain being sustainable. Since the closure of LSIS there has been no further sustainability guidance offered at a landscape level and is demonstrative of the importance and gravitas landscape support offers to a transition and how without it, it can prevent or inhibit further work taking place. Indeed, it is suggested that it is largely an issue of perception of sustainability at a landscape level that has stifled the sector's ability to continue its sustainability journey, not overtly, but

through other more pressing priorities taking precedence. Niche activities are able to continue but are confined as such, because no longer are they a priority. In other words, power at a landscape level has both actively encouraged and indirectly prevented niche level activity. While ever the likelihood of landscape changes favouring sustainable development appear not to be forthcoming, it is unlikely that bottom up, niche level practices will gain sufficient momentum or legitimacy to stimulate regime, or sector level ownership of sustainability.

Power dynamics and sector confidence

It is unlikely that the sector would ever consider considering its purpose, let alone consider an alternative purpose while it remains so closely wedded to the priorities set by government, which as already discussed, remain inherently at odds with the principles of sustainable development and promoting alternative paradigms.

What this study may have revealed is that it is not just a lack of financial autonomy that is perceived to prevent colleges from engaging in sustainability, but it is also a confidence issue – confidence of purpose, confidence of the sustainability discourse, and confidence of the potential role colleges have to play in sustainable development. What was not expected was the dynamics of power pointing (possibly as a result of the formulaic perceptions of leadership [and discourse] of sustainability) and how (the lack of) power, more than simply financial issues, was perceived as the most significant barrier to sustainability.

While the higher echelons of the FE hierarchy may determine how surmountable the barriers to engaging with sustainability are (i.e. funding, finance, and time) it is clear that power pointing at all levels could also indicate complacency, whereby it is the easier option to wait for prescriptive guidance or an incentive for action, both of which are counterintuitive with the learning and individual action and responsibility that should take place within sustainable development. In other words, a lack of guidance or information is unlikely to be the only inhibiting factor. Therefore we return to the interpretation of sustainability and wider incentive for change: as long as it is perceived as a niche subject and managed using transactional leadership approaches that perceive sustainability as just another interest alongside many others (Eddy, 2005; Beltran-Kadji et al, 2013) sector inertia is likely to withstand. This approach also leaves unchallenged leaders' apparent lack of inclination or confidence to learn about sustainability and seize power voluntarily at a niche or regime level.

Power dynamics necessitate a prescriptive approach.

Earlier in the thesis it was surmised that the sector appears not to need a prescriptive approach, however the results to emerge from interviews and focus groups suggested the contrary, whereby a renewed leadership of sustainability that endorsed participation and provided either funding and/ or clear guidance on how sustainability can be integrated within the curriculum would be the only valid method of overcoming the barriers of finance and relevance. In shorthand, the relationship between perceptions and practice of sustainability is an issue of power and perceived relevance.

It is certainly evident that previous interventions have led to an increase in participation by providing such guidance and funding, however aside from the obvious perpetuation of sustainability being practiced separately as a silo subject, with the exception of some eco-efficiency indicators measured annually within the AoC's eMandate which is passed onto the sector's sponsoring government department, it has never formed part of a college's inspection framework, begging the question of how accountable colleges are, or expected to be to sustainability? Conversely, many indicators of sustainable development are qualitative and values based and are therefore difficult to quantify, however, as stated by Cullingford (2004[a]) universities and colleges are held increasingly accountable to their more quantifiable impacts such as their value to the economy and society. For colleges this is exemplified in the annual 'College Key Facts' report published by the AoC, which contains facts such as the projected economic contribution college students generate over their lifetimes, the economic returns per £1 of government funding of post-19 college courses, and colleges responsiveness to training requirements compared with universities (AoC, 2015). It is arguable therefore that colleges do report on the social and economic aspects to demonstrate the sector's sustainability, but are not recognised as facets of sustainable development. Though the other common interpretation of sustainability is synonymous with 'environmental' issues, it is this to which colleges and arguably education as a whole appears unaccountable. Unlike its social and economic counterparts, environmental sustainability is practiced and considered as an optional extra, and its implementation is reliant upon those who are interested or incentivised (through job description) to do so. It is unlikely therefore that prescriptive 'environmental' guidance will be paradigmatically challenging while restrictive and restricted perceptions of sustainability abound at all management levels of the FE hierarchy.

Therefore it is power rather than individual perceptions that has the most significant impact on how sustainability is both perceived and practiced within the FE sector. Significant learning at all FE management levels and society as a whole is needed to disentangle sustainability and sustainable development from current interpretations of it being synonymous with growth of the status quo. However it is suggested that it is fear at an individual level, institutional level and societal level as well as power that prevents the practice of doing better things, for fear of being left “behind”, being too controversial and therefore losing power, or the risk of divergence from the norm. As suggested by transition management studies, a transition requires the dual approach of niche level activity along with the relevant support and leadership at a landscape level to facilitate its acceptance at a regime level. It is of course important that leaders at a niche level develop a clearer and more faithful understanding of sustainable development anyway. However, wary of replicating the power pointing revealed within this study, it is suggested that the susceptibility of FE to landscape trends means that unless this understanding is replicated at a landscape level (which itself has influence on and is influenced by society as a whole), a transition towards sustainable development within FE is unlikely to take hold.

5.3 Discussion conclusion

This chapter has presented discussions and conclusions to each of the study’s research questions. The main themes, as highlighted in table 14 have demonstrated that perceptions and practice of sustainability are self-perpetuating and are reinforced by sector power dynamics, which strongly indicate a perceived diminishing return of investing in environmental responsibility. Indeed, although across all management levels sustainability was largely understood to be synonymous with environmental responsibility, it is to this that the least accountability was demonstrated.

Perceptions of sustainability were therefore based on a human worldview whereby FE as part of the education system continues because it is funded to be unsustainable, and is therefore funded to fuel unsustainability. While ever the perception remains that economies can thrive under such unsustainability and indeed, be refined by initiatives conducted under the banner of ‘sustainability’, the vicious circle of relevance and responsibility for addressing alternatives that address the current environmental unaccountability will continue. I.e. if we truly understand the changes required in order to become more sustainable, it becomes a job too big for an individual or a small group of people.

All levels of FE management did not acknowledge understanding of the detrimental impact education has on unsustainability. Instead, FE as part of the education sector was celebrated as being a key contributor to the country's economic and social sustainability. It is perhaps therefore inevitable that the relevance of sustainability to the sector will continue to be confined to measures that enhance and support the existing paradigm.

Sub-chapter	Discussion central themes
Perceptions and practice of sustainability	<p>The adoption of sustainability to refine unsustainability</p> <ul style="list-style-type: none"> • A human worldview • Funded to be and fuel unsustainability • Thriving on unsustainability • Perceived relevance dictates responsibility • Historical exposure and its lasting connotations • Environmental unaccountability
Perceptions of power for sustainability	<p>The confinement of sustainability responsibility</p> <ul style="list-style-type: none"> • The muted ascendance of environmental responsibility • The inevitability of FE's approach • Power pointing at a regime level • Purpose, agency and power pointing
Research question one	Perceptions of sustainability are less confident, but imply a tactical management approach for the refinement of business-as-usual
Research question two	Perceptions of power and leadership for sustainability are less clear, where responsibility is taken for the literal term, but is projected onto others when discussing environmental sustainability.
Research question three	Perceptions of sustainability practice within colleges are strong, and pertain to a management approach that is operationally based.
Research objective	The relationship between perceptions of sustainability and its practice is weak. This could partly be explained by historical initiatives and the power dynamics that dominate the FE sector, as well as sector confidence.

Table 14 - The central conceptual themes identified within this study's results

The chapter went onto discuss the problems associated with the impacts of historic sustainability initiatives and the resulting and self-perpetuating trend of sustainability responsibility at a niche level. Given that responsibility for sustainability leadership appears to diminish with authority, this study surmises that the operational management approach taken by FE in its practice of sustainability is inevitable, and that so too is the persistence of power pointing. Indeed, though the results of this study have highlighted congruence with existing theories of sustainability and leadership within HE such as the confinement of sustainability practice and responsibility within operational areas and a resulting focus on campus greening, the pointing of power for sustainability responsibility between internal stakeholders, and

that the focus of descriptive studies on operational activities is both the product and perpetuator of perceptions that this is a good enough response.

What this study has revealed is the particular significance of the power dynamics FE colleges are subject to, both bottom up and top down, by trying to simultaneously meet the needs of students, employers and government priorities. It has also highlighted the significance of exposure – exposure of decision makers to FE, how this impacts on the perceived role and funding of FE, and therefore the perceived relevance of a limited societal exposure to sustainability. It is the replication of the interplay between power and remaining relevant that has been observed at a landscape and therefore regime level within the FE leadership hierarchy. And because of exposure, this places colleges in difficult and different positions compared with schools or universities who through either a clearer purpose or more autonomous funding, are not required to demonstrate their relevance – merely suitability.

The more influential leadership dynamics colleges experience are therefore most likely to be the reason behind a stalling, or complete disregard of the relevance of sustainability to FE. It is the strength of this trend that sets it apart from HE particularly. Indeed, as stated by Posner and Stuart (2013), external influences play an important role in the success of campus sustainability. Therefore as identified by Scott and Gough (2010), the fact that universities have greater autonomy over their curriculum and financial position – as a result of being subject to less push and pull factors than colleges – is likely to have given front-runners within universities the opportunity to develop momentum and raise awareness and embed practices that within colleges, have remained simply as initiatives.

It may also be significant that the interdisciplinarity required of education for sustainability is perceived as being more difficult to apply to the task-focused vocational nature of college education which tends to be framed more locally or regionally (Scott and Gough, 2010). However, it is suggested that as well as the increasing emphasis on academic and higher education delivery within colleges, the preference to focus on local demands is actually conducive for the delivery of sustainability education. If, as stated by Cullingford (2004[a]) the problem with the term sustainability is the magnitude of the issues it represents, then a more local or regional framing of sustainable development should be beneficial for engagement.

In the meantime, the short-lived and more externally driven approach to sustainability within colleges is, as indicated by this study's results, based on a self-perpetuating cycle of perception and responsibility whereby the consistent synonymy of sustainability with the 'environment' has led to persistent power pointing between all management levels of FE. This is either due to the environment simply falling subservient to more pressing financial and social priorities within the sector, or that FE's activities are perceived to have no relevance to environmental issues. In other words, the environment is disassociated from the impacts of education. In either case, the environment is not a priority for FE, therefore it is easy to see why each level of management indicate that responsibility for leadership rests with other management levels, or that other sectors within education are perceived to be better equipped to be educational leaders, since sustainability is also consistently perceived to require unachievable levels of funding.

If then, sustainability is too big for a small group of frontrunners as stated previously, but the inherent issue with sustainability leadership is that everyone is waiting for everyone else to act (Monbiot, 2006), what is the solution? Though the TMF was unwieldy in its transference to the FE sector, it was a useful method of highlighting the irrelevance of strategic activity anywhere other than at a landscape level for the sustainability agenda to gain significant traction within FE. Though this study does not discount the role of front-runners, evidence states that within the FE sector, direction and incentivisation for change must come from the government. Front-runners may be required to assist in the articulation or lobbying of government, but this study indicates that front-runners are unlikely to receive the exposure or carry enough kudos for their voice to be heard. On the other hand, perhaps a transition to sustainability is unlikely to ever happen within any sector; especially given that one sub-sector becoming more sustainable cannot lead to sustainability when all other sub-sectors are not (Sterling, 2004). However, education's role is inflated compared with other sectors and can "help to shape the material reality we all experience and the ways in which we attempt to understand, reflect on and, perhaps even change it" (Blewitt, 2004:1).

What FE has demonstrated is its adaptive and responsive abilities for building business resilience, or in other words, its ability to learn and change quickly in order to survive. Therefore the founding skills for sustainability leadership exist, but the incentive or recognition of the need to think and behave systemically placing equal emphasis on social economic and environmental considerations is not. As demonstrated by this

study, continued unsustainability is an issue of environmental unaccountability due to the perception that it only concerns environmental issues; to behave in a way that is environmentally accountable is to behave with restraint and demonstrate equality which requires a refocusing of our morals rather than relying on technological fixes (Cullingford, 2004[b]; Monbiot, 2006). Indeed, as stated by both Monbiot (2006) and Westley et al (2011), technological innovation and our faith in it as a problem solver is actually a focus that is counterintuitive for sustainability because it does not require deep learning or change in values or behaviour. Instead, it essentially provides consent for continued unsustainable practices.

Chapter 6. Conclusions

This chapter begins by discussing how the TMF was applied to develop this study's theory, responding to calls from transition management authors for the framework to be applied to other sub-sectors. The limitations of the TMF's use as well as how this study has developed TMF theory are discussed subsequently.

The chapter will then surmise the policy, practical and research implications if the speculative management approach to emerge from this study was known to be true and representative of the FE sector as a whole.

A reflection of the overall research findings and concluding thoughts and reflections will complete the chapter and the thesis.

6.1 Revisiting the study's purpose and conceptual framework

As discussed in earlier chapters, FE colleges have received very little specific attention within sustainability literature when compared with universities and schools. This is problematic as although there are many similarities between the three, their differences are significant as highlighted within discussions in the previous chapter. The sector's particular exposure to sustainability has had a great influence on how it perceives and practices sustainability, and it is the lack of exposure policy makers and academics have had to FE that has led to its omission from this research area. This may not be considered a problem to FE itself, why would it, when historically it has generally been exposed to a limited interpretation of sustainability, or its purpose as a sector explicitly described as to assist in the country's economic growth.

Nevertheless, the size and reach of the sector qualifies it to be worthy of exploration in its own right. Hence the objective of this research was:

“To determine if there is a relationship between Further Education leaders' perceptions of sustainable development, and the nature of its practice within FE colleges”

The absence of specific studies on FE and sustainability mean that essentially this study was starting with a blank page – even how the sector defines sustainability was unknown. Given that how a university or any organisation defines sustainability and sustainable development will impact on the indicators deemed suitable to measure and report on its sustainability progress (Shields et al, 2002; Shriberg, 2002; Clarke and Kouri, 2009), the focus of this research is to ask *what* approach FE leaders take to

sustainability, rather than research the more assumptive *how* the sector is practising sustainability. This also responds to a literature gap identified by Wright and Horst (2013), who ask for the exploration of how major stakeholders within education conceptualise sustainability. Indeed, this study examined approaches to sustainability taken by multiple leadership levels of FE management comparing how as a term sustainability is conceptualised with how it is practised.

To follow the trend of quantitative descriptive studies of sustainability in HE that describe what is happening, leaves the impression that something substantive is being done (Shriberg, 2002; Stephens and Graham, 2010) and could be partly responsible for the perpetuation of sustainability being perceived as a physical, investible manifestation therefore negating the methods, cultures and contexts within which change takes place, not to mention how or why these circumstances determine what is 'best' (Wright, 2002; Stephens and Graham, 2010; Karatzoglou, 2013).

Nothing more urgently requires humans to adapt their behaviours, cultures and values than sustainable development therefore something has to change. As stated by Blewitt (2004), Cullingford (2004) and Sterling (2013), education is in an unrivalled position to permeate its values into other areas of society, yet although it is unfair to say that nothing is happening in either HE or FE, the fact remains that despite decades of descriptive studies of sustainability (typically) within HE, the deep paradigmatic change that is required remains as remote as ever (Sterling and Maxey, 2013).

With this in mind, and as an alternative method of validating the study's results, the TMF was chosen as the study's conceptual framework. Defined as "a deliberative process to influence governance activities in such a way that they lead to accelerated change directed towards sustainability ambitions" (Loorbach and Rotmans, 2010: 239), it is analytically based on the concept that transitions are multiphase processes and result from changes in processes and interactions between multiple levels - the niche, regime, and landscape (Loorbach et al, 2010; Stephens and Graham, 2010; Safarzynska et al, 2012). It is this broader perspective of transitions and the recognition of this need for learning at multiple levels of leadership, not just within an organisation but society as a whole that was particularly appealing to this study. Its focus and recognition of this role of relationships, as well as learning between society and its subsystems for the enabling (or prevention) of transitions felt particularly pertinent to this study given FE's more involved relationship with the UK government and therefore its susceptibility and

exposure to the short termism of politics and societal complexities. Rather than trying to simplify or gloss over these complexities, the TMF embraces them as part of the sustainability process accepting that the changes required will be slow to develop and will change for every action taken – thereby transforming the problem itself (Loorbach, 2010). Rather than addressing sustainability through a siloed process of fixed goals (or omitting altogether), the TMF treats sustainability as an iterative process and the focus of common ambitions rather than a destination (Shriberg, 2002; Loorbach et al, 2009). This ensures that the right questions are being asked through a transition (Westley et al, 2011), “never assuming that we have found the answer because the questions associated with sustainability are always going to change” (Morris and Martin, 2009: 164). Indeed, it is “efforts focused solely on solving problems on a short-term, unilateral or compartmentalised basis that have created the current crises” (Lozano and Huisingsh: 2011: 106).

6.1.1 Responding to calls for TMF development

This study responds to calls for further development of the TMF from three groups of authors – Jennie Stephens and Amanda Graham, Derk Loorbach and Jan Rotmans, and Jacco Farla et al, who seek the specific exploration of the TMF (i) within different sectors, specifically education, (ii) the dynamics of people and power for the advancement of transitions, and (iii) the introduction of a more macro view along with a temporal element.

By its very nature this study responds to calls to adapt and translate the TMF into other socio-political contexts and cultures in order to validate its descriptive and prescriptive elements as requested by Loorbach and Rotmans (2009, 2010). The extent to which this was practical though and the limitations of doing so are subsequently discussed in chapter 6.2.3, however applying the TMF as this study’s conceptual framework was useful in exploring the strategic dynamics within the FE sector in order to explore how it may be oriented towards either fostering change, or maintaining the status quo. As stated by Stephens and Graham (2010), there remains a scarcity of studies that explore strategic dynamics within HE, with most studies describing sustainability progress at a micro level.

Additionally, studies of sustainability within HE typically omit a temporal element, limiting the ability to understand dynamics of change; through the analysis of preceding (and not superseded) sustainability publications and guidance and the

incorporation of historic sustainability governance within the sector, this study has provided a temporal dimension which was used by design to provide contextual relevance and ultimately proved to be critically important for helping to explain the sector's management approach to sustainable development. A temporal dimension and viewing the sector as a whole, rather than focusing on an individual institution are both extremely valuable for understanding the structural dynamics of a transition, or potential for a transition. As stated by Stephens and Graham (2010:617) "...sustainability in higher education should balance rich description of specific aspects of university activities in sustainability with robust and comparative analysis of the dynamics and interactions between networks, scales, and levels across higher education and among multiple organisations".

As will be discussed in greater detail subsequently, this study and the application of the TMF has highlighted the importance of power dynamics within the FE sector and therefore the greater emphasis needed at a regime and landscape level for the sector to become more oriented and equipped for sustainable development. People and power were therefore of vital importance, not just for the gathering of the study's data, but for also explaining it. This therefore supports and contributes to the focus of power, leadership and multi-level leadership exploring sustainability and transitions asked of future studies by Stephens and Graham (2010), Loorbach et al (2010) and Farla et al (2012).

6.1.2 Recap on the TMF's functionality

The TMF has a dual functioning role as both a descriptive and prescriptive framework: whilst the descriptive function has been adapted for use within this study, it will be discussed shortly that the prescriptive function should be utilised by the sector to act as an alternative governance approach for the initiation, guidance and promotion of change for sustainable development (Loorbach et al, 2009; Loorbach, 2010; Stephens and Graham, 2010; Markard et al, 2012; McCauley and Stephens, 2012). Continuing to describe what the sector is or is not doing is not enough.

In the absence of any previous studies focusing on sustainability within FE, this study still followed the descriptive trend in order to understand what is required next, however it has qualitatively examined perspectives at multiple leadership levels to understand how sustainability as a term is perceived, where leaders perceive the power for sustainability leadership to rest, and how the sector is perceived to

contribute to sustainability. The purpose of examining perceptions at multiple leadership levels is to try and build a more accurate picture of what the overall management approach to sustainability taken by FE leaders is in order to understand what the most appropriate next step might be.

The TMF offered a broader perspective for analysis than more traditional analytical frameworks used in sustainability studies. In this case, it offered guidance on which timescales each management tier should typically be operating and the focus of each tier's activities. That is not to say that strategic activities could not be considered at a niche level, but the facilitation of a transition requires an idea developed at a niche level to be adopted at a regime level and ultimately, through landscape level endorsements and long term changes become the dominant paradigm or activity. For example, within education this may be as significant as a complete paradigm shift from educating *about* sustainability, to educating *for* sustainability, or as equally significant but only pedagogical - not paradigmatically changing - such as the replacement of chalk and blackboards with information technology.

Using the TMF as a method of mapping or signposting the results to emerge from each leadership level helped to illustrate the focus of each tier's leadership approach and conceptualisation of sustainability, and also assisted in discerning any areas of conflict – for example, conflicts regarding power that may indicate where a more prescriptive approach to initiating future change for sustainability may be valuable. The TMF was effective in observing meso trends and issues such as power and responsibility for sustainability, instead of typically used assessment frameworks which tend to focus on micro indicators, which can overstate or leave the impression that significant work is taking place when in fact the frameworks are based only on the work of one or two individuals within the institution (Shriberg, 2002; Stephens and Graham, 2010). This means that rather than being treated as a governance process, environmental and sustainability issues are managed as a specific responsibility, referring to frameworks such as the ISO14001, which is designed for the control and reduction of environmental impacts and ensuring compliance with environmental law, or in other words, focuses on doing things better (and not doing better things).

To describe the sector's approach to sustainable development to date, the descriptive function's analytical hierarchy was adapted by being scaled down to suit the study's parameters – a necessity as described by (Loorbach, 2010) to reflect the specific

context within which it is being used. Specifically, landscape activities were scaled down from thirty years to five-ten years – necessary because the FE sector has not existed in its own right for thirty years and more realistic given the pressures and turbulence experienced as a result of changeable political tenure. Strategic activities taking place at a landscape level were identified through the emergence of data themes that referred to long-term visioning, objective setting and goal formation. Though specific references to sustainability were sought after, any activity that was described using these terms was also used within the analysis.

Tactical activities are based on a two to five year timescale and were assessed by the emergence of themes that referred to lateral relationship building between sector stakeholders with the intention of facilitating mechanisms of change required for sustainability, be it the literal or holistic interpretation of the term.

Operational activities are based on a nought to two-year timescale, and were assessed by the emergence of codes that relate to short-term or ongoing sustainability projects or innovations at a college or organisational level.

Multi-level perspective	TM activity	FE focus	Research method
FE landscape (5-10 years)	Strategic	BIS, SFA, EFA	Content analysis
FE regime (2-5 years)	Tactical	AoC, 157 Group	Content analysis
FE niche (0-2 years)	Operational	Individual colleges	Interviews, focus groups, content analysis

Table 15 - conceptual framework based on Loorbach (2010) and Stephens and Graham (2010).

6.2 Developing the TMF

The previous sub-chapter discussed ways in which this study responded to calls for TMF development. This sub-chapter will now highlight how the TMF assisted in answering the study's research objective and will describe how it should be developed in order for it to be of more practical use in its future application.

6.2.1 Identifying the central tenet of power

The TMF was implicit in the identification of power dynamics (a phenomenon that was underestimated at the start of this research) because it focussed on actors and their approaches to sustainable development. This proved to be more helpful in understanding the sector's approach to sustainable development rather than focussing

on quantitative factors, which as identified by Stephens and Graham (2010), have no qualitative understanding of why these approaches are happening.

Using the TMF this study has found that the relationship between perceptions of sustainability and perceptions of practice is weak as participants indicated a more tactical understanding of sustainability as a concept however, gave only examples of operational sustainability activities in practice. Mapping approaches rather than practices identified a temporal 'locking in' of perceptions of sustainability that have resulted in the habitual management of sustainability through an accommodative response with an environmental focus. This again resonates with the rhetoric – practice gap as identified within HE by Wals and Blewitt (2010), Stevenson (2007), and Shiel (2013), a gap that appears to be based on perceptions of power and whose responsibility it is to make the cultural changes necessary to facilitate sustainable development. The routine management of sustainability has therefore remained unchallenged and may have even exacerbated perceptions of responsibility at all management levels within FE. As stated by Safarzynska et al (2012:1020) "Habits and routines can create an obstacle to changes, i.e. behavioural inertia ...and can act as important barriers to change at the meso-regime level".

Using the regime as a catalyst

This study identified that issues of power pointing and responsibility for what sustainability is perceived to be is occurring at multiple levels of FE management, which is problematic as leaders at a niche level look to higher management levels for the perceived tools and permission to practice sustainability. As this has not been forthcoming, sustainability activities have remained at a niche level and due to issues of perceived relevance, are confined to the responsibility of one or a small number of operational staff. This finding supports the importance of power and people at all stages of the transition to sustainable development, as identified by Loorbach and Rotmans (2010).

The TMF operates on the principle that if nurtured, front-runners at a niche level can overcome the incumbent regime, as stated by Phillips (2009[b]: 176) "social epidemics take off when 'early adopters' are joined by increasing numbers of people until a 'tipping point' is reached, after which point an idea spreads exponentially and comprehensively throughout society". However, as demonstrated by this study, those with responsibility at a niche level are kept there due to perceptions of what

sustainability means (except when it is perceived as being synonymous with business continuity). Therefore that sustainability is happening at all is due to the work of a small number of individuals, but has evolved from and remains based on a surge of activity and guidance received up to a decade ago. Sustainability therefore remains managed operationally at a niche level with its perceived relevance and the conflicting demands of other priorities keeping it there.

People and power are particularly important factors when considering how future debates regarding sustainable development may be initiated: research question two of this thesis asks what leaders' perceptions of power and leadership are for sustainability within the sector, and it has been revealed that the autocratic nature of power within FE means that it is inflated at a landscape level, therefore diminishing the role of front runners. This realistically leaves the regime level as the only legitimate management level that can provide a voice for front-runners, and with endorsement from the landscape level, act as the catalysing level for developing a new sustainability vision for the sector. Part of the regime's role, particularly through groups such as The 157 Group, are to challenge and lobby the government on policy changes that impact on the sector as well as promoting its activities, successes and therefore intrinsic value. Groups such as The 157 Group and AoC find the resource to campaign on issues such as the abolition of the education maintenance allowance, the introduction of free lunches for disadvantaged students, and broader issues such as the diversification of revenues and responding to the devolved skills agenda (AoC website, 2016[b]; 157 Group website, 2016). In other words, money and resource are made available for the initiatives and issues that are deemed important and relevant.

Whilst the TMF shared the same issue with any framework that is analysing sustainability in that it is highlighting a continued inaction, it was effective in clarifying the importance of power and how a "diurnal scramble to survive" (Cullingford, 2004[a]) is clouding the desire, possibility or likelihood of positive and proactive action for sustainability happening.

As indicated by this study, the problem with sustainability may be that it is perceived as an environmental issue, which concerning as it is may not be enough to prompt action. However, with some re-education on the relevance and wider meaning of sustainability to FE, a transition to a more balanced and sustainable leadership framework could be possible.

What is needed is a method of incorporating the environment as an equal consideration within decision-making processes alongside social and economic factors; how this might be achieved using the TMF, the mechanisms by which it could be introduced into the leadership structure of FE, and what changes to the TMF would be required are discussed in chapter 6.2.2.

Incremental change

One of the most contentious issues to arise from this study and the application of the TMF is the principle of incremental change.

The TMF advocates the principle of radical change using incremental steps. Though this sounds paradoxical, it is based on theory that states that radical change is unable to overcome the incumbent regime because if challenged, the dominant systems and processes would simply resist rather than adapt to such abrupt change (Rotmans and Loorbach, 2009). The resulting backlash would therefore decelerate and undermine the proposed radical change; this undoubtedly resonates with some niche activities that have arisen from the environmental movement, the introduction of electric cars or the installation of wind turbines are two examples of feasible alternatives to existing practices that although may not be accepted as part of a wider global problem, are still problematic in their own right. For example, proponents of the car manufacturing industry or oil or gas industries may not accept or link these activities to anthropogenic global warming, however, as individuals this does not mean that they have concerns regarding air pollution, congestion, or the social and economic impacts of constructing new power stations. Nevertheless, the perceived or actual (usually financial) risk posed by alternative technologies is of a magnitude that supersedes the risks associated with the continuation of the status quo.

The TMF therefore suggests that radical change instead takes place through a more sympathetic process of incremental steps, necessary because as reflected by Monbiot (2006:44), "complex ideas seldom do well in politics, as most people do not have the time or the patience required to understand them. We are likely to react against one part of the package before we have grasped the whole idea".

This study has demonstrated that the weak relationship between how sustainability is perceived and how it is practised by the sector is a combined result of power pointing and terminology issues. Due to the prolific nature of both, it is recommended that a

more prescriptive approach may be required for their reconciliation, mirroring the approaches taken to other cultural issues such as the introduction of health and safety and equality and diversity. As stated previously, cultural values are slow but not unable to change (Shields et al, 2002).

The benefit of incremental change therefore is that it allows a system, its actors, and structures to adjust and align to the new configuration and direction in a process of small steps. However, the concept of society moving in a new direction overlooks the possibility that it already may be moving in a direction that is always seeking to be 'better', and may therefore be always participating in a transition. As discussed within this thesis, this is often at the expense of the environment, either explicitly to facilitate the perceived need for economic growth, or implicitly by the continuation of practices that fuel the unsustainable paradigm. Although Warren (2004:106) states "It is not possible to seriously address most environmental issues without also addressing (issues of social justice) the gender, race/ethnic, socio-economic, geographic and colonial issues", it appears that this relationship is not mutual. In other words, social and economic issues can and are addressed as separate issues from the environment. That does not mean that the environment is not perceived as important, indeed, incrementally society has gained traction in challenging the regime to assert greater environmental action, most recently, the introduction of charging for plastic bags and the banning of micro-beads within some cosmetics. However, what this study has reinforced is that the environment whilst important, is not important enough.

This may be due to the term 'environmentalist' being associated with connotation of naivety because to strive for environmental protection is perceived by some as more important than economic growth, and to others is the catalyst for economic hardship and social regression. Both perceptions however fail to understand that, as stated by Shriberg (2002), sustainability is a process, and not a destination. A changing of values that facilitate a more balanced and restrained method of decision making where *omitting* the environment is perceived to be naïve would be one that also observes a rebalancing of power and therefore also economic and social improvements for all, not just those within western societies.

Getting to such a point seems insurmountable given the vast complexities of modern society, however comfort should be taken in the probability that at an individual level most people will care in some way about the natural environment (Doppelt, 2012), be

it only locally or regionally; these values are however lost within current decision making processes that favour economic sustainability above all else. As identified by Garner (2004: 211) “Building in an environmental dimension to the whole range of government activities where environmental problems are addressed at the outset is preferable to the more common scenario of environmental consequences of governmental decision making being dealt with as an afterthought”. Furthering this point, the pursuit of issues that are founded upon values resonant with sustainable development are ever present, with an increasing number of front-runners representing an increasing number of agendas that are not just campaigning for a more equal, inclusive and accountable society but are also challenging unfair, exclusive and unaccountable practices. This resonates with Garner (2004) who also states that governments have been unable to ignore increasing and vociferous public concern over all manner of topics and interests, which although by creating change through challenge, and is disseminating power to a more local or individual level, is in fact creating more problems and adding to an already growing number of complexities. The explanation for this is undoubtedly due to the fact that these changes are taking place within the confines of the same neoliberal economic model upon which decisions at all levels are still made, therefore not only is action limited to “change within changelessness” (Sterling, 2013:33), but any change leads to a transformation of the amorphous problem itself (Shriberg, 2002; Westley et al, 2011).

Incremental change that ultimately leads to the increasing complexity of an inherently unsustainable model therefore poses a significant problem. The reach of any incremental change is limited, as it would remain connected to other less sustainable sectors, practices and processes. Sustainable development within neoliberalism therefore may be a misnomer; the best that society could realistically achieve under such conditions may simply be ‘less bad’. This is a conflict highlighted by Bessant et al (2015), who states that although by “operating within the paradigm we seek to shift, we are not only helping to sustain it, but are also compromising the radical potentialities of other emancipatory educations”. Is it unfair therefore to expect any sector to transition to a more sustainable model when for example, all that colleges and universities have done is adapted in ways that have been necessary to survive in the current climate which operates within a framework set by neoliberalism (Gamble, 2009) and is one from which they do not have the choice to opt out of (Bessant et al, 2015).

Will any sector ever knowingly engage with a transition to sustainability, or will it be a more subtle process of changing values? For instance, the purpose of the sector is to respond to government and employer demands, the priorities of whom are to stay in business and contribute to economic growth. At a societal, regime, and individual level, are those priorities that different from one another? Perhaps it is too ideological to expect anything other than incremental change, and therefore the focus of incremental change within the TMF is not as problematic as initially thought as long as it can be accepted that radical change cannot happen whilst society is focussing its efforts on practices and solutions that preserve the status quo so that nothing need change. The incremental change advocated by the TMF may therefore be more suited to challenging the regime regarding issues that if accepted can lead to some positive change, but are not so radical that they become unpalatable and therefore receive no exposure. After all, front-runners from an existing socio-technical arena are easier to find and consider legitimate than front-runners calling for an alternative political paradigm.

If then we can accept the consequences of the inequalities brought about by the neoliberal paradigm, then incremental action through the role of front-runners may be the best we can expect until an incentive for more radical change becomes more desirable, realistic or unavoidable.

6.2.2 Revising the TMF to overcome sector inertia

Despite speculation at the start of this thesis that the sector neither desired nor needed another prescriptive framework to be held accountable to, following the study's research outcomes it is now suggested that a prescriptive framework for sustainability leadership is the only method by which the sector could be permitted (and permit itself) to reassess the relevance of sustainability to FE and education as a whole, which would hopefully lead to the initiation of more assertive and meaningful action for sustainability across the sector.

It was mentioned within the previous sub-chapter that the regime level is the most appropriate level at which to focus efforts: though the TMF requires front-runners to activate a transition, one of the proposed changes for its future application to the FE sector as a prescriptive framework would be the focus of enabling front-runners at a regime level. This proposed change is informed directly by the study's results whereby the combination of perceptions of sustainability, the role and prolific nature of power

pointing and environmental unaccountability, and historic practices of sustainability have led to the confinement of responsibility for some eco-efficiency practices at a niche level typically within back-of-house operational roles. To overcome perception and relevance issues, it is suggested that if not coming from the landscape, then leadership at a regime level is the better alternative. As demonstrated by previous sustainability drives within the sector that, although initiated from landscape level prompts, were led by the regime in translating these prompts into meaningful and relevant guidance for action. Essentially, the regime level of management within FE is what education is as a sector within society: a conduit for lasting change. Action at a regime level within FE therefore has a greater potential to inspire the niche and develop momentum at a landscape level by garnering an evidence base and impetus for change at a niche level. Some degree of government level endorsement would be required however in order for sufficient leadership to take hold at a regime level. It could even be acceptable for this endorsement to be non-committal, based on existing perceptions of sustainability because the reflexive and communication element of the TMF would necessitate the challenging of these perceptions as the sector's own vision for sustainability became clearer.

The most challenging aspect to this, or indeed any governance framework, is the equal consideration of the environment alongside social and economic factors. Within FE currently, the environment is a consideration within some operational decisions only, with the role and purpose of the curriculum itself remaining unchallenged. Emphasis therefore should be placed onto the reflexive element of the TMF, encouraging the exploration and re-visiting of the relationship between the environment and education throughout the process, in order to avoid the specialisation of activities like those that have previously taken place within the sector. Initiatives have typically only taken place when additional resource has become available, and, as demonstrated by this study, too often have these initiatives been celebrated for their successes and left behind ready to be superseded by the next, and without reflection of the initiative's wider relevance or value. Consequently, the sector has been left treading water, complying with environmental legislation and continuing financially incentivised 'sustainability' branded initiatives whose reach have been limited due to their operational management approaches. This inertia is unlikely to be overcome by incentivisation from the landscape, which communicates the value of eco-efficiency practices only.

The challenge, as highlighted by Loorbach and Rotmans (2010) will be to engage regime actors in order to develop sufficient societal pressure (which in this case would be through the reach FE has through its broad group of stakeholders) that enables the emergence of niche activities that may eventually overhaul the regime. This is indeed the case with FE as without support, front-runners are unlikely to be able to generate enough momentum to overhaul the regime on the merit of environmental accountability alone.

The FE sector, and indeed any sector, requires an alternative leadership framework that is tailored to incrementally introducing sustainable development and environmental accountability as equal factors within decision-making within sector governance. It is suggested that the incentive for such significant change might come from the UK's commitment to the UN's SDGs in order to achieve the explicit goal that relates to education, and the implicit role that education and learning plays in the achievement of all of the SDGs. The House of Commons International Development Committee has expressed concerns regarding the management approach taken by the government towards the SDG's, which resonate with the approaches taken to sustainable development as a whole by the government and the sector. Some of the committee's primary concerns are a) a lack of learning and recognition of other priorities undermining the work being carried out to achieve the SDGs, b) that it is being treated as another initiative, and not 'the' initiative to which others should be adapted towards and c) that the focus of much of the UK's involvement has been with developing countries, resonating also with Monbiot (2006) who identifies that it is much easier to tell others what to do rather than change your own behaviours. It also indicates a lack of systemic understanding of the issues that link third world deprivation and exploitation and the snowballing of western consumerism and greed.

Nevertheless, it is unlikely that FE and the UK will be able to shy away from its role and contribution in achieving these goals. It is suggested therefore that to assign permission and power to FE's regime and niche leadership levels and to create the initial impetus for change, the SFA must develop a funding model whose long-term goal is to reward the delivery of education for sustainable development therefore contributing to the SDG's, specifically goal 4.7 - "By 2030, ensure all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-

violence, global citizenship and appreciate of cultural diversity and of culture's contribution to sustainable development" (HOC, 2016: 66). Whilst it is beyond the scope of this study to speculate on the detail of how this may happen in practice, the proposed adaptations to the TMF provides the subsequent framework that might follow from the socio-political landscape's initial authorization for action.

As demonstrated by this study, action is more likely to come from a financial incentive, particularly one from the sector's funders. Not only would this carry the gravitas and incentive to develop tactical activities, but its emphasis on developing education for sustainable development should circumnavigate the perception-based issues of sustainability being an operational activity only. This would naturally invite the participation of different actors within regime organisations than if it was left for the regime itself to interpret.

A revised reflexive and prescriptive framework

The themes to emerge from the study's research questions and objective highlight that perceptions of sustainability have not exclusively impacted on how the sector has practiced sustainability, and it is the balance of power and power pointing throughout the sector that is the more pertinent factor to address in order to overcome the sector's sustainability inertia.

The revised TMF should therefore focus on the rebalancing of power until the issue of *who* must take responsibility becomes superseded by a shared vision of *why* the sector must take responsibility itself. In other words, instead of waiting for others to act, the TMF should be the guiding framework to help the sector understand its role and contribution to sustainable development so that it need not wait for instruction to act from others.

The framework itself should be a prescriptive and cyclical process, which uses the descriptive function at an operational level as part of the reflexive process only. Despite previous discussions that voice concern regarding incremental change, given that the need for radical change is often portrayed by the media through worst case 'apocalyptic' scenarios, this radical change has still not been forthcoming, therefore incremental change remains the most pragmatic option for businesses and in this case, educational institutions. The proposed methods by which this framework might work in practice and the changes required of the TMF are based on the management

approaches identified by this study. They also reflect an approach advocated by Stephens and Graham (2010: 615), which sees the “temporal integration of near-term incremental steps with long-term visions”. These steps – denoted in figure 12 - will now be discussed in detail.

Step one - Strategic authorisation from BIS

Representing the first intervention for FE colleges in England only (due to the different funding structures responsible for Welsh and Scottish colleges), BIS (now BEIS) must provide a mandate for the establishment of a group whose role would be the governance of sustainable development within the FE sector. This group should be represented by sector’s quality assurance agency, exam boards, teaching unions, funding and regulatory bodies and membership organisations (such as The 157 Group and AoC) to reinvigorate the sector’s approach to sustainability and to develop a vision that engages the FE sector and its purpose with sustainable development.

Though Loorbach (2010) and other advocates of the TMF suggest that the framework should be applied using a much more autonomous method, it is suggested that the many stakeholders FE is accountable to, who are often more influential in defining the sector’s purpose than the sector itself (Panchamia, 2012), are also partially responsible for the deceleration of the sector’s ability to respond to the challenges posed by unsustainability in a timely and effective manner (Stephens and Graham, 2010; Shiel, 2013; Sedlacek, 2013). Therefore a group with a prescribed mandate is likely to command more respect and legitimacy at both a landscape and niche level than an intangible and unfamiliar group.

The HOC (2016) in their appraisal of the UK government’s progress on SDG’s recognises that a separate group to inspire action would be a weaker approach than using existing groups and established mechanisms. This sentiment could also be applied to the FE sector; however there is not an existing cross-stakeholder group within the FE whose remit could be added to include sustainability, instead there are only sector groups within individual organisations such as the 157 Group and the AoC whose remits on topics such as finance, curriculum, and leadership are then used in some cases to lobby or advise the government (as well as the sector) on pertinent existing or arising issues for colleges.

Yet another group might be perceived as onerous or unnecessary, however the government and therefore the FE sector cannot escape the inevitable role it must play in achieving the UK's commitment to the SDG's, "Business as usual is no longer an option. Achieving the SD goals by 2030 will require unprecedented effort to integrate the goals into countries' national and international policies, and it is crucial that governments are held to account on their promise to do this" (HOC, 2016: 12).

This may present both an incentive and opportunity for BIS to catalyse action at a regime level. Could it be tagged onto an existing group within the sector? Possibly, but this would distract from the not insignificant task of establishing a sustainable development vision for the sector. The group would also have to be chosen carefully in order to avoid connotations under an existing group's charge. For example, if this group were to be assigned to the AoC, both the AoC and the sector would perceive this group's purpose as estates and operations biased, as this is the approach historically taken by the AoC. A separate and newly established group therefore seems the best method of avoiding connotations based on previous organisations focuses, and would be demonstrative of the inter-disciplinary relevance and responsibility all sector leaders must take.

Step two – Tactical collaboration at a regime level

Representing tactical collaboration at a regime level, this group's membership should include representation from the AoC, 157 Group, the Quality Assurance Agency (QAA), exam boards, teaching unions, (and as a legitimising role - the SFA and EFA) and should draw upon external expertise, either through sustainability and education consultants, or academic expertise from HE or within FE to assist the group in developing its initial focus and momentum.

This prescribed mandate should require the group to:

- i) Establish and structure the problem of sustainable development being excluded from all significant decision making processes within FE, and develop a new vision and series of goals to overcome this problem. With the exception of some eco-efficiency activities within new building developments, actors would be expected to identify its exclusion from curriculum, teacher training, examinations, and how the sector is regulated, funded and inspected. Though the TMF recommends actors should be chosen on their interests and backgrounds, it is suggested that actors participating in this process

within FE should be nominated by seniority, at the outset by BIS, and not just those whose role is perceived to be related to sustainability or who are perceived to be sustainability “opinion leaders” (Loorbach, 2010:174).

ii) Explore the language used as part of their vision setting as the terms that are habitually used in reference to activities that are perceived to be sustainable, are in fact only refining *unsustainability*. Since the environmental facet of sustainable development is the one to which the sector has demonstrated the least accountability and perceives has the least relevance to FE, it is imperative that the group revisits the terms as part of their vision setting, and develops a definition or working term that reflects the sector and its role within society in 2016. Not resting upon its laurels using a term that was developed over a decade ago by an abolished department.

iii) As part of this exploration of language, the power dynamics of sector funding and how it has implicitly or explicitly dictated the sector’s approach to sustainability should be identified and reflected upon in order for the group to set a vision that can withstand the tumultuous political and funding landscape. This vision and its goals would therefore be evidential of a shift in power from the sector having to wait for the correct landscape conditions, to instead elevating sustainability to a position where work can continue irrespectively of the perceived typical barriers, such as funding and time.

iv) The adapted TMF would require a great deal of reflexivity to overcome historic practices of sustainability where the ‘environment’ has been treated as an initiative, in order to lead to a process that encourages sustainability to become sustainable.

To achieve this, the group’s mandate should focus on re-educating and re-emphasizing that sustainability is as much a cultural, values based and therefore intangible concept as one that can also deliver tangible eco-efficiency outcomes. This should overcome the barriers associated with sustainability as the perception that it requires investment is inevitably responsible for the power pointing both down and upwards within the FE leadership hierarchy.

v) The reflexivity of the framework should serve as a method of educating individuals within different management levels of this structure, including BIS, who as the cycle matures, would be expected to participate in the reflexive learning element like the rest of the sector’s leadership. This need not happen at the same pace as the structural

changes taking place at a regime level, providing that the landscape continues to support and engage with the function of the regime's sustainability governance group.

Changes, such as the development of a parallel funding model by BIS that rewards the engagement with sustainability within teaching and learning, would be expected to materialise over a longer time frame, but be informed by reflexivity at a regime and niche level. Colleges, after all, as well as their messengers, are also their customers.

Step three – Vision and goal setting

This group should then develop its vision and goal setting for the sector based on its mandate, by identifying actors at a niche level to participate in the achievement of the group's goals. This step within the framework echoes an approach advocated by Doppelt (2003) who states that the most successful sustainability organisations challenge the status quo by using new goals, strategies and implementation plans developed by transition teams. Of critical importance to achieving this is a clear vision and understanding of all parties of what rules must be followed and responsibilities taken in order to achieve the group's vision.

Interestingly, the HOC (2016) identified the importance of seeking out where bottlenecks might be occurring within government that if unlocked, could simultaneously accelerate the progress of several SDG's. Given the widely cited slow progress of HE (but arguably all education) earlier in this thesis, education is arguably one such bottleneck that has great opportunity to contribute to the achievement of SDG's through its reach and future leadership potential.

Step four – Operational implementation

Operational implementation at a niche level would be the enabling of actor participation at a niche level through appropriate management support. At an individual college level this would be initiated through the relevant stakeholders at a regime level communicating with college leaders. This may take place through regional addresses with co-operation from the LEP, or through existing professional communication methods such as sector publications (FE news), newsletters and conferences. The purpose of communications must be clear, consistent and supportive of the group's mandate. The outcome of such communication must result in the initiation of college level activity; this could be demonstrated by a micro process involving goal and vision setting at an institutional level by the college leadership, or a more direct and immediate approach by authorising the introduction of process changes, such as the inclusion of sustainability into annual curriculum planning groups and processes. This would then automatically become involved in all subsequent mid-high management level reviews and processes.

Step five – Appraisal of activities

This step would appraise the methods by which the regime's strategy has been implemented operationally in step four and would identify whether the activities in practice are engaging with leadership at all management levels within individual institutions. Using the descriptive function of the TMF, activity appraisal would identify (or not) evidence of multi-level leadership within individual colleges to ensure that responsibility for implementation was not falling to one or two individuals whose job role or enthusiasm made them likely candidates. Activities would need to demonstrate operational, tactical and strategic commitment from the college and its management structure in order to fulfil its contribution to the wider sector tactical goal. Evidence of such demonstration might take place using a similar method to this study, whereby interviews; focus groups or analysis of activities would map the management approach taken by different management levels within the college. It is suggested that private practice sustainability practitioners with experience of the FE sector would be best equipped to carry out such appraisals in the timely manner that would be required. Academic appraisal of the sector's approach as a whole is also an avenue that could be explored over a longer time scale, and is discussed in chapter 6.3.2.

The outcome of such appraisals should, even after the first cycle, demonstrate that these individual niche level activities have amounted to a significant sector-wide

tactical advancement that could lead to the landscape level of leadership reassessing its own long-term goals and vision for the sector.

Step six – Reflexive learning

The observation made by Jorgensen (2012: 1009) “transition theories have had a tendency to explain change without giving explicit attention to the important tensions and temporal situations involved”, is indeed relevant to this study given that the temporal aspect of the original TMF was one of the most challenging components to apply to the FE sector. It is therefore suggested that the temporal aspect of the TMF’s prescriptive cycle and descriptive analysis should be limited to five years to reflect the temporal pressures felt by FE. Representing the last stage of each cycle is the requirement of reflexivity, reporting back to BIS the lessons, progress and difficulties identified in step five. Reporting back to BIS also builds knowledge at a landscape level and demonstrates credibility in order to retain their strategic authorisation and build the case for a parallel funding model for sustainability.

The cycle would then return to step 2), where the regime based group would review its membership, effectiveness and evidence base to emerge from operational implementation.

This revised framework has taken a legitimate prescriptive and descriptive process used within other sub-sectors, and has translated and revised it into a framework that could be used to initiate a revised and refreshed leadership approach to sustainable development within the FE sector.

The revisions to this framework have been based upon the key themes to emerge from this study identified by the research questions and objective, namely:

i) The commanding influence of power and how it has a) been implicit in both the initiation and inertia of sustainability activity within the sector, and b) due to perceptions of what sustainability means and its relevance to the sector, by all levels of FE leadership, has been an implicit excuse for inaction – i.e. it is someone else’s responsibility.

ii) FE’s regime management level has inspired the greatest amount of activity within the sector at an institutional level by demonstrating the most willing level of leadership to sustainability. This is where the framework focuses; however this study has also

demonstrated that the long-term impetus for change ultimately comes from the landscape level through its priorities and incentives.

iii) The framework is built upon a series of incremental steps that encourage more concerted and immediate action at each management level of FE. The revised and reduced timescale that the prescriptive cycle is based upon should identify the building of incremental activity and areas of conflict or inactivity to lead to more rapid and effective change within its next cycle.

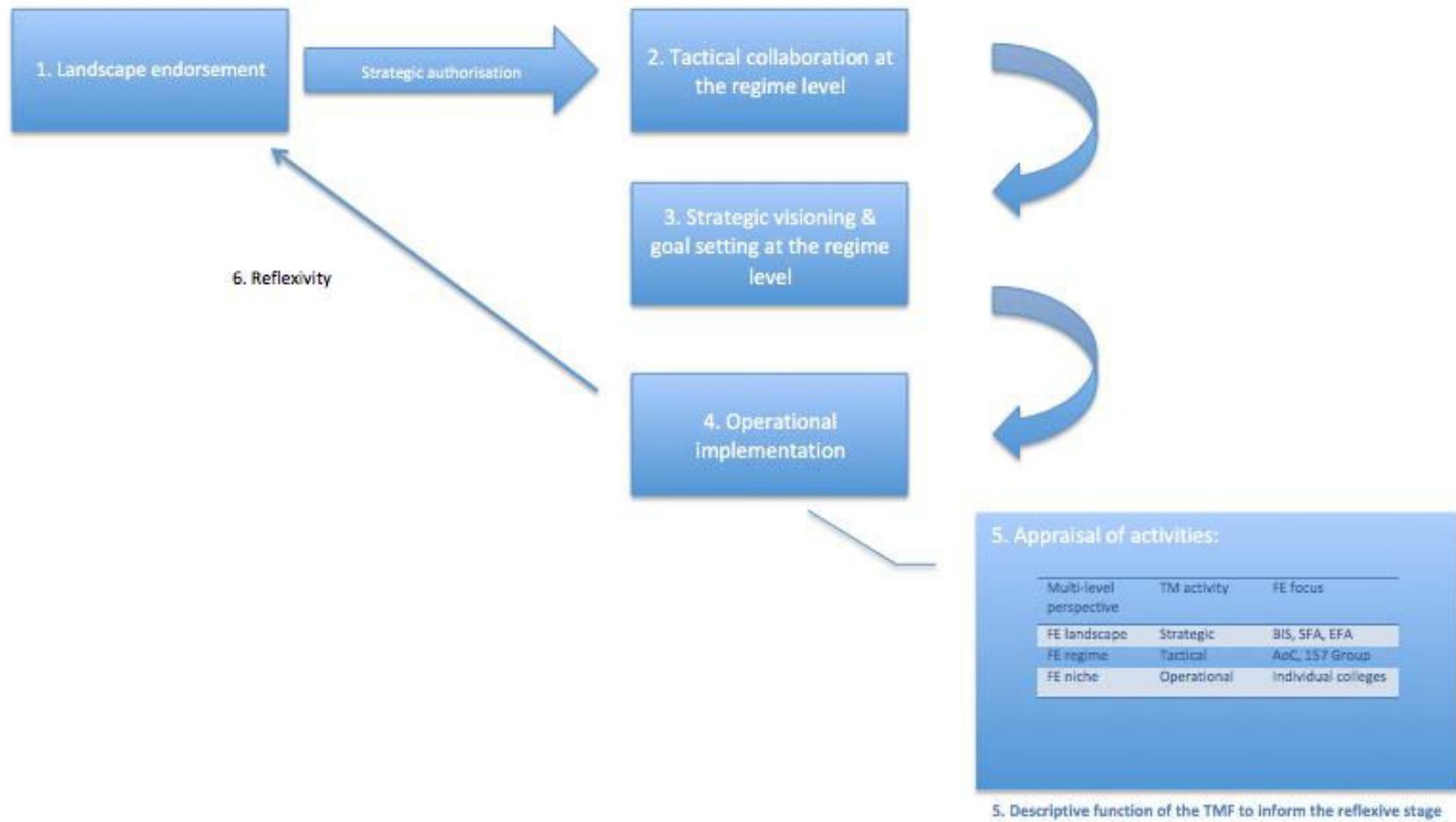


Figure 12 - Diagrammatic representation of the revised TMF and its application to the FE sector by each of the numbered steps.

6.2.3 Limitations of the TMF

This sub-chapter will discuss the limitations encountered by using the TMF as this study's conceptual framework which fall into two categories - mechanical, where issues relate to the application of the framework, and theoretical, relating to the principles of the framework itself. Some of these issues relate to wider limitations associated with the methodology of this study, which although discussed in detail in chapter 3.3, are highlighted and reiterated where appropriate.

Mechanical limitations

The most obvious limitation associated with the TMF's application to this study was the adjustment of timescales that represent the activities conducted at a landscape, regime and niche level.

The timescales were therefore changed to suit the sector's specific characteristics and parameters, for example, FE's existence in its current iteration falls just short of 30 years. Additionally, though this is more theoretical in its complaint, the TMF's suggested timescale of 30 years to analyse processes at a landscape level is also problematic given that there is arguably, no such thing as the status quo. With society in constant flux, what is judged to be important for sustainability will change from one year to the next, which will therefore change the already amorphous nature of the sustainability problem itself (Shriberg, 2002; Westley et al, 2011). If the TMF's purpose is to simply focus on the transition to sustainability of one sub-sector, as discussed previously, one sector alone cannot achieve or represent sustainable development (Loorbach et al, 2010). It can only become slightly better within its own right, generally by focusing on doing things better (rather than doing better things) (Sterling, 2004). Therefore the TMF is perhaps more suited to instead focusing on a socio-technical arena's transition journey to sustainability, which ultimately and if applied to enough sectors could lead to a 'honeycomb' picture of how individual sectors can and are able to change for a societal transition to sustainability. Applied to this sector, the timescales were altered to reflect each management tier and the timescales to which each of these management tier's organisations operate that realistically impact on the long-term culture of the sector (the landscape level), the structure of the sector (the regime level), and the practices conducted by the sector (niche level).

Another mechanical issue with the TMF was the difficulty in discerning tactical from strategic activities. Though the TMF states that tactical activities relate to the rules, regulations, institutions, networks, infrastructure and routines of a sub-sector, and strategic activities relate to the vision development and long-term goal formulation for the culture of a sub-system, this study found that actors at a landscape level were more concerned with managing the accountability of the sector's tactical activities, rather than setting long-term set goals for the sector to respond to. This may be more of a problem of the sector's governance and perceived purpose, as none of the management levels examined appeared to be considering the sector's long-term purpose; only on activities that responded to the more immediate emphases and priorities to come from government.

Finally, the data sample used by this study was limited in its ability to closely examine the landscape level of management, and its approach to the sector's sustainability. Though the detailed limitations regarding the data set are discussed in chapter 3.2.3.2 and 3.2.3.3, specifically it meant that the results of this study were bound by the analysis of some high-level documentation only, and not key personnel within the sector's highest leadership departments. This is relevant because as identified when examining college websites, which often denoted different emphases compared to those given by the leaders of the colleges themselves. Therefore, what little could be discerned at a landscape level may actually be inflating or doing a disservice to the priorities and approach held by the sector's highest leaders.

This also relates to the interpretation of the search terms themselves, which again, were discussed in greater detail in chapter 3.2.3.4, but nevertheless carried significance in the use of the TMF. Activities that were identified as being tactically inclined may have in fact been referring to the literal interpretation of sustainability, therefore having no bearing on the sector's actual or perceived management approach to sustainability. Similarly, the search for explicit sustainability and sustainable development terms may have overlooked activities or approaches that were more relevant to the sector's perception or practice of sustainable development. That does not render the terms that were used as irrelevant. Indeed, whether in reference to the literal or more holistic use of the term, they continue to contribute to the perception of sustainability even if ultimately this does not impact on how it is practised.

Theoretical limitations

The most unwieldy element of the TMF was its descriptive ability being constrained by the adjusted timescales, particularly at a landscape level where the assessment could only go back as far as a decade. Whilst it is accepted that the cultural changes necessary for a transition to happen take place over decades, the results of this study indicate that cultural acceptance and changes within FE for environmental sustainability have actually decelerated as the last decade has progressed. Therefore even if sufficient historic information was available for scrutiny, it is unlikely to have changed the ultimate conclusion this study has reached. Future studies may benefit from examining the sectors' cultural attitude towards the concept of corporate social responsibility over the last 40 years, which would include the mapping of management approaches and attitudes towards values that are necessary for sustainable development, however other than demonstrating positively the evolution of cultural attitudes within workplaces and the sector, the focus of any future studies instead of celebrating past achievements, must instead be to highlight how far there is still to go.

Additionally, and repeating part of an earlier point, the framework's prescriptive ability may be constrained by what is perceived to be 'sustainability' rather than activities that are actually in alignment with sustainability. What this study has shown is that it may actually be more useful to lose the term 'sustainability' altogether, and instead examine the values and priorities held by sector stakeholders, highlighting afterwards the resonance with the sustainability discourse. It is suggested that a transition of how sustainability as a concept is perceived must happen before a prescriptive framework for action can be implemented.

This relates to another theoretical limitation with the TMF, in that as identified by Stephens and Graham (2010) it assumes cultural homogeneity. This was indeed played out within this study whereby the participants of interviews and focus groups shared demographic similarities and indeed, within the colleges, shared similar roles and expertise. For example, interview and focus group participants were mostly white males from specialised operational or managerial backgrounds. Culture impacts on a society's ability to change but it is extremely difficult to change culture (Stephens and Graham, 2010). Perhaps therefore the TMF rather than focusing on different sub-sectors within western cultures, would yield results that would challenge the west's approach to a sustainability transition by emphasising that "value-hierarchical thinking" (Warren, 2004: 107) is what legitimises inequality and leads to the many persistent

problems in the first place. It would perhaps be of greater value to learn from those societies and countries that have made bold and rapid steps to a more sustainable model, such as the Maldives' (a country whose carbon emissions are negligible in global terms [Hirsch, 2015]), commitment to becoming carbon neutral by 2020 (Hirsch, 2015). Conversely however, we have already indulged in decades of reflexivity through "searching, learning and experimenting" (Loorbach, 2010: 166), and whilst this process cannot and must not stop, the need for a more prescriptive governance intervention is needed now to overcome perceptions of power and enable action at multiple levels of western society since it is those developed countries that have the greatest environmental, social and economic impact. Reiterating an earlier point, the SDG's are a worthy endeavour, however their focus on eradicating issues that are more widespread within developing countries could be construed as a 'do as we say and not as we do' approach. If those countries most responsible for unsustainability recognised their impact and wanted to make the necessary changes to lessen this impact, measures would be in place and implicit within all decision making processes and not simply dealt with as an arm's length vague commitment to a specialized international committee. It is in fact a global mirroring of the approach taken to sustainable development within colleges; *someone* should 'deal' with it, but its up to them to work out how to fit a square peg into a round hole.

As a final reflection on the use of the TMF as a conceptual framework, it was more challenging to use than other 'indicator' based frameworks – such as the ISO14001 or EMAS that assess activities within one organisation (i.e. at the niche level). This framework required an ability to take a birds-eye view of multiple levels not only within participating individual institutions but also at multiple levels of the sector as a whole. The onus was therefore on identifying an overall approach, rather than assessing progress based on one approach taken by one institution. Tacit knowledge of the sector was of essential importance in order to carry out this study and be able to advise on how the adapted framework might be applied in practice to the sector in the future. This tacit knowledge was however based on the researcher's professional experience which, as a sustainability practitioner, will have brought a different bias and different aspiration than if perhaps the researcher had been based at a senior management level without any sustainability management experience.

The aspiration of the revised framework is founded upon the inevitability that the sector will need to address sustainability and its contributing role, within the current

decade. Has the TMF emerged as a more suitable candidate to aid the sector in achieving a more sustainable role and purpose? No more or less so than any other framework: it is perhaps less an argument of 'what' will be used and more a question of 'when' the sector and education as a whole will decide to use it. This relates to the wider question surrounding the amount and quality of data used within this study; research was gathered in 2013 and has been augmented using other data sources that are, in 2016, now at least a decade old. Though an obvious aspiration for further studies or a repeat of this study itself would be to gather a greater base of evidence, certainly from the landscape level, this study has demonstrated that the realisation of such an aspiration would not necessarily translate into a different conclusion. Further Education has had dedicated sustainability guidance offered to it, albeit intermittently, for the last decade, yet its management approach has remained unchanged. At a landscape level momentum has decelerated almost to a complete stop following the closure of LSIS who were superseded by the FE Guild who were then superseded by the Education Training Foundation – neither of whom were tasked with furthering the sustainability mandate led initially by the LSC and then LSIS.

If the researcher was to repeat this study with greater resources, time and access, the landscape and not the niche would be the area of focus as it is at this level the researcher has the least tacit knowledge, therefore overcoming much of the bias that has had to be navigated around within this study. Examining perceptions exclusively at a landscape level would also be unprecedented as sector led studies as well as this study has focussed on exploring perceptions and practices of sustainability at a regime and niche level. Given that participants of this study perceive the locus of power to rest with the government, it might be timely to understand how the sector's most senior leaders perceive its contribution to a more sustainable future.

6.3 Practice and research recommendations

The aim of this study was to understand the relationship between how the FE sector's leaders perceive sustainable development as a concept, and how this is related to the ways in which the sector is perceived to contribute to and practice sustainability.

Assuming that the management approach taken by FE leadership to sustainability as identified by this study is representative of the sector as a whole, this sub-chapter will discuss practical recommendations to be used by the sector based on the study's findings, and the unresolved and isolated ideas that may be worthy of future exploration within the research community. Practical and policy ideas are discussed in tandem as it is likely – as demonstrated by this study – that those with the motivation to consider either will be from a practice rather than policy background (i.e. a niche or regime rather than landscape level).

6.3.1 Practical recommendations for the FE sector

Though chapter 6.2.2 discusses the ways by which the TMF as a prescriptive framework could be applied as an alternative governance framework for the leadership of sustainability within FE, there are more immediate recommendations that this study can make that could hopefully prove useful for existing or budding sustainability practitioners or leaders within the sector that have a professional or personal interest in promoting sustainability or becoming sustainability leaders.

However, the practical recommendations discussed are less numerous than the policy recommendations as to continue current practices exempts the continuing 'arms length' management approach at a regime and landscape level, and will only perpetuate the perception that sustainability can be managed operationally as a niche level silo activity.

This assumption that niche level activity is incapable of overturning perceptions at a regime and landscape (and even institutional level) is based on the evidence to emerge from this study; sustainability is practiced as an operational issue because this is the consistent message received by those who previously have attached funding requirements or opportunities to its demonstration. In the absence of any clear alternative guidance and with only hints about what sustainability might *really* mean, sustainability has been kept in a place that can demonstrate quantitative

environmental responsibility while also contributing to the institution's overall financial sustainability.

There are however measures that could be introduced at a practical level by those with an actual or desired responsibility for sustainability.

Case studies – understanding multiple stakeholder perceptions at a college level

As a first step it is recommended that a focus group be conducted, at either a departmental level, or cross-institutionally to understand stakeholder's perceptions of sustainability, anticipating the perception that sustainability is most likely perceived as being synonymous with environmental management. Not only must this be challenged at an institutional level, but also by the practitioner who must challenge their own preferences and perceptions to ensure that colleagues and stakeholders with interests in the economic and social facets of sustainability are not excluded by communication that is environmentally biased.

Curriculum engagement and development

The business case for environmental management has already been made and largely understood, and is in place to greater and lesser extents within most organisations, even if this is limited to simply recycling waste. Rather than reiterating an already understood concept, it is recommended that effort be instead focussed on curriculum engagement. This might be challenging if the sustainability 'leader' is based within business support, particularly the estates and facilities department and will make it difficult to dissuade academic staff that sustainability is not just an "estates issue".

Nevertheless, as discussed in sub-chapter 6.2.2, to dispel the commonly cited barriers of time and relevance, it is essential that faculty leaders are engaged to assess existing curriculum areas as well as potential areas for further sustainability curriculum development. This should include establishing where education *about* sustainability is already taught, and where skills *for* sustainability, such as global citizenship, inter and intra-personal skills and social responsibility are also taught in order to demonstrate that a) work has already been started, and b) the crucial difference between educating *for* and educating *about* sustainability.

Communicating systemic sustainability

Cross-institutionally, communication and strategies must focus on translating the sustainability discourse into language that is accessible and relevant to all stakeholders

within an organisation, highlighting common interest with existing business functions and curriculum areas. However, in order not to fall into the same trap that has constrained sustainability to operational and accommodative measures only, the emphasis must quickly move from 'how sustainability can help you' to 'how you can help achieve sustainability', or in other words, from doing things better to doing better things. An imperative recommendation, the term 'initiative' must not be used within communications regarding sustainability. What is required now is for sustainability to be *the* business model, not as something to add to existing business models. Awareness of the interpretation of sustainability and sustainable development must also too be kept in mind; as demonstrated by participants in this study, it can be used to suit different and conflicting agendas.

Though such institutional work is critically important for at least remaining compliant, it is at a policy level where more rapid and effective progress can be made – institutionally by supporting sustainability practitioners or enthusiasts, and at a sector level by reviving a shared vision and purpose for the sector and its role in meeting the challenges facing future generations.

Expectations of regime leadership

Between the 157 Group and AoC there is a critical mass of senior leader membership, knowledge and resource available to both access and galvanise. For a sector that continues to suffer an identity crisis, sustainability could provide an opportunity to develop a unique selling point that can continue to serve the needs of the socio-political landscape, but also encourage a ground swell of action that ultimately leads to the current educational paradigm's redundancy. As outlined in chapter 6.2.2, the TMF could act as the guiding framework to lead to this ground swell, but in the meantime there are still actions that could be taken at a regime level that could make tremendous differences.

Though incentivisation from the sector's funding bodies remains wanting, the challenges of unsustainability will only continue to increase in both complexity and severity. The sector can either wait for incentivisation, or recognise the implicit incentive and opportunity presented by all of the skills and attributes current and future students will need.

Dove-tailing in with work already taking place at a niche level, the AoC, 157 Group and other sector membership bodies could pursue the following ideas that could later be translated into policy:

- Develop a joint-group statement to be sent to BIS and the DfE requesting their official bearing on sustainability and the role of colleges. This clarification should then indicate a position that the sector can work from or develop further if it felt as though the position was insufficient.
- As a subsequent step, the 157 Group and AoC could invite comment and feedback from their membership that could subsequently reinforce the landscape position, or challenge it by evidence of more advanced work taking place at a niche level.
- Exploring perceptions of sustainability held by the stakeholders who represent the breadth and reach of FE – namely students, staff and employers, would also be a useful exercise in determining where the sector may need to focus attention. For example, if new students expectations or perceptions of sustainability were different to those skills required by employers, colleges could address those skills gaps within the curriculum, leading to more satisfied employers and more employable students.

6.3.2 Future research

At the time of writing, no other studies have investigated this particular topic within FE and there are numerous lines of enquiry that future studies could explore.

Firstly given the lack of policy guidance within FE, the reasons why colleges who have excelled at eco-efficiency or who may have gone further by integrating sustainability into some curriculum areas, and have retained the employment of a dedicated member of staff with responsibility for sustainability are even more elusive. Whilst the motives may be for reasons other than, or contrary to the principles of sustainable development (such as for economic gain only), they are certainly worthy of exploration and highlighting in order to understand how future policy may be effectively translated into action. For colleges who have carried out much work at an accommodative level, the question should also be explored as to what might inspire the next level of engagement.

Referring back to sub-chapter 2.2.2, a further area of research could investigate if, or the extent to which, sustainability declarations has impacted on FE's sustainability work? Have FE colleges been directly involved or aware of these declarations, or are pertinent ideas introduced within universities (as a result of, or irrespectively of sustainability declarations) adopted by neighbouring colleges?

Examining this from a legislative point of view, environmental legislation remains the only enforced motivation for FE colleges to adopt a managed approach to mitigate some direct operational impacts such as carbon emissions (through the Carbon Reduction Commitment, where and if still applicable), waste to landfill, and hazardous and electronic waste. Equally, colleges are also required to comply with health and safety regulations, and equality and diversity regulations, both of which started life as peripheral 'nuisance' additions to business practices and have become increasingly culturally embedded within organisations processes and practices. The point has already been made that health and safety and equality and diversity are based on principles that are required for sustainable development, consequently there are two areas for exploration in future research 1) how can the principles within health and safety and equality and diversity legislation be demonstrated as being pertinent to sustainable development in order to help overcome issues of perception of sustainability and help build a sense of achievement and progress with regards to achieving sustainable development. And 2) what would inspire the same level of legislative intervention for environmental accountability as there has been for social and economic accountability within the FE sector, or indeed the education sector as a whole. As previously discussed, the indirect environmental impacts of education are invisible but arguably more damaging than the combined direct environmental impacts of all other sectors.

Staying on a similar line of enquiry, it would be useful to understand the reasons behind why the sector has pursued some recommendations such as Foster's (2005) recommendation to form a group whose remit was to explain the economic contribution of colleges. This recommendation, in paragraph 157 within the 2005 report 'realising the potential', was the basis upon which The 157 Group was formed:

"We advocate a quick review of reputation led by DfES, involving LSC and AoC to come forward with a range of practical proposals that capitalise on this lead. This review could result in a greater involvement of Principals in national representation, in

particular those from larger, successful colleges where management capacity and capability exists to release them for this work. There is a strong need for articulate FE college Principals to be explaining the services they give to society and how colleges can make a significant contribution to the economy and to developing fulfilled citizens” (Foster, 2005: 39).

If Foster’s approach was considered appropriate and/ or of sufficient value to be applied to sustainability, perhaps the same urgency of action would emerge and assist with the difficulties in defining some of the ambiguities surrounding “operationalising and standardising environmental and social principles” (Shriberg, 2004: 71).

Furthering this point, the values that underpin sustainability as well as topics that were once ‘peripheral’ to core business such as equality and diversity and health and safety must ultimately be the way society conducts itself. In other words, what society would not want to be equal, fair, safe and respectful? Exploring the perception that sustainability and ‘the environment’ are synonymous with personal sacrifice might be a useful avenue of exploration to understand what precisely society is in fear of losing at the expense of the very ecosystems we rely upon to survive.

Farla et al (2012) ask for future research to explore how some actors’ strategies and resources impact on the outcome of sustainability at a regime level. This study has demonstrated that the landscape level’s intermittent resourcing of what it perceives to be sustainability has impacted on the way in which sustainability has been practiced at a niche level, though not exclusively. What is more pertinent is that sustainability when interpreted holistically is perceived to be an externally driven responsibility, but conversely, all stakeholders are expected to take responsibility for their financial sustainability. An area for future research may therefore be to determine why sustainability initiatives – not eco-efficiency based- were treated as initiatives and not integrated as standardised practices. For example, though market forces were to blame for their demise, the teaching of renewable technologies to construction students could have continued with the wider appreciation of the finite nature of an oil based economy, encouraging innovation and systemic thinking from students and teaching staff.

Finally, there is much further work to be carried out on the TMF itself, both on the feasibility and assessment of the revised framework put forward by this study, and the

dispersal of power in particular, as identified by Stephens and Graham (2010). This study demonstrates that power is an implicit but under-articulated component of the TMF, and future studies that explore the complexity of power could not only influence TM theory, but sustainability theory as a whole. While the science that supports the need for change may be quantitatively demonstrable, the mechanisms for change rely upon complex and qualitative social issues and social mobilisation. As previously mentioned within chapter 2.3.4, an action research study that tests the prescriptive function of the TMF as well as implicitly exploring in greater detail the power dynamics relating to sustainability leadership within an organisation would be a logical next step when examining the niche level of leadership.

6.4 Thesis summary

The purpose of this study was to demonstrate that the unique characteristics of the FE sector qualify it to be treated autonomously within sustainability academia. This study has demonstrated a clear relationship between historical and current management approaches to sustainability and the funding and pedagogy of FE whereby sustainability has been largely used as a tool to refine business practices to suit funding criteria for new building developments, or the drive for austerity as a result of annual reductions in government funding.

Conversely the term sustainability has also been adopted as a term to demonstrate leadership commitment to the financial health of individual colleges and the socio-economic role colleges play within their communities. No such leadership however was demonstrated with regards to the more 'holistic' understanding of sustainability, but this was found to be particularly towards environmental sustainability.

The relationship between how leaders within the FE sector perceive sustainability and sustainable development as a term was therefore identified as weak because whichever way sustainability was conceptualised, examples of sustainability in practice were exclusively related to environmental eco-efficiency.

As stated by Garud and Gehman (2012), a transition to sustainability relies on its ability to sustain being sustainable. Current and historic methods of sustainability management within FE are more linear in their approach, which is self-evident and self-perpetuating when activities are typically understood and pursued for their eco-efficiency credentials. Their success is assessed quantitatively through direct or indirect

financial savings, with activities continuing if they are financially viable and are able to be resourced without disrupting existing practices. Though this assessment of whether an activity can feasibly continue assumes some reflexivity, it is reflecting only on the (typically) environmental activity itself, in isolation from the focus of maintaining the sustainability of other business as usual practises. This principle was demonstrated in practice by colleges who gave examples that often focussed on recycling, and therefore were not, or felt excused from addressing the more environmentally damaging consumerist practices that occur sooner within a decision making process, i.e. they do not stifle the demand for the manufacturing, transportation and procurement of goods in the first place – just different goods, or different methods of packaging or transportation.

This identified the further conflict and question of, if environmental sustainability is consistently the focus of college's management approach, then why is the environmental facet of sustainable development the one that leaders indicated the least accountability towards? Indeed, it was in relation to environmental accountability that a strong trend of power pointing was revealed between all tiers of FE leadership. Whereas the landscape level of leadership stated it was an eco-efficiency activity that should be pursued independently by colleges, the niche and regime levels of management viewed it as the responsibility of the government to provide the necessary funding and impetus to facilitate more significant action at a college level. However, the focus on funding still reveals the problem of 'sustainability' being synonymous with investment and therefore tangible quantitative inputs and results. This negates the intangible qualitative cultural and values based shifts that are required to move society from the current unsustainable paradigm and transition to a more sustainable, equal, fair and respectful paradigm.

The conclusion that this study has reached is therefore simple, yet daunting. Power and its distribution is both the opportunity for a more sustainable society and the curse of an unsustainable one. Without its redistribution, action at an individual, company, or societal level cannot be taken because its impact will be underestimated. However, it is the actual or perceived locus of power that is debilitating the discourse of sustainability and therefore its relevance or importance at a more micro level. The FE sector demonstrates this as case in point: the sector's responsiveness to changing technological and societal imperatives is both an opportunity and curse. The purpose of this responsiveness is to demonstrate the sector's perceived relevance and value to

national economic priorities, therefore ensuring its continued funding. However, this urgent need to remain economically afloat is clouding the value and relevance of other less tangible but increasingly insidious threats such as the collapse of the very ecological systems society as a whole relies upon.

Scott and Gough (2010) identify that the tensions between continuity and change, and present and future skills, are felt more by FE colleges than universities due to their greater vocational and less academic nature. The repercussions of the landscape level remaining the major source of FE funding makes FE particularly influenced by the demands of the government. However, HE's dependence on tuition fee income as its major funding source can be no more or less intimidating to universities who also must remain and be perceived as being relevant and valuable to its customers. Perhaps the implicit autonomy of thought within HE as a result of its ability to conduct research leads to a greater confidence to diverge into other practices and schools of thought, should they want to. As stated by Loorbach et al (2010), organisations must understand the level of their influence to sustainable development. FE's dependence on government funding may lead to a more urgent and changeable culture that is less conducive for the skills sustainable development requires, however it is not fundamentally or significantly different to the rest of the education sector, or indeed any sector when such unsustainability prevails. What the education sector as a whole fails to acknowledge is the particularly effective role it has had in creating and contributing to the dominance of values that are embedded within and maintain the existing unsustainable paradigm. Therefore, it has an equally effective potential role in unravelling and changing these values for a more sustainable future, as stated by Stephens and Graham (2010).

The stakeholders that hold the education sector to account could act as a strength for the sector in achieving such dissemination of values and cultural change. In the meantime however, the perceived requirements for environmental decision-making continues to produce conflicts of interest between governments and society (Monbiot, 2006), customers and businesses, and current and future generations.

Even though the intrinsic value of the environment was recognised by most participants, their perceptions of sustainability indicated that it should remain subservient to maintaining economic prosperity and not derail aspirations for economic growth. The issue with environmental responsibility is that it has become

synonymous with austerity (Monbiot, 2006); it is not desirable to take the first step towards decelerating economic growth and being content with less when nobody else is perceived to be doing so. It is therefore easier to perceive the problem of sustainability being attributed to 'someone' or 'that country's' actions because the perceived sacrifices that must be made at home and individually are too high. FE therefore is not alone in its management approach as it only mirrors the pattern demonstrated by much of society, whereby environmental responsibility is limited to alleviating the impact of some existing practices but not changing the practices themselves. I.e. focusing on prevention rather than the cure.

There is a difficult cycle of power pointing to unpick and address as identified by Monbiot (2006), Gamble (2009), and Scott and Gough (2010) whereby current 'sustainability' or 'environmental' measures are based on technology and market solutions, but the actual solutions instead rely on politics and a change in values and culture. Governments will not act until we want them to, but the continued rhetoric of individual action leading to a ground swell of demand from the government alleviates the government taking responsibility itself. Indeed, there is even evidence to suggest that grassroots expectations and actions are not sufficient to divert the government from its economic growth objectives, as demonstrated by the government's recent decision to overrule a Lancashire community's and local government's opposition to fracking. On the one hand, if the government's perception is that the retention of political power is dependent on satisfying the electorate's priorities, then the lack of co-ordinated and articulated demand for a more environmentally sound society could explain the continued favour of economic decision making. However, as demonstrated in the previous example, a co-ordinated and articulated position does not necessarily lead to the respect of decisions made at a devolved local level. This raises a question: it has been assumed throughout this study that the government does not systemically understand the implications sustainable development presents. However it may be that systemic thought has been applied and it is the implications presented by sustainability that has led to even less motive to do precisely what is required (Monbiot, 2006).

6.4.1 A summary of contributions to literature

The conceptual themes to emerge from this study, as indicated in table 14, chapter 5.3, contribute to three main areas of existing sustainability research:

1) A human world-view

This study has demonstrated that definitions and perceptions of sustainability and sustainable development held by FE leadership favour those that are compatible with current industrial and consumerist trajectories (Quilley, 2009). Dominant perceptions fell into two interchangeable categories, with participants either expressing a conventional economist perspective whereby “sustainability is no more than one element of a desirable development path” (Stavins et al, 2003: 340), or a non-environmental degradation perspective, interpreting sustainability as an issue that concerns the natural environment only (Cullingford, 2004[a]; Lozano, 2006; Doppelt, 2008; Dade and Hassenzahl, 2013).

Implicit within the conventional economist perspective is the desire to maintain or protect the current paradigm and its processes (Reid and Petocz, 2006; Christie et al, 2014). Not only does this naturally undermine the equal consideration of environmental and social issues by prioritising instead economic development, but also provides an alibi from having to consider the implications of its alternative meaning (Christie et al, 2014); as stated by Cullingford (2004[a]: 19) “the most important reason for the misuse of the term lies in its very significance”.

This study has demonstrated however that this may not have been a conscious decision, certainly at a niche and regime level, as colleges individually and collectively have enthusiastically followed sustainability guidance when it has been forthcoming. This guidance from the government, the AoC, and sustainability practitioner communities across HE and FE have naturally focussed on elements of sustainability that are compatible with a human world-view, cosmetically demonstrating sustainability, but fundamentally remaining subservient to the dominant economic paradigm. This ‘accommodatory’ response is the most typical response from universities (Sterling, 2004) as well as FE colleges, and involves practices that – as listed in chapter 2.3.4 – typically preclude sustainability’s perceived relevance to core business planning (Sterling, 2013). Instead, elements of sustainability that are compatible with the “prevailing worldview” (Sterling, 2004: 59) have been enthusiastically pursued and celebrated, but have fallen short of “serious greening”

(Sterling, 2004:58), which is associated with personal and organisational austerity (Monbiot, 2006), inconvenience (Cullingford, 2004[b]), and is at odds with the pursuit of economic growth (Williams and Millington, 2004; Waas et al, 2011).

Not only is this inherently prohibitive for sustainable development to really gain traction, but it is also self-perpetuating, as the focus on sustainability ideas and initiatives within specialist areas has led to habitual and prolific power pointing. As stated by Moore (2005), Bardati (2006) and Hoover and Harder (2015), sustainability is often perceived to be someone else's responsibility, the power for action therefore being pointed to others.

This study set out to identify if, rather than assume, that there was a problem with how sustainability is perceived. The study's results have indeed identified that how sustainability is perceived and defined remains a debilitating problem for sustainability action within FE, and is a problem that is closely related to the issue of power.

2) Power pointing

Eco-efficiency within the workplace demonstrates its economic value and as a result of initial surges of activity, has become the habitual responsibility of specialist operational roles within colleges to manage. Whilst this may remain the dominant trend of sustainability management, both in FE colleges and in universities (Blewitt, 2004; Posner and Stuart, 2013), that is not to say that this is an agreed approach within institutions.

For example, participants within this study demonstrated that it is perceived by all but the niche to be solely its responsibility, whereby operational roles looked for external leadership of sustainability as well as broader ownership and more senior leadership within their institution.

Perceptions of responsibility higher up the FE leadership hierarchy, as well as Principals themselves indicated that sustainability is a niche and specialised responsibility to be led by colleges or specific roles within colleges.

These perceptions support Hoover and Harder (2015) who identify the common theme of explicit and implicit power pointing during discussions of organisational change for sustainability within HE institutions. Much power pointing is still taking place within colleges, both in terms of whose responsibility it is to lead or 'do' sustainability, as well

as whose fault it is for the current unsustainability – not to mention the still potent opinion within society that climate change is a hoax.

The human world-view that typical accommodatory approaches in HE and FE favour, as well as the power pointing of sustainability that these approaches encompass, suggest that incremental change can only have limited reach whilst operating within the same paradigm (Loorbach et al, 2010; Markard et al, 2012). Compounding this issue is the sustainability discourse itself, which as demonstrated by this study, is adopted to either mean activities that simply refer to business longevity, limited to environmental issues to which leaders feel unable to challenge or resolve, or as something that their sector does not impact on other than resource use. The issue with the discourse is therefore both a problem of environmental bias and a lack of systemic understanding of the indirect role education plays in legitimating social and economic inequality and environmental demise (Warren, 2004; Adombent, 2013). FE's potential role is therefore significant but not recognised, demonstrated by the exhaustive lack of leadership for sustainability within the sector, and the sector's leadership focus on aligning its purpose with values counterintuitive to those required for sustainable development (Garner, 2004; Phillips, 2009[a]; Bessant et al, 2015).

3) Incremental change

Supporting Stephens and Graham (2010), this study has demonstrated that power is underestimated within the TMF, "although literature does recognise that transitions are ultimately shifts in power" (Stephens and Graham, 2010: 616). Indeed, more widely this study has demonstrated that the distribution of power is an implicit issue within *unsustainability* (Bawden, 2004; Cullingford, 2004[b]; Polistina, 2009; Doppelt, 2012); its redistribution therefore must be an essential method by which society could become equipped to behave sustainably. This supports the need for further study on the relationship between power, multi-level leadership and a transition to sustainability asked for by Stephens and Graham (2010), Loorbach et al (2010) and Farla et al (2012).

Stephens and Graham (2010) have also asked for the exploration of how a sector or sub-sector may be more oriented towards maintaining the status quo rather than fostering change. The TMF as stated by Loorbach (2010) may be one method of assessing this, as well as putting into place the mechanisms for change: "this framework, besides that it could be used to assess how actors in general are dealing

with long-term changes in society, is the basis for the transition management cycle, which is used to actually implement strategies to influence societal transitions” (Loorbach, 2010: 178).

What this study has demonstrated is that the FE sector and its leaders are not averse to change; the sector is in fact intrinsically responsive and adaptable to changing economic and social priorities, and therefore has made fostering change part of its business model. However, it is fearful of the risk of making any changes that would disassociate it from its purpose to satisfy government, student and employer demands and unfortunately, it appears that this continues to be at the expense of not considering the environmental issues that run in parallel with and are exacerbated or altered by, these social and economic changes.

Rather than it being therefore an issue with the TMF per se, it is likely to be relevant to any framework that assesses and guides sustainability and sustainable development within neoliberal parameters, or “change within changelessness” as put by Sterling (2013: 33).

The TMF however was extremely useful in identifying that long-term wide scale change relies upon a harmonisation of values at all levels of leadership within society and an ability for sustainability to become sustainable (Garud and Gehman, 2012). This, as indicated by this study, is not happening within FE or any of its leadership levels whose approach to sustainability has been the ad-hoc adoption of some eco-efficiency practices when additional resourcing or incentives have become available. Given that universities despite their autonomy of thought are as much influenced by the norms and dominant beliefs of wider society (Sterling, 2004; Stevenson, 2007), this must also be true of colleges who remain particularly influenced by government trends and priorities. Within both sectors of education, it is likely that resistance to sustainability reflects a wider cultural resistance to, or suspicion of sustainability (Wals and Blewitt, 2010).

Confusion surrounding the terminology of sustainability and the assumption that it was synonymous with environmental issues neglects the social and economic facets of sustainable development (Scott and Gough, 2004; Sterling and Maxey, 2013), therefore indicating a lack of systemic understanding of sustainability as a term and the problem of unsustainability (Westley et al, 2011; Sterling, 2013).

This study has also demonstrated the potent role of power dynamics that impact not just on existing societies, but the wellbeing of future societies and the planet's ability to support them. It has therefore come full circle from a desire to demonstrate that sustainability is not just about 'the environment' and environmental management, to the study's results suggesting that cultural and practical changes are made only when there is a clear benefit to humans and preserving or enhancing the effectiveness of the current paradigm. This continues to be at the expense of the natural world and those societies that have the least political and economical power, therefore, sustainability is a problem that mostly relates to the environment and at the root of this cycle of environmental unaccountability is the issue of power and its distribution.

6.4.2 Very last thoughts

Satish Kumar (2013) believes that devolved economies born of handiwork redeveloped during formal education is the reconfigured socio-economic fabric that could be the solution to social and environmental problems:

"What you are good at producing locally, make locally. And what you cannot produce locally, that 10 or 20 percent of the economy will be the icing on the cake. At the moment our globalisation is the icing and there is no cake, there is no local economy, so we are living without cake and just icing, icing, icing. Just icing is not good for your health" (Kumar, 2013: 18).

Continued focus on cost cutting and tinkering around the edges rather than the fundamental decisions required inducing positive change indicates that society simply may not be ready to make the changes necessary for the health and wellbeing not just of ourselves and other species, but the future generations of all living things. One research participant of this study claimed that we are waiting for "something to replace fossil fuels" (*Interviewee 9, 16/07/2013*), ignoring the fact that solutions and alternative technologies to fossil fuels already exist, but they remain politically unfavourable and even distasteful when the perception is that they threaten other opportunities for economic growth. Indeed, "technical and scientific solutions to most environmental problems are readily available to us, what has been lacking is the political knowledge necessary to provide us with the ability to utilise them to the best effect (Garner, 2004: 214).

My research and my work as a police constable has suggested to me that the problem

of sustainability rests upon inequality and irresponsibility because people either perceive they have nothing to lose, or because they always want more. If the distribution of power is key to a more sustainable society, then perhaps a reminder that the human species does not hold ultimate power is the only method that we will learn to behave more respectfully and fairly.

*“Only after the last tree has been cut down,
Only after the last river has been poisoned,
Only after the last fish has been caught,
Only then will you find that money cannot be eaten” (Cree prophecy).*

7. References

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8. Appendices

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8.1 Appendix one: Participant information sheet issued prior to arrangement of interviews

Participant information sheet

Expressions of interest are being sought from 157 Group members to participate in a pioneering research project on Sustainable Development (SD) within FE.

The aim of this research is to lead in populating the current sector SD policy vacuum; this will be achieved by highlighting the significance of the complete absence of FE within academic literature concerning SD and education, and the possible explanations behind sector led autonomy within this agenda.

Participation of a minimum of 10 Principals of the 157 Group college members is respectfully requested in order to render the research more meaningful. Participation will be limited to semi- structured interviews scheduled to take place May – October 2013.

Interviews will be a maximum of 1 hour and Georgiana will travel to you; there is no cost involved in participation.

Research aim

The research is seeking to identify the following:

1. Is FE addressing Sustainable Development?
2. What is the relationship between the understanding and awareness of SD by FE leadership?
3. What is the nature of disconnect between awareness and practice of SD within the 157 Group of colleges?

Advancing theory

The research from this pilot group would be nationally and internationally pioneering and would assist in substantiating the sectors position within the SD agenda. The research will be unique, globally reflecting the specific characteristics of the UK FE sector and in particular, the large regionally influential urban colleges which form the 157 Group.

It is anticipated that this would serve as valuable primary research which would be fed into the developing strategies of BIS, AoC, FE Guild, and Ofsted.

8.2 Appendix two: Interview schedule

This interview

I am interested in your particular leadership style and approach.

These questions will ask about sustainable development 1) within your organisation, 2) within the FE sector and 3) within wider society

- 1) What are the key issues facing your College in the next five to ten years?
- 2) When you hear the term sustainable development, what does this mean to you?
- 3) When you hear the term sustainable college, what does this mean to you? Does it differ to the present?
- 4) What role, if any, do you feel colleges should play in encouraging sustainability within the education sector (change word to ecosystem)? (157 colleges? Compared to schools, HE).
- 5) What role, if any, do you feel the 157 Group should play in encouraging sustainability within the sector?
- 6) Alternative for non-157 colleges – Do you feel that sustainability within the sector needs to be encouraged, and if so, by whom?
- 7) Optional question – What are the ideal characteristics of an organisation or group that would be effective in encouraging sustainability within the sector?
- 8) What, if any, barriers do you see preventing your college from engaging in sustainability initiatives?
- 9) Optional question – How could these be overcome?
- 10) Merging questions 1 and 8 - Do you foresee different barriers and challenges emerging in the future?
- 11) What would make becoming a model of sustainability a top priority for your college?
- 12) By which methods do you think that SD is best implemented within an organisation?
- 13) Do you have any examples of how your organisation is implementing SD that you wish to share?

END WITH – Is there anyone within the 157 Group you would recommend I speak to?

8.3 Appendix three: Focus group schedule

Focus group questions

- 1) What is the first thing you think of when you hear the word 'sustainability'?
- 2) Can you think of an organisation that behaves in a sustainable way?
- 3) Can you reflect on what information is that based on?
- 4) What are your thoughts on sustainability as a priority for the college?
- .. 5) Can you discuss in what way do you believe Leeds City College contributes to sustainability?
- 6) What barriers do you see preventing the college in engaging with sustainability?
- 7) What are your thoughts on how the college could be more sustainable?

Paper usage reduction But still huge consumption.
 People want numbers but don't believe them → say
 It will only when it affects them → reaction →
 lesson learnt or disseminated (?) through numbers →
 back to square one. By committee or by leadership?

8.4 Appendix four: Content analysis themes to emerge from sector publications

Project	Group	Overview	College participants	Link to other projects	Key message(s)
From here to Sustainability: The Learning & Skills Council's strategy for Sustainable Development	LSC 2005	Series of key actions relating to: buildings and estates; the curriculum; community engagement, and positioning the sector.	n/a	Referenced within all other projects	The sector would welcome more examples of good practice to assist in becoming more familiar with the SD agenda. The LSC should be specific about how it and the sector will implement the strategy.
Zero Carbon FE Colleges Policy Framework	Arup on behalf of LSC 2006	Response to the UK Governments 2007 Climate Change bill.	n/a	Highlights limitations of AoC e-mandate data. Not referenced within another project.	The cost of zero carbon is dependent on the definition of zero carbon used. The sector requires updated energy consumption benchmarks.
Green Colleges	AoC 2007	Brochure of best practice examples nationally. SAFE project being re-launched under the RSA regional group	26 colleges 5 157 Group members	'SAFE' project (9 Staffordshire Colleges) resurrected under the LSIS RSA programme. 'Achieving Green Colleges'	Colleges face largely financial barriers which could be overcome by changes in Government policy.
AoC Survey	AoC 2007	Surveyed 95% (of 400 GFE 2008) membership on 'The sustainability of the FE estate'	95% of 400 GFE (2007) AoC members	Achieving Green Colleges	Every college has recycling facilities. 74% of colleges surveyed said they would welcome access to resources on <u>environmental</u> policies and practices.
Towards leadership for sustainability. The CEL sustainable development	Centre for Excellence in Leadership (CEL) 2007	Supporting leaders in the sector in developing their capability to be 'leaders for sustainability'.	n/a	Achieving Green Colleges.	If Colleges are to adopt a whole college, holistic, SD strategy, much support is needed.

strategy					
Leadership for Sustainability; Making sustainable development a reality for leaders.	CEL ⁵ 2007	To build understanding of catalysts & blocks to leadership for sustainability. To test the inseparability of good leadership from SD.	5 Colleges	157 Group, EAUC, AoC	22 Internal and External block identified including lack of coherent leadership across national bodies and government on the SD agenda.
Achieving Green Colleges	AoC 2008	Short, medium and long term goals to assist Colleges embed SD within buildings & estates, curriculum & transport. Strategic paper for the sector.	Used same examples as 'Green Colleges'	LSC sponsored 'Sorted' – now LSIS.	Construction & the Built environment, Travel & Tourism and Landbased studies are the most common curriculum areas within which SD is addressed. In other curriculum areas, enrichment & tutorial programmes
AoC SW Case Study	AoC 2008/09	Case study on a group to examine the extent to which Colleges has adopted SD practices. Focussed on Leadership & Management; Building & Estates; Teaching & Learning; and Business & Community.	1 x 157 Group member	Sir Andrew Foster, 2009, 'A Review of the Capital Programme in Further Education'	Ethos and values of individual colleges have a major impact on the starting point and subsequent development of SD. Autonomy of each college results in different approaches.
BIS Toward a Low Carbon Economy	BIS July 2009	Further Education Policy presentation by FE Policy representative BIS	n/a	BIS CRDP UK Low Carbon Transition Plan	
Ofsted Sustainable Development Action Plan	Ofsted 2009/10	Ofsted's departmental contribution to the governments overall 2005 sustainable development strategy – <i>Securing the Future</i>	n/a	No subsequent document for the period 2010 – 2013	The Ofsted Head of Sustainability post was made redundant in 2013.
BiS Sustainable	BiS August 2009 – March	The first plan for BiS setting out in detail what the department will do to ensure a more sustainable	n/a	The BiS Sustainable Development impact test -	The BiS SD unit no longer exists

⁵ CEL – The Centre for Excellence in Leadership transferred business and practice into LSIS in 2008.

Development Action Plan	2011	and secure future.		https://www.gov.uk/sustainable-development-impact-test	
				Securing our Future 2005	
Sustainable Development indicators in your pocket	Department for Education 2009	National statistics booklet to present and assess the breadth and challenges of SD to those less familiar with the concept.	n/a	Securing our Future 2005	Archived.
Leading and Learning for a Sustainable Future	LSIS ⁶ 2010	Strategy and action plan as a reponse to growing appetite in the sector to understand, apply and champion SD thinking & practice.	n/a	n/a	See the 2011 LSIS sustainable development strategy and action plan
BIS Carbon Reduction Delivery Plan	BIS March 2010	First plan of its kind published by BIS. Aims to demonstrate how current BIS policies and activities could lead to a reduction in CO ₂ emissions across the UK economy and from its own estate.	n/a	HEFCE Carbon Reduction Target and Strategy for HE in England (HEFCE 2010)	Target of a 43% reduction of scope 1 and 2 reductions by 2020 against a baseline of 2005. Based on the remaining capital investment programme and the sector providing leadership through the delivery of skills for a low carbon economy. Synergy between both agendas expected.
Towards a Carbon Reduction Target and Strategy for the Further Education Sector	BIS 2010	Conflicts with BIS target stated in the CRDP.	n/a	BIS Carbon Reduction Delivery Plan	FE colleges reduction of Scope 1 and 2: 34% by 2020

⁶ Government funding of LSIS ceased on the 31st July 2013; case studies of SD projects within FE remain archived on the LSIS website.

To sustainability and beyond: inspecting and reporting on progress in sustainable development	Ofsted 2010	Provides an introduction to SD in the national context, and sets out Ofsted's role in embedding SD in inspection guidance, methodologies and frameworks.	n/a	Brighter futures – greener lives: sustainable development action plan 2008–10, Department for Children, Schools and Families, 2008	The government expects the public sector to take a lead in sustainable development by promoting and delivering it through all its policies as well as through its operational activities
Greening FE: Creating a Carbon Reduction Culture	AoC 2011	It is evident that the extent of 'buy in' to the sustainability agenda varies significantly across the sector. Although most Colleges say they now have an environmental or sustainability strategy many do not contain specific targets and few have carbon reduction plans, although others are working towards it.	n/a	Carbon Trust Further Education Carbon Management Programme.	Little in the way of specific legislation that compels Colleges to implement 'green' policies. There is a lack of information available about energy consumption figures in FE Colleges, much of the existing information combines the FE estate with the HE estate
The performance across Skills Funding Agency funded college estates	IPD on behalf of Skills Funding Agency 2011	The performance results for all colleges funded by SFA presented for building efficiency, condition, maintenance and environmental sustainability.	88% of SFA funded colleges.	n/a	Cleaning, maintenance and energy costs represent the bulk of the running cost base for colleges.
The Prospects for Green Jobs to 2020: Further Education College Survey	Dr Andrew Kythreotis, Centre for Adaptive Science, University of Hull. Research carried out on behalf of Yorkshire Cities, 2011.	How are FE providers in the Y&H region approaching the green skills agenda based on the green jobs definition	25 FE College providers in the Y&H region (74% response rate) including four 157 Group members	BIS (2010) Skills for Sustainable Growth	Important issue for Y&H FE in developing a greener curriculum, "need for a joined up approach between partners in the form of a regional network that could share best practice"

The LSIS sustainable development strategy and action plan	Updated LSIS 2011	Summarising progress and outlining opportunities for FE providers to understand, apply and champion sustainability.	n/a	n/a	Progress on leadership, organisational capacity and partnerships since the strategy in 2010 has been encouraging, but changes in pedagogy been slow.
Sustainable development in learning and skills inspections: guidance for inspectors	Ofsted 2012	Guidance for learning and skills inspectors to take into account providers contributions to a sustainable future	n/a	n/a	There is no requirement for providers to have sustainable development policies. There is no separate grade for SD; findings can only contribute to evidence used when grading the aspects.
Evaluation of the Impact of Capital Expenditure in FE colleges	BiS 2012	The impact of capital spending by FE colleges in England between 2001 and 2010.	Qualitative case study of 10 colleges; quantitative analysis of 142 colleges.	n/a	The economic regeneration stimulated by college investment can be of direct and indirect benefit to the local community.
Rio +20 the FE College context and contribution	AoC 2013 – No longer available online.	AoC submission to DEFRA and DECC outlining the contribution that FE Colleges will make to the priority areas agreed at Rio + 20.	n/a	Green Colleges Survey report – AoC 2007. Greening FE, AoC, 2010.	The key challenge identified by college leaders is how best they can integrate EfSD across the extensive curriculum whilst meeting existing demands.
Sustainability in BIS	House of Commons, Environmental Audit Committee November 2013	Progress report on government's progress in embedding SD since the abolition of the SD commission in 2011.	n/a	ELSA > EAUC	The environmental and social aspects of SD are not getting the same attention as economic factors. The RGF particularly illustrates this. BIS should encourage all of its agencies and NDPBs to produce sustainability strategies and make their production a condition for securing funding.

8.5 Appendix five: Content analysis themes to emerge from college websites

College (Niche)	Perceptions of sustainability (language used, location of information, etc).	Key themes of sustainability practice	Power and responsibility of sustainability – horizontal as well as hierarchical within the sector
1. Bedford	Microsite found using search tool (discussion – portrayed as something separate).	Initiatives, energy reduction and efficiency (including external partnerships), communication & training, policy (aims & objectives), add-on curriculum engagement/ initiatives, 'sustainability day', transport (vegetable oil), zero-landfill, commodity efficiency, low carbon skills	Director of Sustainability (now redundant)
2. Bradford	12 news stories; 'environment and community' webpage, 2010 Environmental policy, energy conservation procedures, green travel plan	Environment, waste & recycling, community engagement, volunteering and fund raising, green travel, environmental policies and plans, fair trade. Core value on college mission	Executive Director of Corporate Services responsible for policy
3. Blackpool	Website search 152 items; 80 documents, 26 courses, (location of all information within the 'Estates' webpage	Engage staff and students, work with stakeholders, waste, utilities and sustainability targets, increase energy efficiency, embedding SD, SD Funding, ESD document repository (21 engineering, computing and motor vehicle, 3 construction, 2 hospitality, tourism and sport), Eco-centre, bike locker scheme, projects, recycling, car share scheme, travel and transport.	Sustainability Manager
4. City of Bristol	Website search 49 results; sustainability page doesn't mention curriculum. Curriculum search results in CBE, and Geography	Carbon emissions, CMP, waste, fair trade, travel (cycling, car share), procurement, new building award	No power
5. City and Islington	Nothing (discussion – does this reflect interview?)	-	-
6. Cornwall	Website search 42 results; curriculum land based, CBE, or dedicated courses within energy.	Carbon management, car share, cycling, renewable energy initiatives, dedicated curriculum on alternative technologies, environmentally friendly new builds and improvements	No power (though an environment officer was mentioned in one news story).
7. Derby	Website search 5 results – green impact awards within SU, engineering curriculum areas	-	No power, but could be seen as a SU activity only.

8. Hull	Website search under 'environment' generated CBE results (nothing for S/SD).	Construction students, green energy skills – not linked to sustainability, was an award for CSR	No power
9. Leeds	One search result for CBE	-	No power
10. New College Nottingham	Website search results for CBE, Geography and Tourism curriculum areas only	-	No power
11. Stoke-on-Trent	Nothing (discussion – does this reflect interview?)	-	-
12. Manchester	Sustainability webpage under 'About Us'; sustainability web search results for CBE, business and economics	Money focused - saved the college significant revenue, business case for reducing carbon emissions, sustainability consultancy. External relations, Reducing Carbon Emissions (commodities, cycle to work scheme, etc), recycling surplus materials, reusing natural resources, training	Director of Property
13. Sheffield	15 website results – building awards, energy efficiency projects; curriculum bee keeping, furniture making, plumbing, business admin	Green travel plan (cycle to work, cycle mileage, car share), sustainable Buildings, carbon reduction, waste recycling, awards. Strategy for SD (unsigned)	Sustainability strategy is responsibility of Property services manager and Director of Planning and Performance
14. Trafford	Website results – Green deal assessors, STEM centre opening and ISO14001	Environmental technologies, employers	Health and Safety manager
15. Leeds College of Building	One search item on 'sustainability' about construction students	-	No power
16. Kirklees	Website results – one item on engineering centre and BREEAM excellent on new build	-	No power
17. Leeds College of Music	Website of its own though quite difficult to find	Energy saving, recycling/ waste management campaign, communications, external partnerships, catering	Middle management and SU

18. Shipley	Website search links to policies webpage; estates section states the college has an environmental and sustainability policy, a sustainability implementation group, green bulletin & fair trade policy. Horticulture curriculum area also within search.	-	Estates management
19. Wakefield	No search function > about the college, under policies and procedures. Environmental policy and green travel plan	Energy, paper, waste management, transport and travel, building developments, building environment, carbon management plan	Energy officer and Estates manager
20. East Riding	22 website results; environmental award, SHE policy, tourism, energy technology centre	Reducing waste, increasing recycling and raising awareness	SHE manager, Director of Estates

8.6 Appendix six: Ethics committee approval

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UNIVERSITY OF LEEDS

Georgiana Weatherill
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 University of Leeds
 Leeds, LS2 9JT

AREA Faculty Research Ethics Committee
University of Leeds

21 September 2016

Dear Georgiana

Title of study: Studying the perception and understanding of Sustainable Development by FE leadership
Ethics reference: AREA 12-071

I am pleased to inform you that the above research application has been reviewed by the ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee and following receipt of your response to the Committee's initial comments, I can confirm a favourable ethical opinion as of the date of this letter. The following documentation was considered:

Document	Version	Date
AREA 12 071 Ethics response.docx	1	25/03/13
AREA 12 071 EA 10 point checklist.pdf	1	25/03/13
AREA 12-071 Ethical_Review_Form_V3.docx	1	26/02/13
AREA 12-071 Participant information sheet.docx	1	26/02/13
AREA 12-071 Participant_Consent_Form1 - GW.docx	1	26/02/13
AREA 12-071 Participant_Consent_Form2 - GW.docx	1	01/03/13

Please notify the committee if you intend to make any amendments to the original research as submitted at date of this approval, including changes to recruitment methodology. All changes must receive ethical approval prior to implementation. The amendment form is available at

http://researchsupport.leeds.ac.uk/index.php/academic_staff/good_practice/managing_approved_projects-1/applying_for_an_amendment-1.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited. There is a checklist listing examples of documents to be kept which is available at

http://researchsupport.leeds.ac.uk/index.php/academic_staff/good_practice/managing_approved_projects-1/ethics_audits-1.

Yours sincerely

Jennifer Blaikie
 Senior Research Ethics Administrator, Research & Innovation Service
 On behalf of Dr Emma Cave, Chair, [AREA Faculty Research Ethics Committee](#)
 CC: Student's supervisor(s)