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Staff and student perceptions of sustainability and its integration into university curricula

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**STAFF AND STUDENT
PERCEPTIONS OF
SUSTAINABILITY AND ITS
INTEGRATION INTO
UNIVERSITY CURRICULA**

By

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Abstract

In the world today, an awareness and consideration of sustainability and sustainable development is becoming increasingly important. Education and public awareness have been identified as critical components of the transition to sustainability. A great deal of responsibility is now placed on universities in order to achieve a sustainable future due to their heavy influence on students' skills and attitudes.

This dissertation investigates staff and student perceptions and understandings of, and attitudes towards, sustainability and its integration into university curricula. The study also explores the sustainability of student lifestyles and the factors influencing their views and behaviour.

The project's data was collected using in-depth student questionnaires, six interviews with Programme Leaders, and three senior support staff members at the University of Chester. The project revealed that there is greater awareness of sustainability among staff and students as well as engagement with the issue. Although sustainability-related content is being increasingly integrated within university curricula, the extent of its integration varies significantly between disciplines due to staff perceptions.

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CHAPTER 1

INTRODUCTION

This chapter provides background information about sustainability and sustainable development, the role and importance of education and higher education in particular for progressing towards a sustainable future, and finally staff and student perceptions and attitudes towards sustainability and its integration into university curricula. This chapter also states the project's aims and objectives, and provides the basic rationale and structure for the dissertation.

1.1 Background to the Research

“In the world today, an awareness and consideration of sustainability and sustainable development is becoming increasingly important” (Asian Institute of Technology, 2014). Environmental awareness among the public and policymakers has been growing since the 1960s, when it became widely recognised that human activities were having harmful and large-scale effects on the environment (National Academy of Sciences, 1997). As these effects have become more apparent and adverse, the concept of sustainability has risen to prominence and is now at the forefront of many people's minds. Those who have become more aware about the importance of sustainability have developed an immediate and intuitive sense of the urgent need to build a sustainable future (Asmar, 2009). Moving towards this goal of a sustainable future requires fundamental changes in human attitudes and behaviour. Therefore, “progress in this direction is thus critically dependent on education and public awareness” (Radovic, 2013. p.7).

The notion of sustainability stems from the concept of sustainable development which rose to significance in 1987, when the World Commission on Environment and Development (WCED) published the report *Our Common Future*, also known as the Brundtland report. The report defines sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations WCED, 1987. p.37).

The concept of sustainable development was further popularised in the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, also known as the Rio Summit (Drexhage and Murphy, 2010). The product of the conference was Agenda 21 which is a non-binding, voluntarily implemented action plan for realising and promoting sustainable development which can be executed at local, national and global levels. The programme highlights the role and importance of education in Chapter 36, stating that “education is critical for promoting sustainable development and improving

the capacity of the people to address environment and development issues” (UN, 1992. p.320). Agenda 21 suggests that education should be reoriented towards sustainable development, “integrating environment and development as a cross-cutting issue into education at all levels”, both formal and non-formal education for all age groups, as well as cross-disciplinary courses in tertiary education (UN, 1992. p.321).

A key outcome of the Rio Summit's Agenda 21 has been widespread international commitment to strengthen the role of education, training, and public awareness in achieving sustainability and sustainable development (Katzschner, 2011. p.160). It is now “widely agreed that education is the most effective means that society possesses for confronting the challenges of the future” (Pandey, 2006. p.170). A great deal of responsibility is now placed on “higher education (HE) to move beyond its current sphere of academic influence and assume responsibility for becoming a spring board for individual, community, and social change” (Pappas, 2012. p.2). The role of HE is especially pronounced as students are being prepared at this level to enter the labour market and emerge with the knowledge and skills required to achieve a sustainable future in a rapidly changing and less predictable global system (Johnston, 2007). There is also growing evidence of increasing interest and demand from students and employers for sustainability education in HE (Insight, 2014; Sharma and Kelly, 2012; Hanover Research, 2011). Therefore, universities will play “a decisive role in shaping future capabilities to address sustainability across professions and organisations” (Insight, 2014).

It is widely believed that “higher education is the route to implanting sustainable lifestyles into society” (Asmar, 2009. p.4). Integrating sustainability into university curricula is essential for students to realise the impact of their lifestyles and everyday choices in terms of sustainability, as well as understanding the relationship between the environmental, economic, and social dimensions of the concept to influence their actions as local and global citizens (Tuncer, 2008). However, there is still a dissonance between disciplines in terms of staff and student perceptions and attitudes towards sustainability and its integration into university curricula. It remains unclear how lecturers and students could be convinced of the importance of sustainability and engaged with the concept when it is not necessarily clearly linked to their subject of study or career aspirations (Sjerps-Jones, 2007).

1.2 Research Aims and Objectives

1.2.1 Aims

The primary aim of this research is to investigate staff and student perceptions and understandings of, and attitudes towards, sustainability and its integration into university curricula. The study also explores the sustainability of student lifestyles and the factors influencing their views and behaviour. The project's findings have the potential to affect change and guide improvement at the University of Chester, as well as other institutions that are considering integrating sustainability into their curriculum, in an attempt to enhance the teaching and learning experience, as well as preparing students for life and employment as sustainability becomes an increasingly important aspect of both.

1.2.2 Objectives

The project's specific objectives are:

1. To reveal staff and student perceptions and understandings of sustainability, including their conception and familiarity with the term, as well as their interest towards sustainability and its associated issues.
2. To examine variations in staff and student perceptions and understandings of sustainability, in relation to differing educational backgrounds and disciplines.
3. To determine the main factors influencing student perceptions and attitudes towards sustainability, and how these contribute to the sustainability of student lifestyles.
4. To ascertain which sustainable behaviours students engage in, including the motivators, barriers, and deterrents for doing so.
5. To determine to what extent sustainability is currently integrated into the University of Chester's curriculum.
6. To reveal staff and student perceptions of the importance and relevance of sustainability within their respective disciplines and curricula, as well its integration across the entire university curriculum.
7. To uncover staff perceptions regarding the responsibilities and obligations of the University of Chester and its staff to include and promote sustainability education.
8. To identify the main barriers perceived by staff to promoting sustainability at university level and integrating it into university curricula.

1.3 Rationale for the Project

As the background information has emphasised, the concept of sustainability has now risen to prominence as many people have recognised the urgent need to promote and progress towards sustainability. Education and public awareness have been identified as critical components of the transition towards a sustainable future, with the role of higher education being particularly pronounced due to its potential to drive individual and societal change in terms of human perceptions and abilities. Although there is growing evidence about the increasing interest and demand for sustainability education in HE, the dissonance still remains between disciplines in terms of staff and student perceptions and attitudes towards sustainability and its integration into university curricula. With a specific focus on the University of Chester, this project aims to reveal the perceptions of staff and students about sustainability and its place at university level, as well as exploring the sustainability of student lifestyles and behaviours in relation to their differing attitudes and educational contexts.

1.4 Dissertation Structure

This dissertation comprises of five chapters:

- 1. Introduction:** Introduces the project and subject matter to the reader, including the project's aims and objectives as well as the basic rationale for the dissertation.
- 2. Literature Review:** Critically reviews the literature relevant to the study, and justifies the project.
- 3. Methodology:** Describes and justifies the research methods used to collect the project's primary data. This section also outlines the design processes involved, the ethical issues, and how the data will be collated and analysed.
- 4. Results and Analysis:** Analyses and discusses the findings from the project's primary data. Clear links are made between the project's findings and the secondary data and information discussed in the literature review.
- 5. Discussion and Conclusions:** Summarises and discusses the project's findings in relation to the aims and objectives of the dissertation. This chapter also provides recommendations for practice, as well as implications for future research. Finally the chapter includes a critique of the project.

CHAPTER 2

LITERATURE REVIEW

This chapter critically reviews the literature concerning the various perspectives of sustainability and society's progress towards the elusive concept, as well as exploring the role and potential of education in the transformation towards a sustainable future. The chapter also studies the role of universities and their capacity to drive the transition towards sustainability, including their commitment and engagement with the issue. The purpose and aims of higher education are also explored, considering the increasing interest and demand from students and employers to incorporate sustainability into university activities and curricula, with a particular focus on the University of Chester. More specifically, this chapter reviews the available literature regarding the integration of sustainability into university curricula, including the barriers to integrating the topic, and how its inclusion can influence student perceptions and lifestyles. This chapter concludes by providing a rationale and justification for the project relating to the literature reviewed.

2.1 Understandings and Definitions of Sustainability

“The problem of developing a more sustainable society is complex. At the heart of this complexity is the lack of understanding of the concept of sustainability as a basis for goal-setting” (Sibbel, 2009. p.69). Although it is now widely accepted that we have to find more sustainable ways of living and using the planet's resources, there is no single standardised or universally agreed definition of sustainability (Gaston, 2012). Since the classic definition provided in the Brundtland report (1987), various definitions have emerged for sustainability and sustainable development as there are many different views on what it is and how it can be achieved (Wilson, 2009). Bharucha (2005) identifies that some definitions extend the notion of equity between the present and the future, to equity between countries and continents, races and classes, genders and ages. Regardless of the assorted definitions, many academics have labelled sustainable development as an oxymoron due to its contradictory nature, as development is perceived to often entail environmental degradation (Dhara, 2011; Nikolova, 2011; Wall, 2009).

Despite the on-going debate on the actual meaning, the general consensus among academics is that there is no single framework, conceptualisation, and understanding of either sustainable development or sustainability as they are evolving and fluid concepts (Drexhage and Murphy, 2010; Sibbel, 2009; Kagawa, 2007). The British consultancy SustainAbility (2010) indicates that among the many definitions for sustainability, the simplest and most fundamental is “the ability to sustain or... the capacity to endure”. In 2010, Drexhage and Murphy identified four common themes that feature in the majority

of definitions for the concepts, including a commitment to equity and fairness, a long-term view that emphasizes the precautionary principle, recognition that sustainability embodies integration, and the importance of understanding and acting on the complex interconnections that exist between the environment, economy, and society. Although most people now have at least a basic understanding and awareness of sustainability, their perceptions are often narrow-minded, as “for many people, the basic idea of sustainability focuses greatly on depletion of resources... and other environmental and ecological aspects” (Kerk and Manuel, 2008. p.3).

The most widely recognised and accepted definitions of sustainability focus on the three pillars of economic development, social equity, and environmental protection (SustainAbility, 2010; Sibbel, 2009; Spring, 2004). Figure 1 shows two versions of the three pillars model which has become a popular and powerful tool in sustainability education, as part of the “worldwide endeavour aiming to reorient education around the three pillars of sustainable development, the economic, the social, and the environmental” (Richmond, 2010. p.19). Despite the general acceptance that progress towards sustainability requires a convergence between the three pillars of sustainability, the concept remains elusive. Drexhage and Murphy (2010. p.6) state that “since the Brundtland report and the Rio Summit, governments and organisations have taken up sustainable development as a desirable goal and developed metrics for sustainable development, but implementation has proven difficult”. Matthew and Hammill note that the main problem since the Rio Summit has been “designing the move from theory to practice” due to “technological, political, and other constraints” (2009. p.1119).

Figure 1: The Three Pillars of Sustainability

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copyright restrictions**

Source: Thwink (2012)

2.2 Progress Towards Sustainability

Although there has been a growing awareness and recognition of the need to address issues of sustainability since the Rio Summit in 1992, the general acceptance among academics is that progress towards sustainability has been slow and inadequate (Blackstone, 2014; Pohl, 2014; Dernbach, 2012). Dernbach (2012) states that two of the main factors that have impeded progress include the ongoing controversy regarding the existence and severity of environmental problems such as climate change, as well as the continued adherence to the traditional development model which focuses mainly on economic growth. The International Union for Conservation of Nature (IUCN) also states that “the current reality is that international efforts to achieve sustainable development have tended to put most emphasis on economic development” (IUCN, 2004. p.9), which is reflected in Figure 2. The IUCN (2004) suggest that these three pillars need to be more equitably balanced as sustainability cannot be achieved unless environmental concerns are better integrated into economic and social development thinking.

Figure 2: The Three Pillars Model: The Theory, the Reality, and the Changed Needed

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copyright restrictions**

Source: Vogt (2009. p.18)

Although there are numerous factors that have hindered progress towards a sustainable future, Pohl declared that the “principal reason for this lack of action is found in the reactive nature of the human species” (2014. p.1). Pohl (2014) explains that human beings have an aversion to change that is rooted in our biological evolution and deeply embedded in our cognitive facilities. Harich (2010) also shares this perspective that to be proactive rather than reactive is not in our human nature. “While some of us are capable of the conception of revolutionary ideas... society as a whole is not willing to implement the required paradigm shift until the hardship or threat to status quo has become unacceptable” (Pohl, 2014. p.12). Therefore only small steps towards sustainability have

been made due to our relatively slow cognitive evolution, as well as the general reluctance and unwillingness of proactive action. The role and potential of education has been identified to promote and induce the required paradigm shift and proactive action necessary to progress towards sustainability (Radovic, 2013; Harich, 2010; Vogt, 2009).

In 2009, Lourdel et al identified a number of barriers to progress in terms of people's perceptions regarding sustainability issues (see Figure 3), with the main barriers including denial and skepticism over the urgency to act on sustainability issues which can lead to uncertainty from the public, especially due to geographical distance in some cases where the effect of a problem is not immediate. Another highlighted barrier is that many people perceive their individual actions to be insignificant in terms of solving the global issue, which leads to some people choosing to ignore the issue rather than considering it critically and engaging with it (Lourdel et al, 2009). Refusing to take responsibility is also common because many fail to comprehend their potential impact and opportunities to engage with the complex issue. As a result, many blame governments, businesses and even countries for the sustainability crisis rather than assuming personal responsibility (Blackstone, 2014). Education at all levels can influence these perceptions and encourage participation by "equipping individuals and societies with the skills, perspectives, knowledge and values to live and work in a sustainable manner" (Palmer, 2013. p.303).

Figure 3: Obstacles on the Route to Sustainable Development

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copyright restrictions**

Source: Lourdel et al (2009. p.9)

2.3 Education for Sustainability

In 2004, Marinova and McGrath described the global sustainability challenge as “a crisis of values, ideas, perspectives, and knowledge and is thus primarily a crisis of education”. Shaw et al reinforced this view in 2009 by stating that “education is the primary agent of transformation towards sustainable development, increasing people’s capacities to transform their visions for society into reality” (2009. p.502). Shaw et al (2009) also identified how the four principles for achieving sustainable development enunciated at the World Summit for Sustainable Development (2002) are reflected by the four pillars of learning in the report, *Learning: The Treasure Within* (1996), published by the International Commission on Education for the Twenty-first Century. Table 1 shows the connections between the two. “The international community now strongly believes that we need to foster - through education - the values, behaviour and lifestyles required for a sustainable future” (UNESCO, 2004. p.86).

Table 1: Connections Between Learning and Achieving Sustainable Development

<u>Education Provides the Skills For:</u>	<u>Achieving Sustainable Development Requires:</u>
Learning to know	Recognition of the challenge
Learning to do	Acting with determination
Learning to be	The indivisibility of human dignity
Learning to live together	Collective responsibility and constructive partnership

Source: Shaw et al (2009. p.502)

In 2013, Bokova, the Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO), declared that “education is the most powerful path to sustainability. Economic and technological solutions, political regulations or financial incentives are not enough. We need a fundamental change in the way we think and act” (as cited by UNESCO, 2013. p.7). In recognition of education’s importance for achieving a sustainable future, the United Nations Decade for Education for Sustainable Development (DESD) was established which was led by UNESCO (2005-2014). UNESCO explains that the goals of the decade are to provide an opportunity for refining and promoting the vision of, and transition to, sustainable development through all forms of education, public awareness and training. It should also help to give an enhanced profile to the important role of education and learning in promoting sustainable development (UNESCO, 2009).

Since the international launch, the DESD has generated considerable enthusiasm and support, with education for sustainable development (ESD) gaining significant momentum across the globe (UNESCO, 2012. p.5). UNESCO indicates that the importance and need for ESD has been well established in national policy frameworks, with the creation of national ESD coordinating bodies in around 100 countries across all UN regions. Although ESD is growing, evolving, and maturing, UNESCO note that it is not implemented evenly across the board which has restricted progress. As the DESD comes to an end in 2014, “it is evident that the countries of the world need to identify new goals and internally agreed upon processes for moving forward to confront the educational and sustainability challenges of this century” (UNESCO, 2012. p.68).

2.4 The Role and Commitment of Universities

A great deal of responsibility is now placed on universities in order to achieve a sustainable future due to their heavy influence on students’ skills and attitudes (Pappas, 2012; Asmar, 2009; Johnston, 2007). Marinova and McGrath (2004) state that the challenge ahead for universities is “to take a leadership role in preparing the upcoming generation, and in integrating information and knowledge for sustainability”. In 2005, Haigh, (p.25-26) stated that the DESD “offers academe's best chance to date for making the deep and radical changes that will be necessary if the world's higher education institutions are to enact their responsibilities for creating a better and self-sustainable world”. UNESCO (2012) reports that universities are slowly but progressively incorporating ESD into their curricula, by integrating sustainability into existing study and research programmes, as well as adding new courses and modules containing elements of ESD, which help people to understand and engage in sustainability and its associated issues.

The first official statement made by university leaders committing to environmental sustainability in higher education was the Talloires Declaration in 1990, which was created at an international conference in Talloires, France (Hanover Research, 2011). The Declaration is a ten-point action plan for incorporating sustainability and environmental literacy in teaching, research, operations and outreach at colleges and universities. As of July 2014, the Declaration has been signed by 470 university presidents and chancellors in 54 countries (University Leaders for a Sustainable Future, 2014) who all agree to take the following actions:

1. Increase awareness of environmentally sustainable development.
2. Create an institutional culture of sustainability.
3. Educate for environmentally responsible citizenship.
4. Foster environmental literacy for all.
5. Practice institutional ecology.
6. Involve all stakeholders.
7. Collaborate for interdisciplinary approaches.
8. Enhance capacity of primary and secondary schools.
9. Broaden service and outreach nationally and internationally.
10. Maintain the movement.

Following the Talloires Declaration, a number of smaller initiatives have been undertaken across the globe to promote sustainability at university level and within university curricula. Although some academics such as Bekessy et al (2007) question the effectiveness of non-binding declarations and agreements due to the lack of public accountability for failing to deliver on commitments, Kagawa (2007) argues that as a result of the DESD, there have been increasing government commitments to mainstreaming sustainable development in both school and higher education sectors across the globe, and especially in the UK (Kagawa, 2007). The UK Government's sustainable development strategy, *Securing the Future*, emphasises the importance of equipping people with skills for building a sustainable society, stating that "we need to make sustainability literacy a core competency for professional graduates" (as cited by the Higher Education Academy (HEA), 2006. p.2). The HEA also produced a set of skills and knowledge necessary for an action-oriented, sustainability literate graduate (2006. p.6), which can be seen in Appendix 1.

The role of universities in achieving sustainability was accentuated in 2005 by the Higher Education Funding Council for England's (HEFCE) strategy paper, *Sustainable Development in Higher Education*. The paper stated that "within the next ten years, the higher education sector in this country will be recognized as a major contributor to society's efforts to achieve sustainability – through the skills and knowledge that its graduate learn and put into practice" (as cited by HEFCE, 2013. p.7). Upon review of UNESCO's 2012 report on the DESD and the progress that has been made, HEFCE proposes to update their vision in recognition of this development. Their new vision "is for universities to be widely recognised as leaders in society's efforts to achieve sustainability - through the skills and attitudes that students gain and put into practice, through research and knowledge exchange, and through their own business management" (HEFCE, 2013. p.7).

According to Sterling and Maxey (2013), there are approximately 135 million students studying worldwide at over 17,000 universities. Higher education is now a global enterprise operating collaboratively through the exchange of ideas, students and staff. The connections and positions of universities within societies mean that higher education has the potential to drive global change (Pappas, 2012). HEFCE (2013) believe that English universities, with their overseas campuses and high proportions of students from overseas, have a considerable opportunity to lead and drive this change towards sustainability.

2.5 The Purpose of Higher Education

“Over the last half-century, new pressures have challenged the traditional purpose of higher education” (Chan et al, 2014. p.1). Chan et al (2014) explain that the traditionalist view is that universities exist to create, advance, absorb, and disseminate knowledge through teaching and learning; contribute to the development and improvement of education; and develop higher order cognitive and communicative skills in young people, such as, the ability to think logically and critically, the capacity to challenge the status quo, and the desire to develop sophisticated values. However, many people in today’s society have adopted the marketised view that universities are essentially training grounds for advanced vocational and professional skills, producing well-qualified graduates who are in high demand in the labour market (Blouw, 2013; Oni, 2013; Felix, 2012).

Although the purpose of HE continues to be debated, Wilmott (2014) suggests that “balance is key”. Rather than producing workers who can fit immediately into a specific job in which they will spend the rest of their lives, universities should “provide the kind of broad intellectual and personal development that enables graduates to thrive in a world that is constantly changing, a world that demands innovation and adaptability”, which is also key to progressing towards sustainability (Blouw, 2013). Some universities now consider both employability and sustainability to be strategic priorities which influence their activities and practices. The University of Gloucestershire states that “both agendas are increasingly important in higher education, for employers and government, as the UK looks to emerge from economic downturn and national discourse grows around the green economy” (2012. p.1). However, the extent to which these agendas are engaged with at university varies greatly between institutions.

As an educator and employer, the University of Chester (UoC) was originally established in 1839 and prides itself on its history and traditions. The UoC (2014a) states that its mission is to provide “an open and inclusive environment guided by Christian values”, as

well as providing “education, training, skills and motivations for staff and students, to enable them to develop as individuals and serve the communities in which they live and work”. Regarding employability and sustainability, the UoC considers itself responsible for both in terms of their promotion and improvement. The UoC (2014b) declares that “we take our responsibility for preparing students for employment seriously”, providing students with opportunities to develop their skills, abilities and competences that are work-related, including a 7 week Work Based Learning module during their degree programme which involves working for an organisation followed by submission of a reflective report.

Although the UoC is not a signatory of the Talloires Declaration, it “aims to embed sustainability into all of its educational activities and services in order to help achieve our vision of a sustainable world for present and future generations” (University of Chester, 2014c. p.1). In 2013, the Green League ranked the UoC 53rd out of all UK universities for its environmental and ethical performance (People and Planet, 2014). Although the UoC attained points regarding its commitment to integrate sustainability issues throughout the curriculum in its official documents, points were lost as support/training is not available to all staff to help them promote and integrate sustainability into their own curricula, as well as there being no review and reporting process to monitor the integration of sustainability. Therefore the pledge to promote and integrate sustainability within the UoC’s curriculum is evident, but there is a great deal of uncertainty regarding the extent of engagement and uptake from staff, as well as the success and impact of its implementation.

2.6 Increasing Interest and Demand from Students and Employers

Due to increased awareness and recognition of the importance of sustainability and the important role of education, the level of interest and demand from students and employers to embed the subject into university curricula has increased significantly over the last several years (Insight, 2014; Sharma and Kelly, 2012; Hanover Research, 2011). HEFCE (2013. p.5) state that “in the UK, students are aware of sustainability and want this to be reflected in their institution, their studies and their overall experience”. A series of surveys conducted with third-year university students in the UK, funded by the Higher Education Academy (HEA) and carried out by the National Union of Students, have revealed that 88% agree that sustainable development should be incorporated and promoted by universities; 67% agree that sustainable development should be incorporated into and promoted in university courses; and 60% would like to learn more about sustainable development (HEFCE, 2013).

In 2011, the Higher Education Academy (HEA) revealed from their surveys with first-year university students in the UK, over 80% believe sustainability skills are important to their future employers; 63% are prepared to sacrifice £1,000 salary to work for a sustainably-aware company; and 65% believe that sustainability skills should be delivered throughout the curriculum rather than through a separate module (the Higher Education Academy, 2011). These results indicate that students believe their university should be responsible for actively incorporating and promoting sustainable development to prepare their students for graduate employment. The demand is also there from employers as Hanover Research (2011, p.2) cite a UK survey which found that “over half of employers will be looking in the future to employ recent graduates that are socially and environmentally responsible”, with larger businesses being most demanding. With increased tuition fees, these results and those presented by HEFCE provide valuable information regarding student expectations and aspirations, which in turn influences the decision-making process of universities on what to offer, and students on where to study.

2.7 Reforming University Curricula

Throughout history, universities have adapted their curricula to meet the changing demands of society and this has largely played out by altering the degree of knowledge integration in academic programmes (Remington-Doucette et al, 2013). Therefore universities have the potential to contribute significantly to sustainability, as they traditionally transform students into future leaders and graduates who assume responsibilities in society (Asmar, 2009). In response to the increasing interest and demand from students, employers, and the UN to reorient towards education for sustainability, universities worldwide have begun offering undergraduate degrees in sustainability and integrating sustainability-related courses and modules into their curricula (Remington-Doucette et al, 2013; Hanover Research, 2011; Sibbel, 2009).

Thomas (2009) explains that the question of how much change is required in university curricula to accommodate education for sustainability is a highly contentious issue. In 2006, Sterling and Thomas suggested that there are four stages that universities would move through (see Table 2). Thomas (2009, p.247) states that “the degree of change required to achieve sustainable education is enormous”, and that the transition will face many barriers as curricula are transformed from bolt-on to build-in sustainability. A number of academics believe that most institutions are still in the bolt-on phase of the transition (Hanover Research, 2011; Lourdel et al, 2009; Sjerps-Jones, 2007). Lourdel et al (2009, p.2) argues that there is a “superficial inclusion of aspects of sustainability within curricula because it is required, rather than the development of in-depth engagement with the subject in all its richness and complexity”.

Table 2: Stages for the Development of Sustainable Education in Universities

Source: Sterling and Thomas (2006), cited by Thomas (2009. p.248)

For universities to play a crucial role in building the knowledge, skills, and attitudes for a sustainable future, Clugston (2002) recommends developing curricula based on concepts related to sustainability, rather than the traditional set of concepts associated with each discipline. Sibbel (2009. p.75) states that “because sustainability depends on ways natural and social systems interact, studies in a single discipline cannot provide the opportunities to learn how to devise practical and effective ways of overcoming the barriers to achieving sustainability”. Therefore, holistic thinking and collaboration across disciplinary and institutional boundaries is required (Remington-Doucette et al, 2013), rather than confining the topic of sustainability to subjects such as geography and biology. Transdisciplinarity is a growing field of education that holds great potential to reform university curricula and make an important contribution to a sustainable change (Marinova and McGrath, 2004).

Figure 4: Evolution of Disciplinarity

Source: Jensenius (2012)



Figure 4 presents how transdisciplinarity has evolved from the earlier education and research fields. Previous forms of disciplinarity remain within the framework concerned with one level of reality, or fragments of that one level. Transdisciplinarity seeks “unity of knowledge beyond disciplines...its approach implies full interaction between, among, and beyond disciplines from a real-life problem-based perspective” (Caston, 2013).

Figure 5 displays how a transdisciplinary approach applies to solving real-world

sustainability problems through sustainability education and research. The complexity of issues addressed within sustainability education demand such an approach, yet HE remains slow to adopt this new paradigm. The challenge ahead for universities is to integrate transdisciplinarity into their curricula within an academic environment which may be reluctant to accept it (Caston, 2013).

An example of a HE institution that has successfully employed transdisciplinarity is the Institute for Sustainability and Technology Policy (ISTP) at Murdoch University in Australia. The ISTP was established in 1988 and has always been dedicated to interdisciplinary, transdisciplinary, and collaborative research to develop innovative solutions to a range of global, national and local sustainability challenges (Murdoch University, 2014). Now re-named the Institute for Social

Sustainability (ISS), this new iteration of the ISTP focuses on the social aspects of sustainability but continues to have broad research interests in the domain of sustainability. Their Sustainable Development (BA) course covers 6 key areas including Sustainable Cities, Regions, Futures, Energy and Third World Development, Politics, and Selves. “These key areas are transdisciplinary in that taken together, as an undergraduate degree; they are between the disciplines, across the disciplines and beyond the disciplines” (Marinova and McGrath, 2004). With increasing interest and demand for the course over the years, the ISS has proved that transdisciplinarity can be a powerful educational approach for the shift in culture where sustainability is no longer a vision, but a way of living (Marinova and McGrath, 2004).

2.8 Barriers to Integrating Sustainability into University Curricula

As universities have moved to include more programmes that directly target sustainability and issues of green energy, attention has also been placed on embedding these same themes and foci into extant curricula and disciplines. “When it comes to putting such goals into practice, however, most educational institutions have an easier time welcoming the theory than actually applying it” (Hanover Research, 2011. p.6). There is a general appreciation that sustainability education has a clear place in HE, but implementation varies significantly due to a number of barriers. Behm (2011) and Sjerps-Jones (2007) identify that the main barriers for student engagement with sustainability include lack of awareness, interest, and participation from students who do not see the relevance of

Figure 5: The Transdisciplinary Approach

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Source: Stauffacher et al (2006)

sustainability within their subject of study, especially if they do not perceive it to be linked to their career aspirations. Therefore, students fail to comprehend their role in achieving a sustainable future which leads to a lack of personal responsibility (Sibbel, 2009).

There is also a dissonance between disciplines in terms of staff perceptions of the importance and relevance of sustainability within their subject areas (Sjerps-Jones, 2007). The HEA 2011 survey with university staff revealed a number of barriers to integrating sustainability into university curricula, including a lack of understanding about sustainability from staff who perceived it as nebulous concept that requires a nationally accepted working definition. Those who lacked understanding of the concept explained that they would not feel confident teaching about a subject that they were new to or unsure of themselves. The survey also revealed concern from staff about shifting from area-focused teaching to transdisciplinarity, as they considered their existing curricula to be already overcrowded with essential subject content. Hanover Research (2011) also revealed that the main barriers from their surveys include perceived irrelevance within certain subjects, an already overcrowded curriculum, general uncertainty on how to integrate sustainability, no time to make changes, and lack of institutional drive and commitment. “As a result, progress often fails to move beyond discussions of best practices” (Hanover Research, 2011. p.11).

Hanover Research (2011) suggests that in order to make progress in embedding sustainability into university curricula, the first step is to develop a clear message regarding a chosen definition for sustainability. Continued professional development courses can also be utilised to provide staff with the expertise and knowledge required to promote and integrate sustainability within their teaching and learning activities. Staff will then be able to “rally around a unified, articulated concept and move forward with a clear idea of what must take place in order to achieve desired results” (Hanover Research, 2011. p.11). In 2009, the Macquarie University produced a booklet which includes a number of suggestions on how universities and staff can promote and integrate sustainability within their activities and curricula (see Appendix 2).

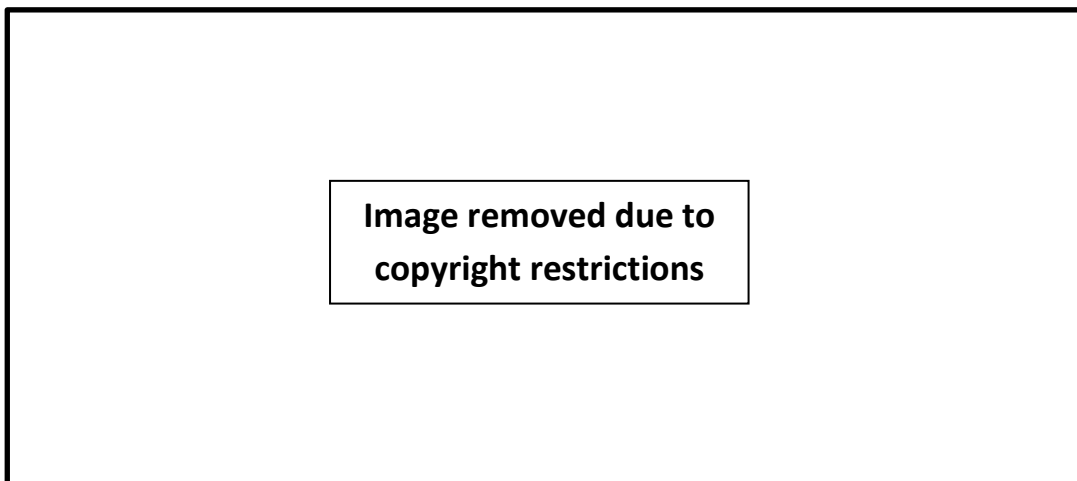
2.9 Influencing Student Perceptions and Lifestyles

In 2009, Asmar (p.4) stated that “it is widely believed that higher education is the route to implanting sustainable lifestyles into society”, due to the authority and influence which universities hold over their students and communities around them. For this reason, universities bear profound responsibilities to increase the awareness and knowledge required to progress towards sustainability, as well as “encouraging healthy, informed,

and conscientious lifestyles” (University of Alberta, 2010. p.9). However, Kagawa identified that there is a significant lack of research and publications exploring the perceptions and attitudes of staff and students about sustainability and its place in university curricula. Behm (2011) emphasises that understanding HE staff and student perceptions is imperative as it can inform spending of limited resources on more effective sustainability initiatives, as well as informing decisions on how best to integrate sustainability into university curricula.

Sharma and Kelly (2012) and Behm (2011) note that because sustainability is a broad and complex term encompassing a variety of concepts and issues, many disparities and misconceptions exist within the HE student community. Without a clear understanding and positive perception of the concept, many students become disconnected with the importance of sustainability and fail to realise their role in achieving a sustainable future (Sibbel, 2009). In 2006, Brody and Ryu discovered through the analysis of ecological footprints that HE students from an interdisciplinary sustainable development course behaved in a significantly more sustainable manner than those from other courses, due to a greater awareness and understanding of the concept and its importance. In 2007, Kagawa found that in terms of personal change for a more sustainable lifestyle, student respondents most frequently stated actions relating to their responsibility as consumers including changing purchasing habits, as well as recycling, changing forms of transport, and saving energy and/or water (Table 3). Kagawa (2007) also found that the main reasons students gave for engaging with sustainability included to sustain the environment and avert environmental crises, but also that they are incentivised by the great deal of personal satisfaction by doing so. Whereas personal preference, financial constraints, convenience and/or comfort are the main reasons students gave for not living more sustainably.

Table 3: Personal Change for More Sustainable Lifestyles



Source: Kagawa (2007. p.331)

In 2007, Kagawa discovered that over 77% of students surveyed at the University of Plymouth were familiar with the term sustainability, with only 15% stating that they were not at all familiar with the term (see Figure 6). Kagawa (2007) also found that 90% of students believed sustainability and ESD to be positive, identifying it as a “good thing”. This finding is similar to research conducted by Azapagic et al (2005) with undergraduate engineering students worldwide. They found that students thought sustainable development was important despite their low-level of knowledge of the concept; they considered that sustainable development was more important for future generations than for them personally; and students’ knowledge was strong in terms of environmental issues, but a significant knowledge gap existed in terms of the social and economic aspects of sustainable development. Similarly, Summers et al (2004) discovered that 89% of students at the University of Oxford recognised the environmental dimension of sustainability, with 69% and only 49% for the economic and social dimension respectively, reinforcing the lack of student understanding about sustainability and the interconnectedness of the term.

Figure 6: Familiarity with the Terms Sustainability and Sustainable Development

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copyright restrictions**

*Source: Kagawa
(2007. p.322)*

2.10 Rationale and Purpose for Study

This literature review has revealed that there is considerable existing literature about the importance and potential of integrating sustainability into education and what this will entail, but there is a scarcity of research and publications exploring the perceptions and attitudes of staff and students about sustainability and its place in university curricula. This research project intends to contribute towards filling this gap in research, by revealing the perceptions of staff and students at the University of Chester about sustainability and its place at university level, and more specifically within the curriculum. The project also explores the sustainability of student lifestyles and the factors influencing their views and behaviour, as the literature review has identified that a

great deal of responsibility is now placed on universities in order to achieve a sustainable future, due to their heavy influence on students' skills and attitudes.

The literature also revealed that in response to the increasing interest and demand from students, employers, the UN, and HEFCE to reorient towards education for sustainability, universities are slowly but progressively incorporating sustainability into their curricula, by integrating sustainability-related content into existing study and research programmes, as well as adding new courses and modules into their curricula. Therefore, this study intends to determine the extent to which sustainability is currently integrated into the University of Chester's curriculum, especially because the University considers itself responsible for enhancing the employability of its staff and students, as well as promoting and embedding sustainability into all of its educational activities and services. The project also aims to identify the main barriers perceived by staff to promoting sustainability at university level and integrating it into university curricula, as the literature has highlighted that despite the general appreciation that sustainability education has a clear place in HE, implementation varies greatly between institutions due to a number of barriers.

The project's findings have the potential to affect change and guide improvement at the University of Chester, as well as other institutions that are considering integrating sustainability into their curriculum, in an attempt to enhance the teaching and learning experience, as well as preparing students for life and employment as sustainability becomes an increasingly important aspect of both.

CHAPTER 3

METHODOLOGY

This chapter describes and justifies the project's research methods and their design processes, as well as detailing the participants and setting of the study. This chapter also covers the ethical issues of the methods used, and how the data will be collated and analysed.

3.1 Research Methods

In 2009, Sammons (p.1) stated that “every person has their own unique way of perceiving and understanding the world and that the things they do only make sense in this light”. Mixed method research has become an increasingly common approach in recent years for investigating people's perceptions (Raderbauer, 2011; Harris and Brown, 2010; Sammons, 2009). Raderbauer (2011) explains that by combining quantitative and qualitative methods, the researcher can obtain a more complete and comprehensive account of the enquiry, allowing greater insight into people's perceptions. Therefore, this project employed a mixed methods approach of both positivist and humanistic research methods to gather primary data. Quantitative data was gathered using in-depth questionnaires with students, and the project's qualitative data was obtained through interviews with staff members and open-ended questions from the questionnaires. Appendix 3 shows a blank questionnaire and the complete transcript of each interview can be viewed on the CD provided in Appendix 4 (Word documents), as Appendices 5 to 13 contain only the pages of the transcripts with highlighted text referred to in the Results and Analysis chapter.

3.2 Setting and Participants

The project's primary research was conducted at the University of Chester with third-year Single Honours students, Programme Leaders from six different disciplines, and three senior support staff members with cross-university responsibilities. The six programmes chosen were Geography, BSc Biology, Sociology, Business Management and Entrepreneurship, Mathematics, and English Language and Literature. Programmes from six different disciplines were chosen to obtain perspectives and perceptions from different contexts, including four disciplines which often include content related to sustainability, as well as two core and foundation subjects (Mathematics and English Language and Literature) which are compulsory throughout the national curriculum.

Third-year Single Honours students were chosen as they have had the most time and experience studying at the University, and as Single Honours students have studied

within a single discipline. Programme Leaders from the six disciplines were then interviewed, as well as three senior support staff members about their perceptions and understandings of sustainability and its place at university level, as well as its integration within university curricula. The senior support staff members were involved to investigate the perceptions of those with greater influence over the activities at the University of Chester, including the Dean of Academic Quality and Enhancement, the Director of Learning and Teaching, and the Head of Sustainability.

3.3 In-depth Questionnaires with Students

The questionnaires were emailed to third-year Single Honours students through the secretaries of each of the six departments at the University of Chester, with the replies set up to be directed straight back to the researcher. The questionnaires were initially intended to be emailed to students in the week beginning 5th May 2014, with subsequent reminders in the third week of May and the first week of June to encourage participation from those who have not yet. Unfortunately technical and communication difficulties were experienced with the emailing of questionnaires, which lead to the intermittent sending of emails to students. Table 4 indicates the dates that emails were sent to students. Due to the combination of later than intended emails and students' exams starting on 19th May and ending on 6th June, the response rate was very low and only 19 were received as most students didn't check their emails after their exams finished. As a result, the researcher included the three senior support staff members rather than the original plan of just six Programme Leaders, therefore the project developed a greater focus on staff perceptions.

Table 4: Dates of Emails to Students with Reminder Emails

<u>Programme of Study</u>	<u>First Email</u>	<u>First Reminder</u>	<u>Second Reminder</u>
Geography	12 th May	22 nd May	10 th June
BSc Biology	14 th May	29 th May	10 th June
Sociology	14 th May	29 th May	N/A
Business Management and Entrepreneurship	16 th May	10 th June	N/A
Mathematics	20 th May	3 rd June	N/A
English Language and Literature	15 th May	12 th June	7 th July

3.4 Interviews with Staff Members

After the questionnaire data was collected and the initial results analysed, the findings were used to inform semi-structured interviews with the six Programme Leaders, which then advised the questions and issues raised in further semi-structured interviews with senior support staff members. Table 5 displays the details of each interview and reflects how the discussions within each meeting were used to build upon subsequent interviews, as the duration of both sets of interviews increased throughout, except for the BSc Biology staff interview which was more concise due to the Programme Leader's lack of availability. The Programme Leaders were emailed in April to explain the nature of the study and ask for their participation in the project, with the senior support staff members being emailed in June. All of the interviews were conducted at the University of Chester in the office of each participant on a date which suited them between June and August. The main questions that were asked in the interviews with Programme Leaders and senior support staff can be seen in Appendix 14 and 15 respectively, although the interview transcripts show that the moderator asked more questions due to the various discussions that took place. Hereafter, each staff member will be referred to by their abbreviation in Table 5.

Table 5: Details of Interviews with Programme Leaders and Senior Support Staff

<u>Participant</u>	<u>Abbreviation</u>	<u>Date of Interview</u>	<u>Duration (minutes)</u>	<u>Appendix for Transcript</u>
Mathematics Programme Leader	MATHPL	25 th June	27	5
Geography Programme Leader	GEOPL	30 th June	32	6
English Language and Literature Programme Leader	ENGPL	3 rd July	56	7
Sociology Programme Leader	SOCPL	15 th July	61	8
Business Management and Entrepreneurship Programme Leader	BUSPL	18 th July	74	9
BSc Biology Programme Leader	BIOPL	22 nd August	36	10
Dean of Academic Quality and Enhancement	DAQE	18 th July	36	11
Head of Sustainability	HoS	23 rd July	46	12
Director of Learning and Teaching	DLT	31 st July	61	13
<div style="display: flex; justify-content: space-around; align-items: center;"> Blue – Programme Leaders Green – Senior support staff members </div>				

3.5 Rationale for Methodology

The project employed a mixed methods approach of both positivist and humanistic research methods to gather primary data. Both methods have their own strengths and weaknesses, so by combining approaches from different paradigms the researcher “can capitalise on the strengths of each approach and offset their different weaknesses” (Creed et al, 2004. p.7). The use of mixed methods research is now recognised as a common approach for investigating people’s perceptions, as questionnaires provide numerical evidence which can be statistically analysed, while interviews allow the researcher to obtain more in-depth insights into the perceptions of participants and how these affect their attitudes and actions (Raderbauer, 2011; Harris and Brown, 2010; Sammons, 2009).

Questionnaires were originally chosen as the main method of data collection as they can provide feedback from a large number of participants (Adams and Cox, 2008). Questionnaires give participants the opportunity to provide anonymous feedback from their personal experiences and views. The questionnaires were semi-structured and contain a mixture of open and closed questions. Tick boxes and Likert scale questions were used for the closed questions to determine the attitudes and feelings of respondents (Anderson, 2007). “The use of semi-structured questionnaires enables a mix of qualitative and quantitative information to be gathered” (Hague et al, 2013. p.107). Therefore the data could be analysed quantitatively to show patterns and trends, and the qualitative data could be used to reveal students’ personal opinions on the subject.

The chosen delivery method of the questionnaires was by email which can be very economical and fast, allowing large numbers of respondents to be questioned as well as sending subsequent reminders if needed (Phellas et al, 2011). Although questionnaires delivered in lectures often have higher response rates than emailed or web questionnaires (Nulty, 2008), timing was a significant issue and so email was chosen as the most appropriate delivery method. The planning stage of this project commenced in March 2014 but the pilot questionnaire was not completed until mid-April. At this point most departments at the University only had one or two weeks of lectures remaining in May after the Easter vacation before students finished for exams. Therefore, it was decided to email questionnaires as it would have been very challenging to visit numerous revision lectures in such a short time-frame, in order to distribute questionnaires to all third year Single Honours students in each department.

Unfortunately due to the timing issue as well as technical and communication difficulties with the sending of emails, the response rate was very low and only 19 completed questionnaires were received. The researcher did provide incentives in an attempt to boost

response rates, offering those who participated the chance to enter a prize draw to win one of three Amazon gift vouchers (one worth £20 and two worth £10). Such incentives have proven to improve response rates in other studies (Centres for Disease Control and Prevention, 2010). Although questionnaires were originally chosen as the main method of data collection, due to the low response rate the researcher involved three senior support staff members as well as the six Programme Leaders in interviews, therefore the project developed a greater focus on staff perceptions.

Interviews were chosen as they often generate rich information and allow the researcher to gain greater insight into the perspectives and experiences of interviewees (Agbese, 2006). This method is also an efficient way of producing a great deal of information, including diverse opinions and ideas. Semi-structured interviews also allow participants the freedom to express their views and ideas in their own terms, which can be explored and discussed further during the interviews (University College Dublin Geary Institute, 2012; Thomas et al, 2011). The interviews were also able to build upon the findings from the student questionnaires as well as previous interviews which lead to various and contrasting discussions.

3.6 Questionnaire and Interview Design

During the design process of the questionnaires, a pilot questionnaire was created and trialled with three students from the University of Chester. One of the completed pilot questionnaires can be seen in Appendix 16, which has been annotated to show the modifications that were made to produce the final questionnaire. The green highlighted text/areas indicate where changes were made, with the text in the yellow boxes explains what changes were made and the justification for them.

The questionnaire also contains some specific questions so that the project's findings could be compared to the secondary evidence discussed in the literature review, particularly Kagawa (2007) with questions 3, 6, 10, 11 and 12; HEFCE (2013) with questions 17 and 18; and HEA (2011) with question 19. In terms of sustainability's place within university curricula and the barriers to its promotion and integration, the findings from the interviews could be compared predominantly with those of Hanover Research (2011) and HEA (2011).

3.7 Ethical Issues

There were a number of ethical issues that required consideration before creating and conducting the questionnaires and interviews. First of all, permission and cooperation was obtained from the six Heads of Department and Programme Leaders in April 2014, as the questionnaires were emailed to students from the administrative staff of each of department. In terms of the data collection, the researcher must explain the nature of the study and in a way that is understandable to the potential participants (Ethics Guidebook, 2012). It is also very important that individuals understand that their participation is voluntary, and that there are no consequences for refusing to take part in the study. Another important aspect is to make it clear to the participants that they will remain anonymous and how this confidentiality will be maintained, as well as indicating how the information that they provide will be used (Overseas Moving Network International, 2005).

With consideration of the various ethical issues discussed when it comes to data collection methods, consent forms were used for each method. Consent forms were attached to the front of the questionnaires (Appendix 17) and distributed to staff members (Appendix 18) before the interviews began. These consent forms include information about the study as well as the necessary information regarding confidentiality, how the data would be used, and how much time the questionnaire and interview would take approximately to complete. Staff members consented to the identification of their specific programme/role at the University, however no names have been revealed. A risk assessment (Appendix 19) was also completed which indicated that the interviews were to be conducted at the University of Chester making it a safe environment for all of those involved in the study.

The questionnaire consent form also contains information about the prize draw. It explains how their anonymity will be maintained even if they choose to enter their email address to have a chance of winning a gift voucher. The questionnaire itself also had ethical issues as it had to be designed in a way that respected people's privacy, and to avoid questions that may offend participants (Altermatt, 2011). With both the questionnaires and interviews aiming to gain information about the personal perceptions, experiences, and actions of participants, the questions had to be worded carefully and correctly. But if participants wished to withdraw from the study at any time, then they were free to do so without having to give a reason for their withdrawal.

3.8 Data Collation and Analysis

The data obtained from the questionnaires and interviews was collated and analysed to determine the project's findings. When collating the questionnaire data it was evident that some students had selected two numbers in the Likert scale questions, so in these cases the higher number was used. Microsoft Excel was used to collate, analyse, and graphically present the quantitative data to show the patterns and trends. Wordle was also used to create word clouds to visually present the key themes that emerged from open questions in the questionnaires. If the questionnaire response rate was higher, IBM SPSS Statistics would have been used to statistically test the relationships between variables.

The qualitative data from staff interviews is discussed throughout the Results and Analysis chapter to reveal the personal opinions and perceptions of staff members. Each staff member is referred to by their given abbreviation in Table 5, and when reference is made to a particular statement or discussion within a transcript, the reader is directed to the transcribed text. For example, YHLAPP7 directs the reader to the corresponding yellow highlighted text in Appendix 7. Each of the transcripts also include the following transcription conventions:

- [] indicates overlapping speech.
- ... indicates a pause longer than two seconds.
- CAPITALISATION indicates emphasis.

The findings from the primary data were then compared to the secondary evidence discussed in the literature review to assess the differences, and/or similarities between the project's findings and those of other academics/organisations.

CHAPTER 4

RESULTS AND ANALYSIS

This chapter analyses and discusses the findings from the questionnaires and interviews, to reveal staff and student perceptions and attitudes towards sustainability and its integration into university curricula, as well as the sustainability of student lifestyles and the factors influencing their views and behaviour. Clear links are made between the project's findings and the secondary data and information discussed in the literature review.

4.1 Demographics of Questionnaire Participants

A total of 19 questionnaires were received from students at the University of Chester (UoC hereafter). The entire data set can be viewed on the CD provided in Appendix 4 (Excel file). Due to the low response rate, the majority of the questionnaire data can only be used to give an outline of student opinion at the UoC, rather than the relationships between variables. Table 6 provides the general demographics of those who completed questionnaires. Although the female to male ratio is greater than 2:1, this closely reflects the high female to male ratio at the UoC with 65:35 (The Complete University Guide, 2014). Another explanation for the higher response from females could be that they are more interested in the topic of sustainability as a number of studies have discovered (Gelski, 2014; Rastogi, 2010; Stevens, 2010). In 2013, Sethi declared that “women’s tendency toward empathy, altruism and personal responsibility makes them inherently more interested in safeguarding the environment” (as cited by Gage, 2013).

Table 6: Demographics of Questionnaire Participants

<u>Programme of Study</u>	<u>Gender</u>		<u>Total</u>
	Male	Female	
BSc Biology	2	4	6
Geography	2	3	5
Sociology	1	2	3
English Language and Literature	0	3	3
Mathematics	1	1	2
Business Management and Entrepreneurship	0	0	0
<u>Total</u>	6	13	19

4.2 Understandings of Sustainability

4.2.1 Student Understandings

The findings from Figure 7 reveal that all 19 students consider themselves to have at least an average level of familiarity. Geography students were the most familiar of the respondents with four being very familiar with sustainability. Whereas both students from Mathematics were only somewhat familiar with the term, suggesting that they have had the least exposure to the concept of sustainability (Table 7 in Appendix 20). Although the sample is only small, these findings are very similar to Kagawa's research (2007) which found that over 77% of students had an above average level of familiarity with the term sustainability, compared with the project's 14 students (equivalent to 74%). These findings support Kerk and Manuel's (2008) claim that most people now have at least a basic understanding and awareness of sustainability, as the concept has risen to prominence.

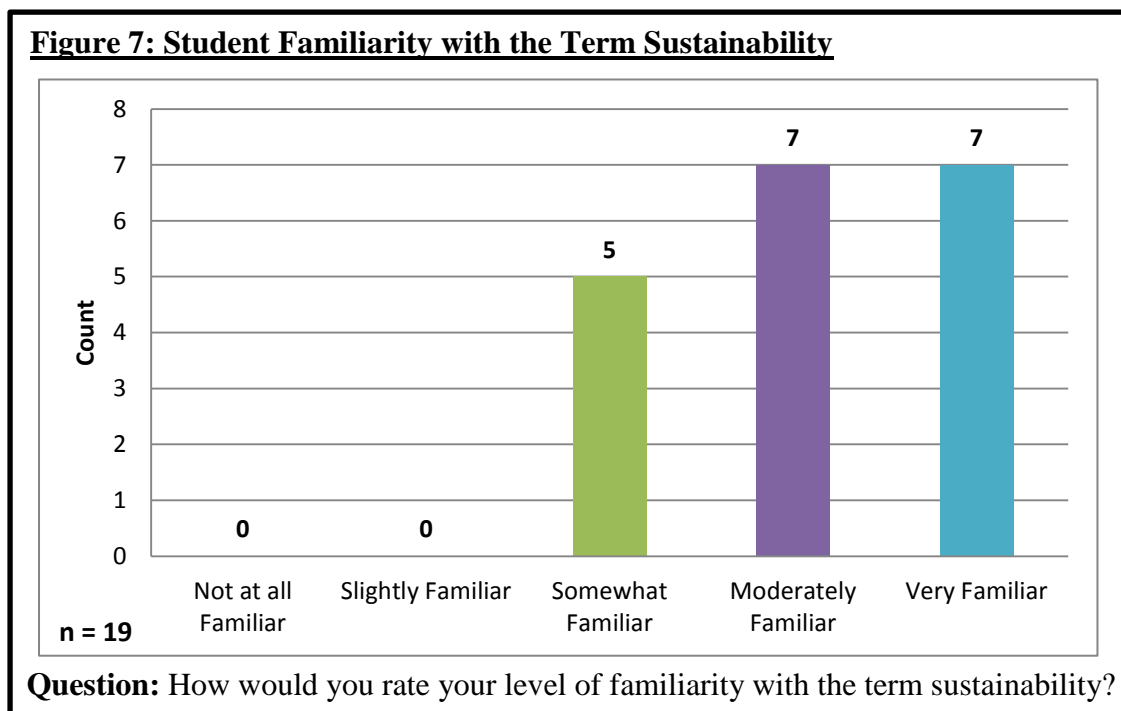


Figure 8 shows that students most associated “recycling” with the notion of sustainability, which nine students identified (Table 8 in Appendix 20). This is most likely due to student engagement with the action, as well as the recognition of the role and potential of recycling to preserve the environment and its resources. Some even consider recycling to be “the cornerstone for sustainability” (Benefits of Recycling, 2014). The second and third most associated themes were “future” (five responses) and “environment” (four responses) respectively. Figure 8 also reveals that most students recognise the environmental dimension and issues of sustainability, but only two students associated

the three-legged stool with sustainability (seen in Appendix 21), which acknowledges the economic and social dimensions as well as the environmental aspect of sustainability. These findings reflect those of Azapagic et al (2005) and Summers et al (2004) discussed in the literature review, as they also discovered that students' knowledge was strong in terms of the environmental element of sustainability, but there was a significant lack of understanding and recognition of the social and economic aspects of the concept.

Figure 8: Student Understandings of Sustainability – Associated Themes



Question: Please write up to five keywords, concepts, ideas, or actions that come to mind when you think about sustainability.

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4.2.2 Staff Understandings

Table 9 shows that the staff members with the greatest understanding of sustainability were the GEOPL, BUSPL, and HoS who all embraced a broader and more holistic perception of sustainability, relating the themes of “intergenerational equity”, “interconnectedness”, and “the three pillars of sustainability” with the concept. Whereas those who were less familiar with the notion (particularly the SOCPL, MATHPL and ENGPL) adopted a narrower view of the concept, focusing on the environmental dimension highlighting “resources” and “recycling” as the main themes. The DLT also reinforces this interpretation by stating that “in terms of a sort of world view, I think again most people tend to think about it in terms of resources... particularly things like recycling and, use of energy and those sorts of things. But again it can have a much broader, broader, remit than that” (YHLAPP13). These findings as well as those from

Figure 8 support Kerk and Manuel’s (2008. p.3) statement that most people now have at least a basic understanding and awareness of sustainability, but “for many people, the basic idea of sustainability [still] focuses greatly on depletion of resources... and other environmental and ecological aspects”.

Table 9: Staff Understandings of Sustainability

<u>Staff Member</u>	<u>Main Themes Associated with Sustainability</u>	<u>Familiar with the Brundtland Definition?</u>	<u>Level of Familiarity with Sustainability*</u>
GEOPL	Intergenerational equity, limits of the planet/environment	Yes	Very Familiar
BUSPL	Interconnectedness, business endurance/longevity, environment, triple bottom line	Yes	Very Familiar
BIOPL	Impact limitation, intergenerational equity, resources	Yes	Moderately Familiar
SOCPL	Resources, recycling, transport, lifestyles, politics	No	Somewhat Familiar
MATHPL	Prolonged life, recycling, resources, efficiency, ecology	No	Somewhat Familiar
ENGPL	Politics, environment, resources, renewable	No	Slightly Familiar
HoS	Balance between humanity and nature, intergenerational equity, triple bottom line, the three pillars of sustainability	Yes	Very Familiar
DLT	Interconnectedness, responsibilities and lifestyles, financial sustainability, resources, recycling, energy	No	Moderately Familiar
DAQE	Environment/ecology, financial sustainability, survival and viability of an organisation	No	Moderately Familiar
* Interpreted by the researcher based on the participant’s understanding at the start of the interview.			

In terms of the three pillars of sustainability, all nine staff members acknowledged and discussed the environmental aspect, but other than the GEOPL, BUSPL, and HoS, the SOCPL was the only other staff member who directly addressed the social dimension of sustainability, by discussing its relationship with social inequality and stating that “inequality is the biggest problem in terms of sustainability” (YHLAPP8). The economic aspect of the concept was acknowledged by all staff members but discussed to different extents, primarily in relation to business and politics. The DAQE and BUSPL explained how they relate most with the economic and business aspect of sustainability due to their roles at the UoC (YHLAPP11 and YHLAPP9 respectively), but that they also identify the environmental aspect as an integral component of sustainability (DAQE – GHLAPP11). The BUSPL explained that although the environmental aspect is “secondary in my thinking of sustainability... THAT is probably the most CRUCIAL element of understanding sustainability” (GHLAPP9). The GEOPL also admitted that although they acknowledge and appreciate the three main dimensions of sustainability, “my heart and my head almost always jump to the environmental aspects of sustainability... [because] ultimately, the limit is an environmental one in my view” (YHLAPP6).

4.3 Attitudes Towards Sustainability

4.3.1 Student Attitudes

The findings from Figure 10 reflect the growing interest from students around the topic of sustainability (Insight, 2014; Sharma and Kelly, 2012), with 13 students declaring that they were moderately if not very interested in the subject area. Geography students were the most interested with one student being very interested and the other four moderately interested. Mathematics students were the least interested with one being slightly interested and the other somewhat interested (Table 10 in Appendix 22). This pattern also emerged from Figure 7 indicating the link between students' familiarity with sustainability and their interest in the topic.

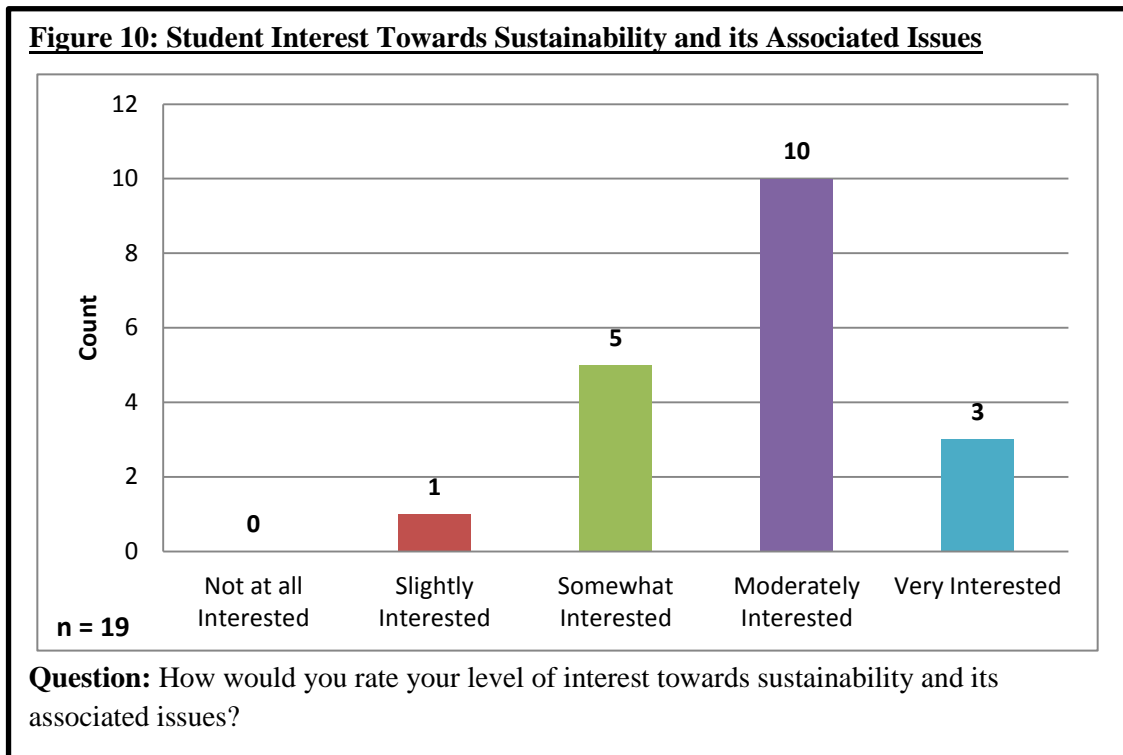
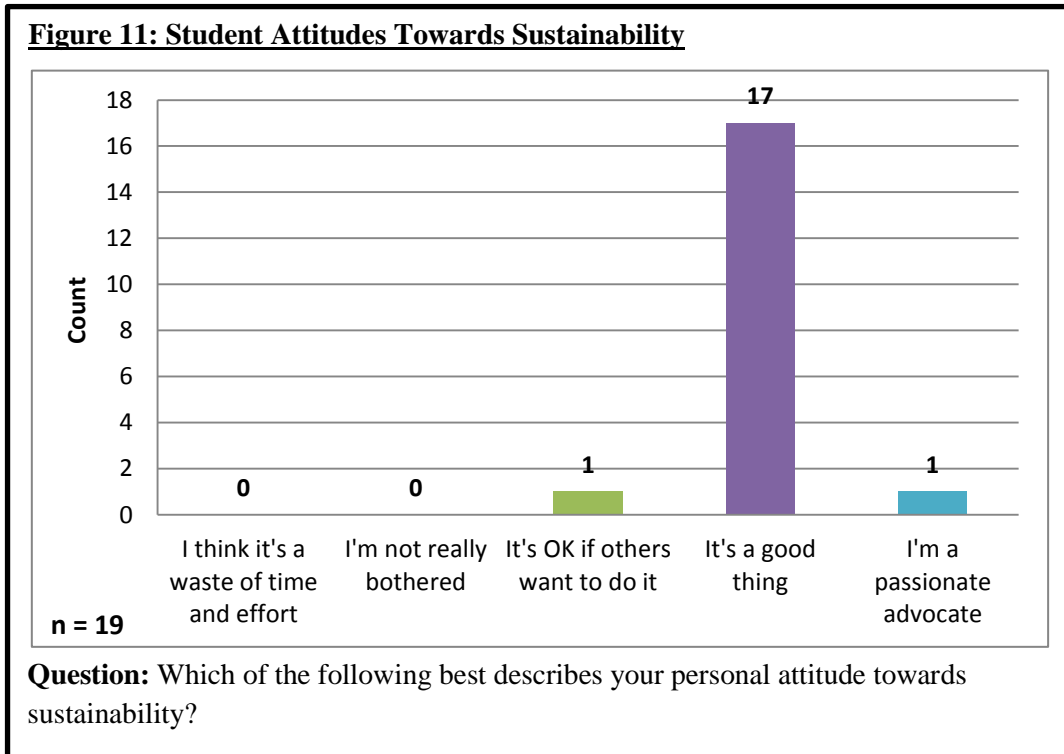


Figure 11 signifies the positivity surrounding the concept of sustainability in terms of student perceptions, with 18 of the 19 participants holding a positive attitude towards sustainability. As might have been anticipated following the findings from Figure 10, the Mathematics student who was least interested in sustainability adopted the attitude of “it’s OK if others want to do it”. The single “passionate advocate” in Figure 11 was a Geography student who also declared themselves as very familiar with, and interested in sustainability (Table 11 in Appendix 22). These findings parallel with those of Kagawa (2007) who discovered that 90% of students possessed a positive attitude towards sustainability, compared with the project’s 18 students (equivalent to 95%). Both sets of findings are encouraging considering the ongoing controversy and skepticism over the

urgency to act on sustainability issues, identified by Dernbach (2012) and Lourdel et al (2009).



4.3.2 Staff Attitudes

All nine staff members agreed that the topic of sustainability is fundamentally and hugely important in the 21st century, including the HoS who emphasised that “we need to stop consuming, we need to stop digging up minerals from the earth, polluting it and causing issues because we've gone too far” (YHLAPP12). In terms of staff interest, all staff members expressed their interest in sustainability except from the ENGPL, who explained that it was not a subject that they were particularly interested in (YHLAPP7). This finding reinforces the link between familiarity and interest as the ENGPL was only slightly familiar with the concept of sustainability (Table 9). The nine staff members also acknowledged that there is now a greater awareness of sustainability among the public as well as the UoC’s students, but they also expressed concern about sustainability becoming a buzzword. The ENGPL stated that “what we have to be careful with is that word becomes a kind of buzzword, and then everyone uses it without really having commitment to what it means” (GHLAPP7). The ENGPL and DLT explained that despite the ambiguity over its interpretation, it’s difficult to argue against sustainability as it has become a fashionable word and topic (BHLAPP7 and GHLAPP13 respectively), which could have been a contributing factor to the findings of Figure 11.

With regards to how best to progress towards sustainability, a number of staff members emphasised the importance of individuals assuming responsibility for creating a sustainable future, by realising their potential impact and opportunities to engage with the issue. The SOCPL and DLT in particular stressed how this can be a difficult step for people to make (GHLAPP8 and BHLAPP13 respectively), which was also one of the main barriers identified by Lourdel et al, 2009. A few staff members considered the core of the problem to be political as “those who have power have the greatest opportunity” (ENGPL – YHLAPP7), which was a view shared also by a BSc Biology student in their questionnaire response (highlighted text in Appendix 23). The ENGPL declared that “in the end it’s the politicians who need to do something about it, and we need to encourage them to do it” (BHLAPP7). The ENGPL also suggested that no significant progress will be made towards sustainability until the United States and China are affected (GHLAPP7), as they are the world’s two largest economies and largest polluters (Magnuson, 2013). Blackstone (2014) identified how such beliefs are often held by those with who fail to comprehend the potential impact of individual actions and choices (as the ENGPL was the least familiar, interested, and engaged in sustainability).

There were also contrasting perceptions between staff concerning the role and impact of businesses in terms of sustainability. The ENGPL perceived that the majority of businesses exploit the environment to achieve their “one aim which is to make significant profits for their shareholders” (GHLAPP7). Whereas the BUSPL stated that “business is not the enemy of sustainability” and that “business is [actually] forging ahead with the sustainability agenda” (BHLAPP9), by adopting and promoting more sustainable practices in order to remain competitive. The HoS acknowledged both sides of the argument regarding the performance of businesses (GHLAPP12), but more importantly they identified that collaboration and a combination of approaches is required to tackle the sustainability crisis (GHLAPP12). Despite the differing views of staff as discussed, all nine agreed that holistic thinking and collaboration is required to progress towards sustainability. The SOCPL stated that “politicians, and business owners, and capitalists, and people, just people, need to understand their impact upon each other... so it’s about intersectionality and working together basically” (GHLAPP8). So as well as large-scale system changes, a massive cultural shift is required. All nine staff members identified education as a great way, if not the greatest to induce the required paradigm shift and proactive action necessary to progress towards sustainability (as the literature review highlighted).

4.4 Sustainable Behaviours and Lifestyles

4.4.1 Sustainability of Student Lifestyles

Although evidence of the growing consciousness and interest among students has been indicated by academics (Insight, 2014; Sharma and Kelly, 2012), as well as the findings from Figures 7, 10 and 11, Figure 12 show that sustainability is still not a main priority in students' thinking during their day-to-day decisions and activities. Although five students said they often consider sustainability during their everyday choices, most students (eight) only consider it sometimes, which is unexpected considering the interest and positive attitudes that students declared towards the topic.

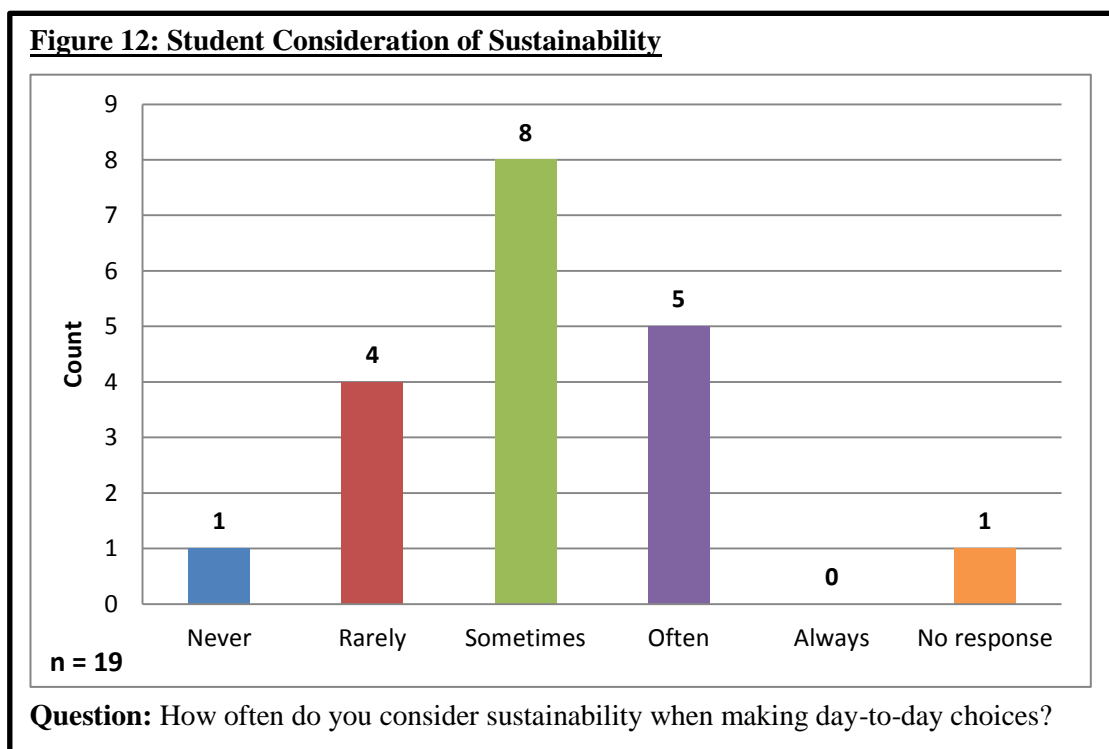


Figure 13 also shows that despite the familiarity and interest claimed by students towards sustainability, the majority (13) were uncertain as to whether or not they had a sustainable lifestyle. Table 12 (Appendix 24) shows that of the five people who often consider sustainability when making day-to-day choices, only two of them consider themselves to have sustainable lifestyles, as the other two were unsure. In 2012, Miller and Bentley stated that “to date, leading a sustainable life is not yet a mainstream concept”, and so most people are unsure of what can be classed as a sustainable lifestyle. The GEOPL also shared this view, explaining that some people are living sustainably without recognising it due to the notion’s lack of clarity (GHLAPP6). The Regenerative Leadership Institute (2012) states that there are numerous definitions and forms of sustainable living, but “at its most basic, sustainable living means living a lifestyle that uses as few resources as

possible and causes the least amount of environmental damage for future generations to deal with”.

Although Brody and Ryu (2006) found that students with a greater awareness of sustainability from their university course behaved in a more sustainable manner than those from others, Tables 13 and 14 (Appendix 24) reveal no clear patterns between programmes of study and students’ consideration of sustainability and lifestyles (although a larger sample may have). One

Geography student also admitted that

although they were very familiar with sustainability and moderately interested in the topic, they never consider sustainability when making their day-to-day choices (highlighted text in Appendix 25). A number of staff members explained that the perceptions and understandings about sustainability are only important to an extent, “what we actually DO is really important” (HoS – BHLAPP12).

4.4.2 Student Engagement in Sustainable Behaviours

Despite the uncertainty from students regarding the sustainability of their lifestyles, Figure 14 shows that the students engaged in a variety of sustainable behaviours. Table 15 (Appendix 26) indicates that most students engaged in six of the sustainable behaviours included in the questionnaire. The least behaviours engaged in were four (by two students), with the highest being nine (also by two students). The sustainable behaviour most engaged in by students was “recycling” (18 students), which was also the most associated theme by students in Figure 8 due to their engagement with the action. The SOCPL explained that students are now used to recycling “as part of their everyday routine... so it’s in their conscience” (BHLAPP8). The second and third highest behaviours engaged in were “turn off unused appliances” (by 17 students) and “use energy saving light bulbs” (by 16 students), which have become two of the simplest and most promoted ways to save energy as well as money (Energy Saving Trust, 2014). The sustainable behaviours least engaged in involved changing their purchasing habits, with “buy Fairtrade products” and “sustainable food choices” (a behaviour added by students in the “other” option of questionnaire) each being engaged in by two students.

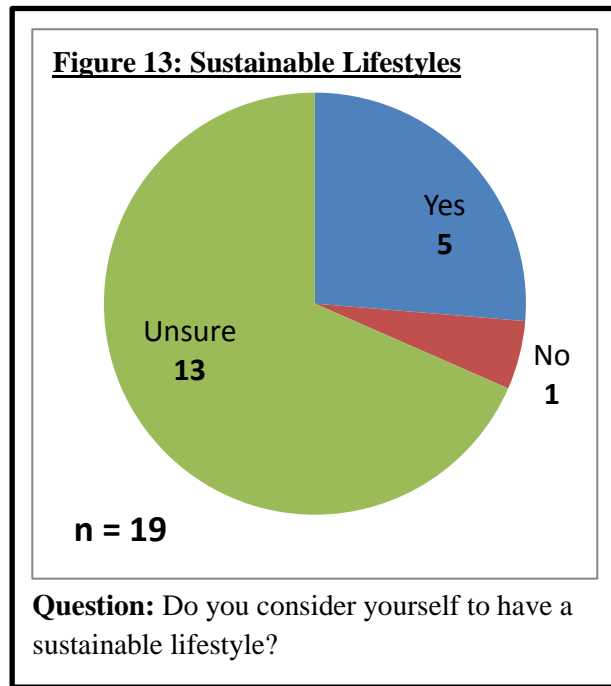
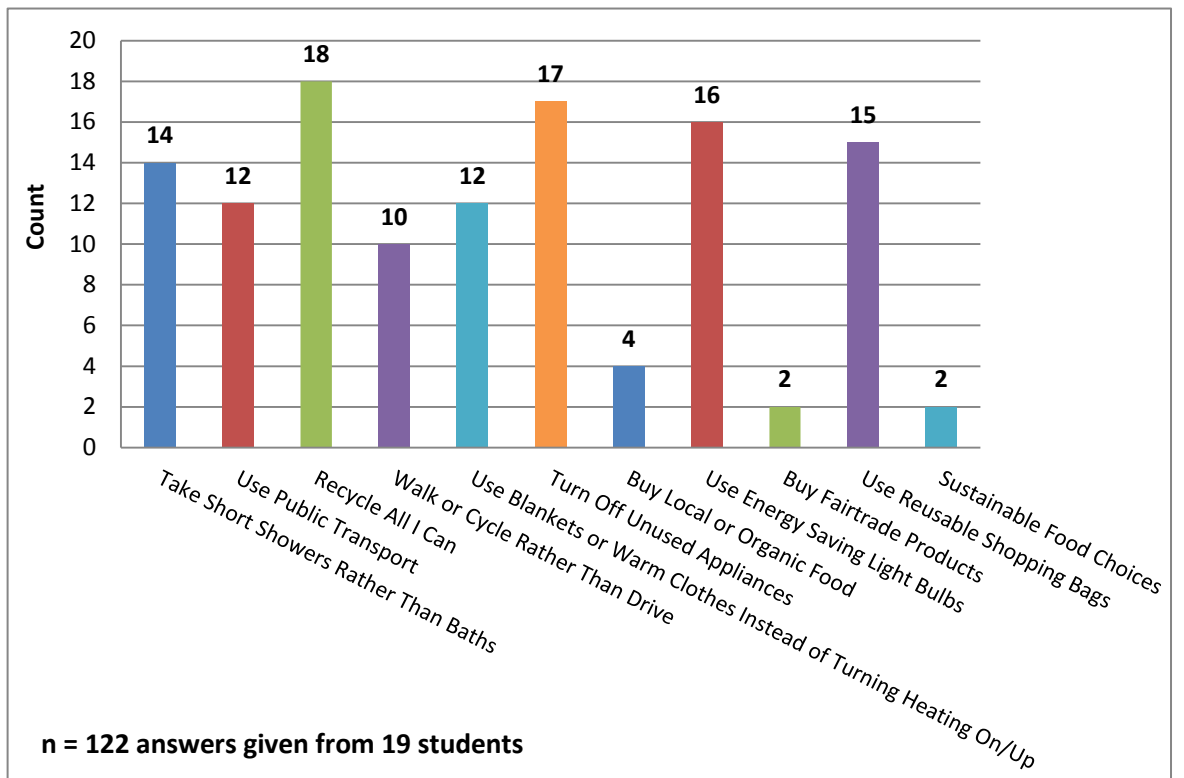


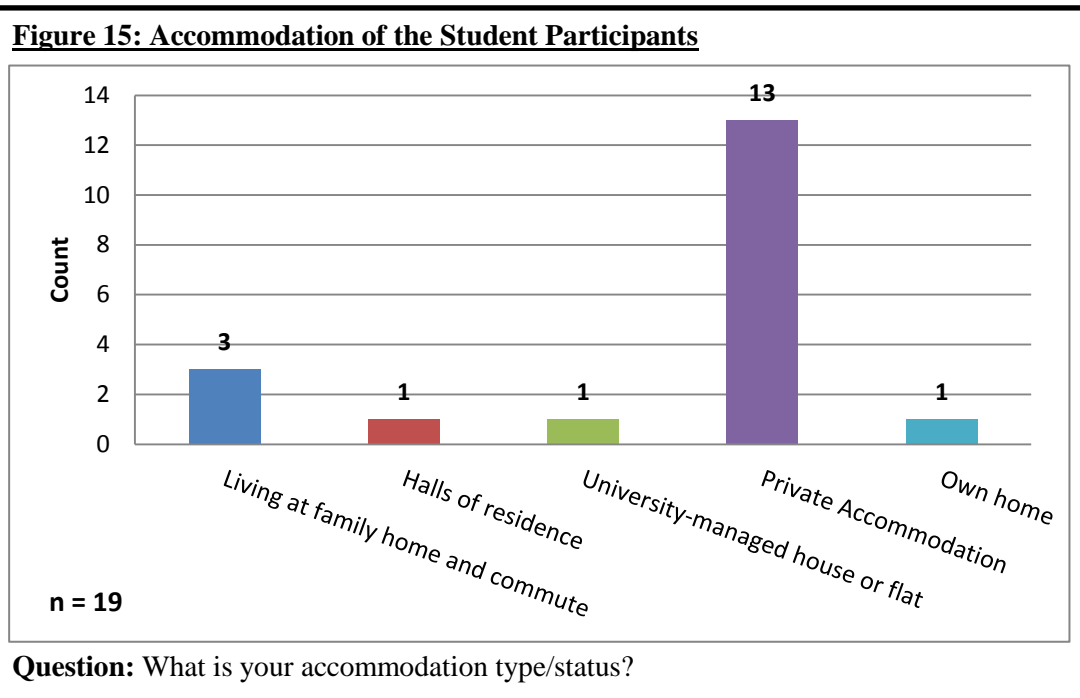
Figure 14: Sustainable Behaviours Engaged in by Students

Question: Which of the following sustainable behaviours do you engage in?

In terms of consumer change in relation to students' purchasing habits, this project's findings are the complete opposite to Kagawa's research (2007), who found that most students from the University of Plymouth were willing to purchase and consume more Fairtrade and sustainable food choices, as well as local produce in order to live more sustainable lifestyles (Table 3). Whereas Figure 14 reveals that the sample of students from the UoC were reluctant to change their purchasing habits, as one student explained that "Fairtrade and local produce cost almost double, and I'm just a student" (highlighted text in Appendix 27), with another student stating that "food from foreign countries is often better quality" (highlighted text in Appendix 28). This suggests that the willingness of students to change their purchasing habits varies between institutions. However, Kagawa's research (2007) also highlighted that recycling and saving energy/water were also behaviours which most students engaged in, which is reflected by this project's findings in Figure 14.

In 2014, Yoe identified that it is critical that university students realise their opportunities to engage with sustainability and assume personal responsibility, as many are living away from home during their time at university. The findings from Figure 15 show that only three students of the sample of 19 lived at home with their parents, with the majority living in private accommodation (13 students). Table 16 (Appendix 26) also indicates that

approximately 73% of university students in the UK are living away from their parental home during term time. Therefore it provides students with the early opportunity to engage with sustainability and develop “healthy, informed, and conscientious lifestyles” (University of Alberta, 2010. p.9), rather than developing bad habits and unsustainable behaviour (Yoe, 2014).



4.4.3 Reasons For Engaging in Sustainable Behaviour

Table 17 contains the various reasons students gave for why they engage in sustainable behaviour. The most common response was to “protect the planet/environment” (seven students), which was also the main reason discovered by Kagawa (2007), reflecting the growing consciousness and interest from students about sustaining the planet and environment. The second highest response was to “save money on energy bills” (six students), which is now a commonly used promotion strategy to encourage more sustainable lifestyles (Winter, 2007). However, this often results in a rebound effect where the financial savings from people’s energy efficiency are used on other energy-consuming services (a view shared by the DLT - YHLAPP13). Holliday (2012) explains that “if we are to counter-act the rebound effect, energy saving messaging need to convey not extrinsic values but a sense of our moral duty to help meet the climate change challenge and make sure we all have a stable, sustainable future”.

4.4.4 Reasons For Not Engaging in Sustainable Behaviour

Just as Kagawa (2007) found, Table 18 shows that the main reasons students gave for not engaging in/more in sustainable behaviour included financial constraints and concerns (ten students), as well as convenience (eight students). Students expressed that they weren't willing to spend the time or higher price to live more sustainably, especially in relation to food choices (as previously indicated in Appendices 27 and 28). One student also stated that "as a student I find it difficult to make much of an impact" (highlighted text in Appendix 29). The ENGPL explained that currently in our society, "the kind of ACTION people TEND to be able to make are ISOLATED [and] UNCOORDINATED... so what you lack is a mass movement, effectively... [Therefore] because we are restricted and effectively act as SINGLE agents, we then wonder how serious we are as SINGLE agents" (YHLAPP7). As a result, many people often become disengaged with sustainability due to their perceived minimal impact (Lourd et al, 2009). The SOCPL stated that a "massive cultural shift" is required to overcome this barrier to progress, in order to change people's mind-sets and perceptions regarding the significance of their role and impact (BHLAPP8).

Table 17: Students' Reasons For Engaging in Sustainable Behaviour

<u>Response</u>	<u>Frequency</u>
Protect the planet/environment	7
Save money on energy bills	6
Protect animals/sustain their habitats	3
Convenience	3
Concerned for the future	2
More of a conscious thing now	2
Sustainability is important to the GDS Department, so I care as well	2
Educated on the reasons why I should engage with it	2
Reduce waste	2
Save energy	1
It is the law (compulsory to recycle)	1
To help local businesses (purchasing local produce)	1
To walk as often as I can and recycle	1
To benefit health	1
<u>Total</u>	34
Question: If you do engage in sustainable behaviour, what are your main reasons for doing so?	

The literature review also identified the reactive nature of the human species as a significant barrier to sustainability progress (Pohl, 2014). The SOCPL made reference to this by stating “your mind is on different things, like so what if we’re all gonna die in fifty years’ time... I think I might die tomorrow ‘cause I ain’t got enough money to put food on the table” (GHLAPP8). Despite the numerous barriers to engagement discussed as well as the slow progress that has been made towards sustainability, the DLT, SOCPL, and BUSPL all emphasised that small

steps towards sustainability building up to a larger collaborative effort are critical (including a student respondent – highlighted text in Appendix 30). The BUSPL compared sustainability progress to the journey of ship, declaring that “it’s very small turns of a ship’s wheel that can change the course of a huge liner” (YHLAPP9). Figure 3 also implies that “it is impossible to go, in a single step, from understanding global sustainable development to ensuring that it happens” (Lourdel et al, 2009. p.7).

4.4.5 University and Departmental Activities

A number of staff members also alluded to the activities of their departments and the UoC in relation to sustainability. The BIOPL believed that the Green Chester initiative as well as the UoC’s other various sustainability projects have made the institution and its students more aware of sustainability, as well as encouraging and influencing students to engage with sustainability (YHLAPP10). Table 17 supports this belief as two students explained how the GDS had encouraged them to engage with sustainability, as one Geography student stated “it is something that is very relevant to the department, so I guess that has influenced my actions” (highlighted text in Appendix 31). The DLT also explained that bin installing recycling bins at the UoC, recycling has become the norm for its students (GHLAPP13). Whereas the BIOPL emphasised that in some cases the UoC needs to reduce the necessity for recycling, especially in terms of the unnecessary printing and use of paper. Instead the BIOPL suggested that more resources should be made available online rather than hand-outs during lectures, and that “academic staff

Table 18: Students’ Reasons For Not Engaging in Sustainable Behaviour

<u>Response</u>	<u>Frequency</u>
More expensive	10
Convenience	8
Forget to consider sustainability	2
Lack of options to live sustainably	2
Lack of sustainable food choices	1
Better quality food from foreign	1
Live at home – parents buy food	1
Lack of sustainable energy suppliers	1
Difficult to make much of an impact	1
Bad weather prevents me walking	1
Council doesn’t provide enough recycling bins	1
<u>Total</u>	29
Question: What are your reasons for not engaging in/more in sustainable behaviour?	

could all have tablets to use for meetings so you don't have to print reams of paper off, but not everybody would go for that" until there is a culture shift at the UoC (GHLAPP10).

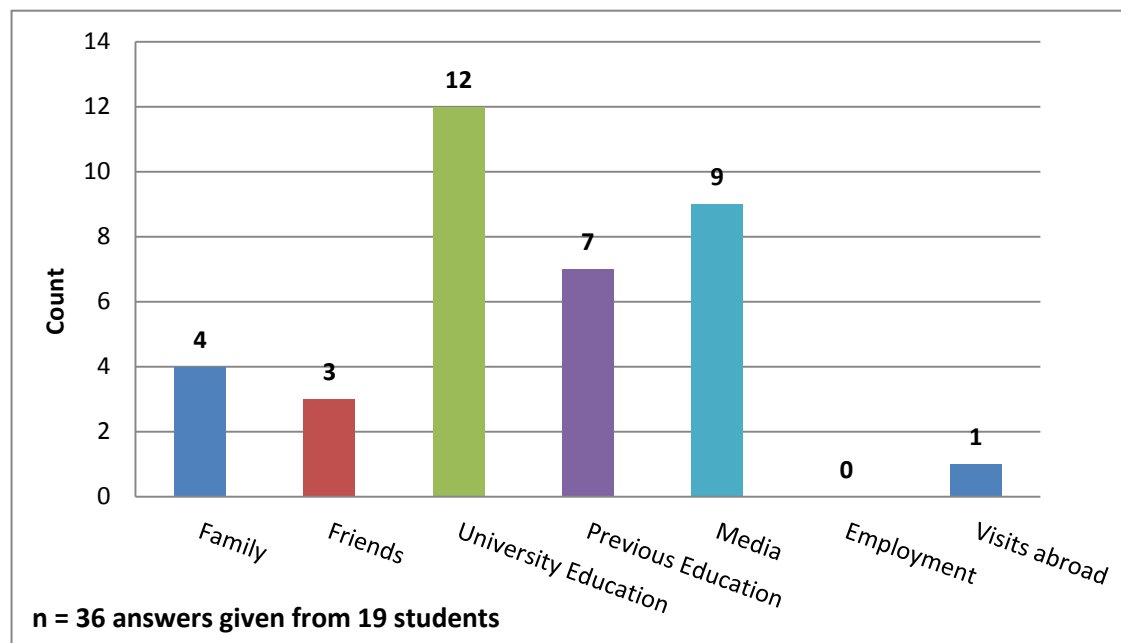
4.5 Influences on Perceptions of Sustainability

4.5.1 Influences on Student Perceptions

Universities now bear profound responsibilities to increase the awareness and knowledge required to progress towards sustainability, due to the authority and influence which universities hold over their students and communities around them (Asmar, 2009). Figure 16 reflects this heavy influence as 12 students indicated that their "university education" had most influenced their perception and attitude towards sustainability. The "media" was also found to be a significant factor (nine students), reflecting the increasing coverage and influence of the media regarding sustainability and its associated issues (Viana, 2010).

Figure 17 also shows that 15 of the 19 student participants had been taught about sustainability before coming to the UoC, with no pattern found between programmes of study (Table 19). Although the sample is only small, these findings could signify the growing support and commitment to education for sustainable development from all disciplines and at levels below tertiary education (UNESCO, 2012).

Figure 16: Main Influences on Student Perceptions Towards Sustainability



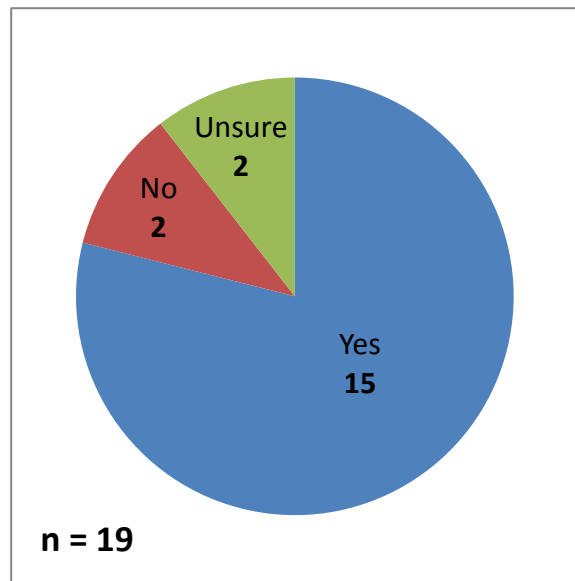
Question: Which of the following has most influenced your perception and attitude towards sustainability?

4.5.2 Influences on Staff Perceptions

Table 20 reveals that the main influences on staff perceptions also include education and exposure through the media, as well as their roles and responsibilities at the UoC, such as the BUSPL who explained that “as an academic working in a business school, my teaching and learning defines that I connect sustainability with business” (YHLAPP9). The HoS also emphasised how work experience and engagement in the topic of sustainability had influenced their perception (YHLAPP12), as well as highlighting its importance and potential for influencing those of students (GHLAPP12). The significance of trips and fieldwork in education was also

highlighted by the SOCPL to engage students with the topic of sustainability, explaining how a visit to the Machynlleth Alternative Technology Centre when they were a student really influenced their perception and attitude towards sustainability (GHLAPP8). The DLT indicated that essentially, “it’s trying to find a ways that awaken people’s interest and makes them aware, in both concrete and sort of more subtle ways” (YHLAPP13). Although “it’s often hard to change people’s ideas when they’ve been here [at the UoC] for a long time” (BHLAPP13).

Figure 17: Taught About Sustainability Before University



Question: Were you taught about sustainability before you came to study at the University?

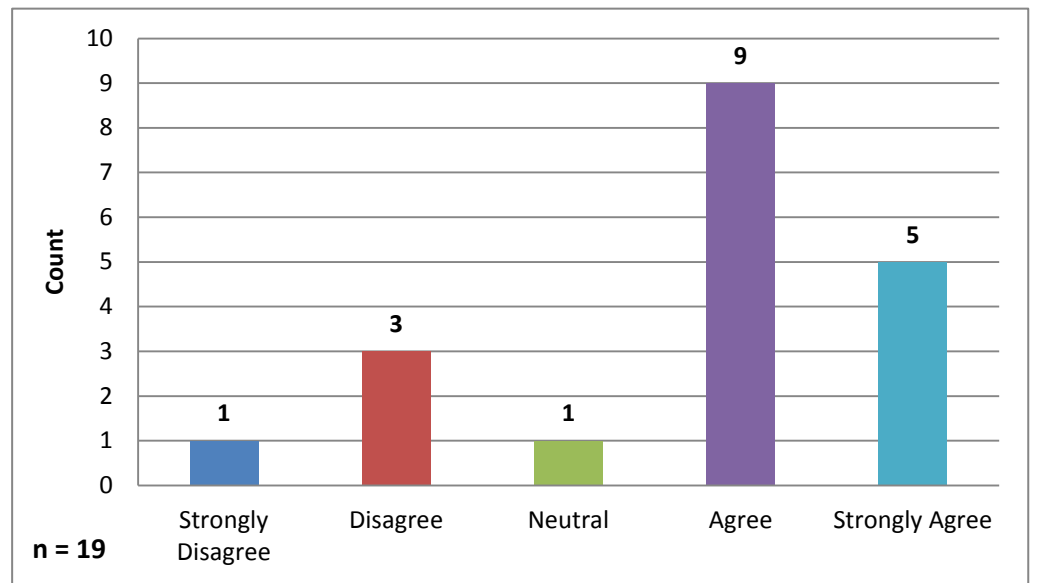
Table 20: Main Influence on Staff Perceptions and Understandings

Staff Member	Main Influences
GEOPL	University studies, becoming a geography teacher, working with those who teach about sustainability, topic has become more significant, media, literature.
BUSPL	Role and responsibilities as an academic in a business school, education, media.
BIOPL	Education, media, working practice - teaching about sustainability, some colleagues are conservation specialists.
SOCPL	Politics, media, talking with a colleague who researches sustainability, friends, day visits. E.g. National Trust and wildlife areas.
MATHPL	Area of research includes mathematical ecology, age and experience – seeing things change over time.
ENGPL	Politics, media, literature, age and experience.
HoS	Education, Masters course, work experience - WWF with Marks and Spencer – Mike Barry, role as Head of Sustainability.
DLT	Studied geography at school, leisure activities, involvement with agriculture, work experience, age and experience, managerial role at the UoC.
DAQE	Working practice and role at the UoC, media, age and experience.

4.6 The Role of Education

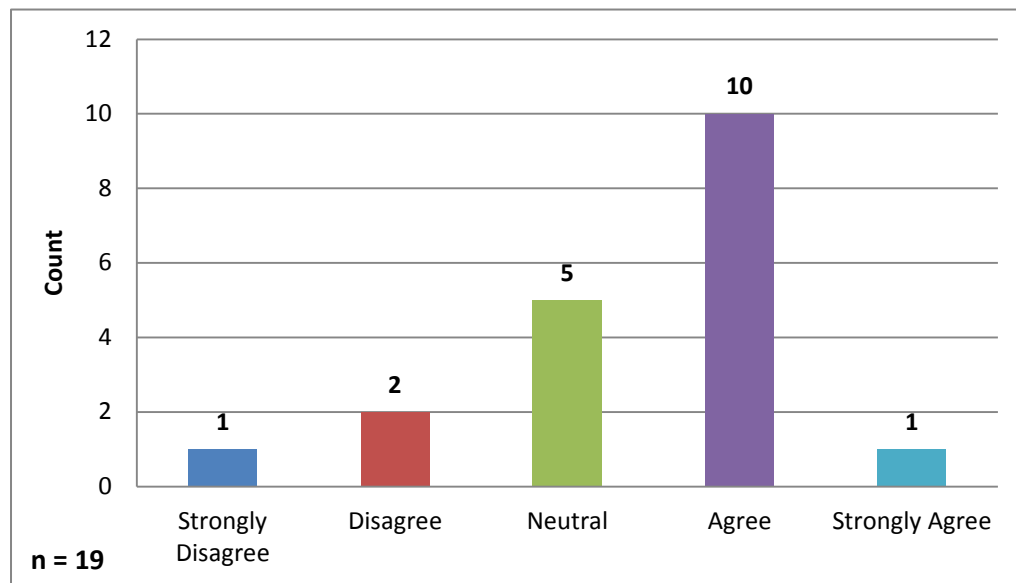
4.6.1 Student Perceptions

Figure 18 reflects the growing interest and demand from students to embed the topic of sustainability into university curricula (identified by Insight, 2014, and Sharma and Kelly, 2012), with a total of 14 students agreeing, if not strongly agreeing that it should be integrated into all university courses. Table 21 (Appendix 33) shows that students from BSc Biology, Geography, and Sociology agreed most, whereas both Mathematics disagreed (with one strongly disagreeing). One Mathematics student stated “I feel sustainability should be taught more at a young age, rather than at university” (highlighted text in Appendix 34). Another student from the English Language and Literature programme explained that “other than not using too much paper and turning off computers, I don’t really see how it’s relevant to many courses. It would be better approached as a separate seminar, possibly in Freshers’ week” (highlighted text in Appendix 35). However, the majority of students agreed and the findings from Figure 18 are very similar to HEFCE’s research (2013) which found that 67% of students in the UK agreed that sustainable development should be incorporated into and promoted in university courses, compared with the project’s 14 students (equivalent to 74%).

Figure 18: All University Courses Should Incorporate Sustainability

Question: Sustainability is something which all university courses should actively incorporate and promote.

The findings from Figure 19 are very similar to those from Figure 10, which indicated that 13 students were interested or very interested in the topic of sustainability, compared to the 11 students shown in Figure 19 who would like to learn more about the subject. However, Geography students were found to be the most interested in sustainability (Table 10 in Appendix 22), but in terms of learning about the topic there were mixed feelings between Geography students and those from other programmes of study, except for the three Sociology students who all agreed that they would like to learn about sustainability (Table 22 in Appendix 33). Once again, these findings are very similar to those from HEFCE (2013) which discovered that 60% of UK students would like to learn more about sustainable development, compared with the project's 11 students (equivalent to 58%).

Figure 19: Would Like to Learn About Sustainability

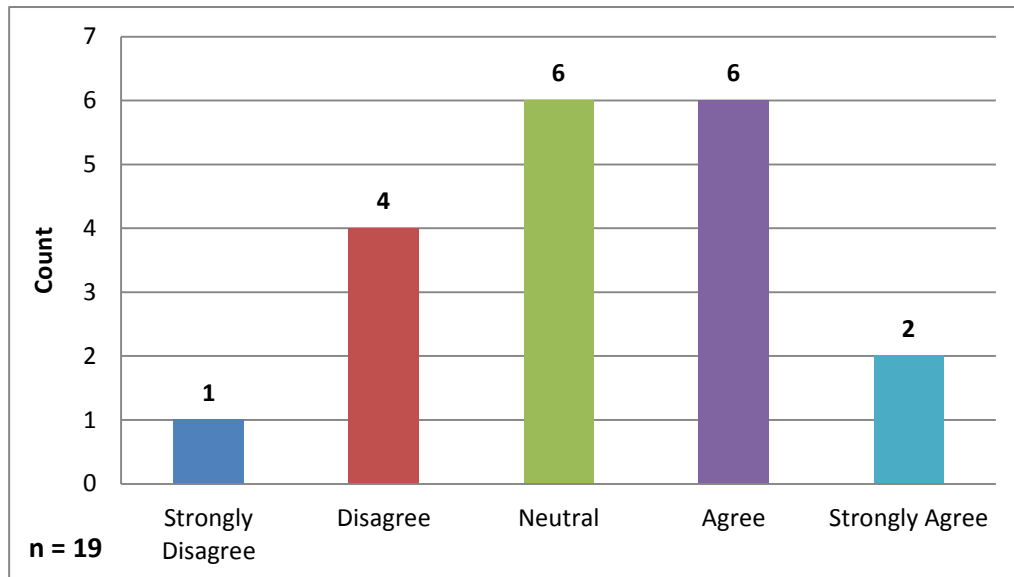
Question: Sustainability is something which I would like to learn about.

Although Figures 18 and 19 revealed clear trends despite the project's small sample size, Figure 20 indicates that students weren't as certain about the benefits to students' employability by integrating sustainability into the curriculum, with six remaining neutral/undecided about the statement. Table 23 also reveals no clear pattern between programmes of study and students' opinion on the matter (although a larger sample may have). In 2011, the HEA found that 65% of first-year university students in the UK believed that sustainability skills should be delivered throughout the curriculum rather than through a separate module. Whereas Figure 20 suggests that only eight of the 19 students (equivalent to 42%) appreciated the link between sustainability and student employability. The BIOPL explained that students "might have been thinking about specific things that they're gonna go into and how it relates", possibly due to many of them not perceiving sustainability to be directly linked to their career aspirations (BHLAPP10).

One of the Mathematics students strongly disagreed to each statement in Figures 18, 19 and 20, as they perceived sustainability to be irrelevant to their learning at the UoC. The student declared that "I study maths because I want to get into corporate banking and insurance, because of this I have no need to waste time in my lectures learning about sustainable living when I could be learning about more important things within the subject I chose. Employers do not care about this unless you are going into an area of work which this is directly linked which not many people do in proportion to those who don't... No way should it be taught in university modules that do not need it (highlighted text in Appendix 36). The student's views were discussed during the interview with the

BUSPL, who stated that “probably on an individual level, no amount of YOU talking to them or ME talking to them would help them to broaden their view, it needed to be part of that programme” to help that student realise the connections between sustainability and their discipline and career aspirations (GHLAPP9).

Figure 20: Incorporating Sustainability into University Curricula to Enhance Student Employability



Question: Universities should incorporate sustainability into their curricula in order to enhance student employability.

4.6.2 Staff Perceptions

All nine staff members acknowledged education as a critical component of the transition towards a sustainable future, and that sustainability should be integrating into education at all levels for all ages, although staff perceptions differed in terms of the extent of its integration. The MATHPL stated that “the next generation of people who want to push this forward need to know why it’s important, [so] it’s important to educate them now” in order to induce the required cultural shift and to change people’s mind-sets (YHLAPP5). The HoS also explained that education and public awareness are “the most critical factors that we have because, what we’ve kind of come to perceive in the [sustainability] sector is that... politics does not work for this kind of change” (YHLAPP12). The DAQE added that as well as educating people about sustainability, the most fundamental aspect of this transition is to convey the values to people so that they recognise the urgent need to build a sustainable future (BHLAPP11).

Although the role and importance of education and students has been emphasised by staff members as well as numerous academics (Radovic, 2013; Harich, 2010; Vogt, 2009), the HoS emphasised that “we have to be mindful or careful about placing all of the responsibility on the shoulders of students now”, because a combination of approaches and collaboration is required to tackle the sustainability crisis (BHLAPP12). The HoS stated that “a better way of putting it is that, students and universities have the potential to have the biggest impact on creating a more sustainable world, a more just and sustainable future” (YHLAPP12).

4.7 The Purpose and Obligations of the UoC and its Staff

4.7.1 Purpose and Obligations of the UoC

In 2013, HEFCE (p.7) stated that their vision “is for [English] universities to be widely recognised as leaders in society’s efforts to achieve sustainability”. The literature review identified that the UoC does consider itself responsible for both the promotion and improvement of sustainability as well as employability. However, the DLT explained that although “universities like most organisations say things about what their aims are... when you look at the practice, there's often a dissonance between the two” (BHLAPP13). The DLT stated that “from a personal perspective and, if you follow what the University’s mission says, sustainability should be embedded across the patch, in all disciplines” and activities, as well other similar values such as equality and diversity (YHLAPP13). Despite the commitment declared in the UoC's official documents “to embed sustainability into all of its educational activities and services” (University of Chester, 2014c. p.1), staff perceptions differed greatly in terms of the progress made with the integration of sustainability into the UoC’s curriculum and activities. The HoS acknowledged that although some staff members consider the progress to be substantial, “I often feel it’s progressing very slowly” (BHLAPP12).

The DAQE acknowledged the ongoing debate on the purpose and obligations of universities in relation to student employability (Blouw, 2013; Oni, 2013; Felix, 2012), but stated that “certainly at this University we put a high value on trying to prepare students for employment” (GHLAPP11). The DAQE explained that not everything the students do has a practical focus on employability, but “they are encouraged to develop, learn, and become aware of what will help to make them successful employees, and an awareness of sustainability is one of those things that I think will help to make them successful employees” (YHLAPP11). The highlighted text in Appendix 37 shows how one student explained that if not for employability, sustainability should be integrated into the curriculum because students will encounter sustainability-related problems in the

future, and therefore need to be educated about the topic. The DLT explained that by responding to these student expectations, the UoC will be producing graduates who can think critically about any issue, as well as being able to make an appropriate decision based on evidence (GHLAPP13).

4.7.2 Obligations of the UoC's Staff

Table 24 shows that the majority of staff members felt that they had a moral and personal obligation to include and promote sustainability education, with only three staff members considering it to be more of a professional obligation of meeting the demands and interests of employers and students. Those who stated a moral/personal obligation explained that they also engage in sustainable behaviour on a personal level. Another pattern that can be identified is that two of the three staff members least familiar with the topic of sustainability (Table 9 – ENGPL and MATHPL) considered it to be more of a professional obligation. Although the six staff members explained that they were motivated by a moral/personal obligation, they also considered the inclusion of sustainability to be part of their professional obligation. The BUSPL stated that “there's been an element of sustainability in MY teaching and learning from the moment I arrived [at the UoC]. But that was about ME, because to understand business you have to understand sustainability” (GHLAPP9). If you are wanting to prepare your students to be job hunters and job creators, you have to embed sustainability... we have a responsibility to do that (BHLAPP9).

Table 24: Moral/Personal or Professional Obligation

<u>Staff Member</u>	<u>Moral/Personal Obligation* or Professional Obligation</u>
GEOPL	Moral/Personal
BUSPL	Moral/Personal
BIOPL	Moral/Personal
SOCPL	Moral/Personal
MATHPL	Professional
ENGPL	Professional
HoS	Moral/Personal
DLT	Moral/Personal
DAQE	Professional
*All staff members that stated a moral/personal obligation also considered there to be a professional obligation to integrating and promoting sustainability	

In contrast to the BUSPL, the MATHPL explained that “I’ve not come at it from a sort of a moral point of view to get across sustainability, I’ve come from the point of view that it is important to society... I don’t present anything as if it’s my moral opinion. I present it as fact (GHLAPP5). Whereas the SOCPL explained that although there are discussions as to whether lecturers should be biased or not, “if there’s an agenda, if there’s a problem like inequality in the world then I’m gonna highlight that”, which also applies to sustainability (YHLAPP8). In 2009, Lourdel et al (p.3) stated that in education, “such neutrality is a myth”. A number of staff members also discussed the difficulties of promoting sustainability as small groups or individuals, including the GEOPL who stated that “there’s only so much you can do [without]... a wider culture that is supportive of the interest in sustainability” (BHLAPP6). The DLT also shared this perception but believed that “if the University was presented with the opportunity to say, have a five million pound grant if we could demonstrate to the funding council that we were embedding sustainability across the University, all of a sudden... everybody would do it” because they will have been incentivised (GHLAPP13).

4.8 The Integration of Sustainability Within the Curriculum

4.8.1 Current Integration Within Programmes

Figure 22 shows the researcher’s expected extent of integration within each of the six programmes, based on each of the staff member’s interpreted level of familiarity and understanding of sustainability, as well as the discussions that took place in each interview.

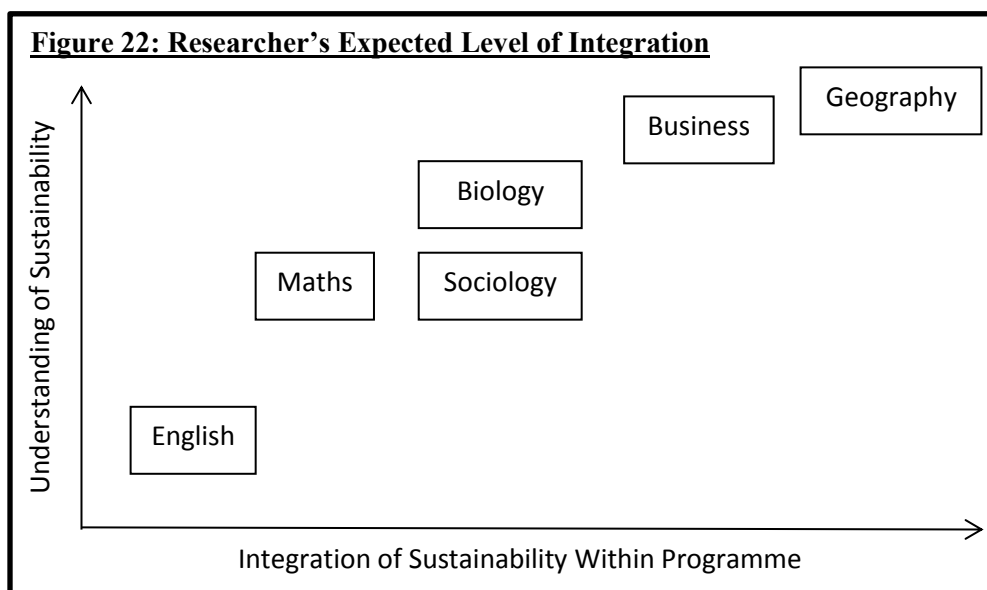
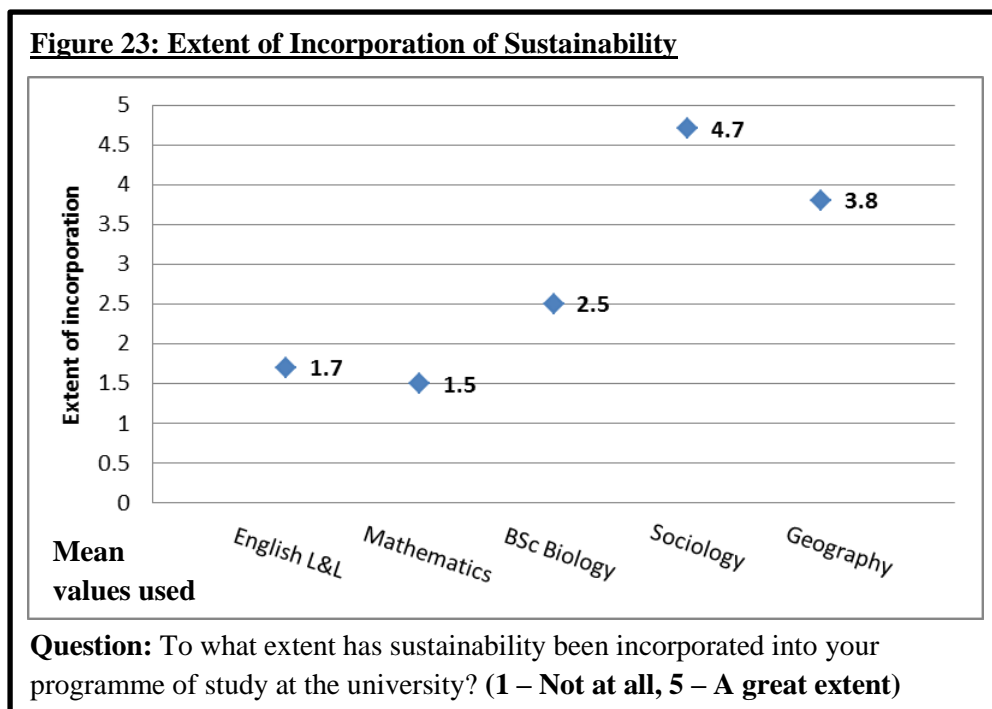


Figure 23 reflects the extent of incorporation of sustainability within each programme based on the student questionnaire findings. As expected, the Mathematics and English Language and Literature programmes had the least. Students perceived Sociology to incorporate the most sustainability-related content, although two of the three students indicated on their questionnaire that they had studied the third-year optional module Politics of Sustainability (Appendices 41 and 42), which could explain the higher than expected result. Unfortunately no completed questionnaires were received from Business Management and Entrepreneurship students, so no comparison could be made. Geography was also lower than expected, but a larger sample may have indicated different perceptions regarding the extent of incorporation in each programme.



4.8.1.1 Geography

The GEOPL explained that sustainability comes naturally to geography in terms of its integration, because of the discipline's focus on the relationships between people and the environment. They stated that "I think everyone would argue central to a geography curriculum at university level" (GHLAPP6). Sustainability is now "a HIGH-profile element" within the Geography programme featuring throughout modules, including some specific modules such as Sustainable Futures, and Climate Change, as well as core modules for first-years including People, Hazards and Resources (GHLAPP6). The GEOPL also explained that they don't feel sustainability needs to be integrated further in the Geography programme, but those that want more can take the Sustainability for Community and Business Masters programme (YHLAPP6).

4.8.1.2 Business Management and Entrepreneurship

Similar to the GEOPL, the BUSPL considered sustainability and the triple bottom line (seen in Appendix 38) to be central to the Business Management and Entrepreneurship programme. The BUSPL explained that they introduce first-year students very early on to the notions of sustainability, the triple bottom line, and the three-legged stool in The Essentials of Entrepreneurship module (YHLAPP9). Sustainability is discussed in various modules in the programme including the third-year module Sustainable Entrepreneurship, which focuses on the dynamics of sustainability in organisations (YHLLAPP9). The BUSPL states that the links to sustainability are overt in the modules that they teach, and that the links are made within other programmes at the Business School, although they might not be as overt (GHLAPP9).

4.8.1.3 BSc Biology

The BIOPL explained that sustainability is built into the BSc Biology programme, but stated that they “probably do have many modules that don’t specifically mention it” (YHLAPP10). One of the aims of the second-year module Research Methods is to expose students to the importance of ethical and sustainable development considerations when conducting research in any discipline. One student also identified a number of other modules that incorporated sustainability-related content (highlighted text in Appendix 39). The BIOPL explained that BSc Biology students choose almost all their modules, but “tend to go towards either the human biology or the animal side”, whereas some students keep their degree quite general (GHLAPP10). The BIOPL considered those who cover the animal side would be more aware of sustainability, as one student indicated that it is included but mainly in terms of animal conservation and welfare (highlighted text in Appendix 40). With regard to further integration, the BIOPL explained that a lot of the programme’s content could be linked to sustainability, but more could be done to make that link clearer to students (YHLAPP10).

4.8.1.4 Sociology

The SOCPL explained that sustainability is integrated into numerous core level modules for all Sociology students, with introductory modules including sustainability-related content in terms of transport, consumption, and politics as well as other related issues (BHLAPP8). Sustainability is discussed in various modules in all three years, including the second-year module The Shaping of Society which focuses on “theories of power [which are] INTEGRAL to understanding sustainability” (GHLAPP8). The programme also contains the third-year module Politics of Sustainability, which is a specialism problematizing sustainability. Although the SOCPL acknowledged that sociology is

inherently linked to sustainability, they explained that they don't always directly address the concept within their modules, stating that "maybe we could do more in making the links more explicit in terms of sustainability" (BHLAPP8).

4.8.1.5 Mathematics

The MATHPL stated that staff are encouraged to discuss the applications of mathematics with students throughout the Mathematics programme, so that the "students do see the role of mathematics in planning for the future" and solving real world problems (BHLAPP5). Numerous links are made between sustainability and finance in particular in relation to the applicability of mathematics, including sustainable economic models as well as stability and equilibrium points. The MATHPL also explained that some students conduct more sustainability-related projects in other optional modules on the programme, such as "climate change and mathematical modelling of weather patterns and things" (BHLAPP5). In terms of further integration within the programme, the MATHPL stated that they could make the link to sustainability clearer for students by addressing it more directly in lectures, as well as possibly indicating the inclusion of sustainability in module descriptors (YHLAPP5).

4.8.1.6 English Language and Literature

Unlike the other Programme Leaders, when asked what they thought about integrating sustainability into the English Language and Literature programme, the ENGPL stated "that wouldn't interest me at all" (BHLAPP7). They acknowledged the relevance of the topic, but explained that they wouldn't teach about a book because it raises issues related to sustainability, because literature reflects the issues that are crucial to society. The ENGPL referred to numerous books within the module Contemporary Literature that could be related to sustainability (such as Cormac McCarthy's *The Road*), but explained that "none of my students would miss the significance of this" so I don't need to highlight it to them (GHLAPP7). The ENGPL stated that they don't feel there should be any further inclusion of sustainability, it just depends on the literature (YHLAPP7).

4.8.2 Further Integration

4.8.2.1 The Place of Sustainability

In terms of the place of sustainability within the curriculum, the DLT stated that "people, in my experience are more comfortable with it being the preserve of geography or biology or something business" (YHLAPP13). Staff perceptions did vary regarding the extent of sustainability's inclusion within the curriculum, but all nine agreed that holistic thinking and collaboration across disciplinary and institutional boundaries is required. A

number of staff members emphasised the importance of interdisciplinarity in terms of embedding sustainability throughout university curricula (also highlighted in the literature review). The SOCPL stated that “there needs to be more interdisciplinary understanding” and collaboration between disciplines, in order to promote sustainability and engage students with the issue (GHLAPP8). Although the majority of staff felt very strongly about the integration of sustainability into all disciplines, including the BUSPL who stated that “it underpins everything” (GHLAPP9), the GEOPL declared that they wouldn’t want to underestimate the challenge in “disciplines where sustainability doesn’t have a natural home” (YHLAPP6). The BIOPL believed that the solution in disciplines where sustainability isn’t inherently linked, is to make “smaller connections and then you build up influence and momentum as you go along” (BHLAPP10).

The DLT explained that if students of all disciplines are to be given the opportunity to develop their critical thinking in the area of sustainability, then the only way to ensure that “is to make sure that there's some emphasis placed on it in the core of all programmes” (YHLAPP13), as it is within the Geography, Sociology, and Business Management and Entrepreneurship programmes. Then those who are particularly interested in the topic can take a specialised module in later years, rather than making it a requirement for all students throughout the years on their programme. This was the main concern expressed by all three senior support staff members, that if the integration of sustainability became a regulatory requirement for all disciplines with a tick box mechanism, then it may become a meaningless bolt-on approach rather than being a genuine engagement with staff (as seen in Table 2 - Sterling and Thomas, 2006). The DAQE explained that if a lecturer who doesn’t value sustainability is forced to teach about the topic, “they wouldn’t do it effectively... [and] would be more likely to breed and generate some of their own cynicism or disbelief”, which is then transmitted to students (BHLAPP11).

4.8.2.2 Engaging Staff

The DAQE believed that the best way forward is to ask staff to consider how sustainability as well as numerous other values and types of knowledge are reflected in their programmes, engaging them to search for and highlight opportunities where they could highlight sustainability, rather than specifying a checklist for staff (GHLAPP11). The DLT also shared this view describing it as “almost like a mapping exercise” (BHLAPP13), but also identified the potential of embedding attitudes and values through the Learning and Teaching Institute through staff development at the UoC. The HoS stated that “rather than trying to integrate anything specific into the curriculum, working with lecturers earlier on around the issues would possibly be more important”

(YHLAPP12). Staff development and continuing professional development courses have the potential to empower lecturers to consider the importance and relevance of sustainability, and how they could translate these issues in a language that their students would understand. All three senior support staff members shared this view, with the DAQE declaring that “it’s a slower burn, but ultimately, potentially a more meaningful burn” (YHLAPP11).

4.8.2.3 Employability

Another area that was identified to promote and improve sustainability as well as student employability is in the compulsory Work Based Learning (WBL) module, which provides students with opportunities to develop their skills, abilities and competences that are work-related (University of Chester, 2014b). The majority of staff members agreed that integrating sustainability and teaching about the topic within the curriculum enhances students’ employability. The HoS explained that WBL presents a great opportunity to provide every student with at least a small amount of training around sustainability because it is a compulsory module (GHLAPP12). The DLT also added that even asking students to find out what their WBL provider is doing about sustainability is a great way to build in the notion of sustainability.

4.8.2.4 Researcher’s Influence

The DLT also suggested that the best way forward with engaging staff could be to emulate the researcher’s method, stating that “the way you’ve done it has been probably much more valuable than anyone ticking a box because you’ve engaged in a conversation about it”, and broadened people’s minds about the importance and relevance of sustainability within their programmes (GHLAPP13). The DAQE explained that it’s “clearly a model which is quite productive”, and could have potential positive implications by shifting people’s perceptions (GHLAPP11).

4.9 Barriers to Integrating Sustainability

Of the numerous barriers that staff stated to integrating and promoting sustainability within university curricula, the main barrier identified by most staff was related to the senior management of an institution, and whether they consider sustainability as an important issue to engage with (significant barrier highlighted by Hanover Research, 2011). The GEOPL explained that the extent to which those at the highest level are genuinely committed to the issue, ultimately governs the capacity of an institution to develop in a sustainable manner (BHLAPP6). The second major barrier indicated by staff was the level of personal inclination of staff, as the BIOPL stated that “building up a

consistent approach across the university depends on maybe personal ideologies” (GHLAPP10), which the project revealed with staff perceptions varying in relation to the extent of sustainability’s integration. The most significant barrier related to the UoC was the conservativeness of the institution. The DLT explained that due to the UoC’s conservative nature, “things change very slowly here” (YHLAPP13). The less specific barriers include those highlighted in the literature review including the lack of expertise to teach about sustainability, the ambiguity over its interpretation, the lack of resources and time to make changes, and finally the curriculum is already overcrowded (barriers also identified by Sjerps-Jones, 2007; HEA, 2011; Hanover Research, 2011).

CHAPTER 5

DISCUSSION AND CONCLUSIONS

This chapter summarises and discusses the project's findings in relation to the research aims and objectives. The chapter also provides recommendations for practice, and implications for future research, as well as a critique of the project.

5.1 Summary of Findings

In relation to the research aims of this dissertation, the project's findings (both quantitative and qualitative) will be summarised using each of the eight research objectives outlined in chapter one.

Objective 1: To reveal staff and student perceptions and understandings of sustainability, including their conception and familiarity with the term, as well as their interest towards sustainability and its associated issues.

The GEOPL, BUSPL, and HoS were the most familiar with sustainability and embraced a broader and more holistic perception of sustainability, relating the themes of “intergenerational equity”, “interconnectedness”, and “the three pillars of sustainability” with the concept. The SOCPL, MATHPL and ENGPL were least familiar and adopted a narrower view of the concept, focusing on the environmental dimension highlighting “resources” and “recycling” as the main themes.

The questionnaire results revealed that all 19 students considered themselves to have at least an average level of familiarity. “Recycling” was found to be the most associated theme to sustainability, with the environmental dimension of the notion being most recognised by students. In terms of interest, 13 students declared themselves as moderately if not very interested in the subject area, with 18 students holding a positive attitude towards sustainability.

Objective 2: To examine variations in staff and student perceptions and understandings of sustainability, in relation to differing educational backgrounds and disciplines.

The GEOPL, BUSPL, and HoS were the most familiar and interested in sustainability, whereas the SOCPL, MATHPL, and ENGPL were the least familiar, with the ENGPL being the least interested of all staff members.

Geography students were the most familiar of the respondents, with Mathematics students being least familiar, suggesting that they have had the least exposure to the concept of sustainability.

Objective 3: To determine the main factors influencing student perceptions and attitudes towards sustainability, and how these contribute to the sustainability of student lifestyles.

Only five students said they often consider sustainability during their everyday choices, suggesting that it is not a main priority in students' thinking. Despite the familiarity and interest claimed by students towards sustainability, the majority (13) were uncertain as to whether or not they had a sustainable lifestyle. The main influences on student perceptions included their "university education" (12) as well as the "media" (9).

Objective 4: To ascertain which sustainable behaviours students engage in, including the motivators, barriers, and deterrents for doing so.

The sustainable behaviour most engaged in by students was "recycling" (18), as well as "turn off unused appliances" (17) and "use energy saving light bulbs" (16). The main reasons students engaged in sustainable behaviour was to "protect the planet/environment" (7) and "save money on energy bills" (6), with the main deterrents referring to financial constraints and concerns (10), as well as convenience (8).

Objective 5: To determine to what extent sustainability is currently integrated into the University of Chester's curriculum.

The extent of sustainability's integration across the curriculum varied between disciplines. The findings from the small sample of students suggested that the topic was least integrated into Mathematics and English Language and Literature, with it being most integrated into Sociology and Geography.

Objective 6: To reveal staff and student perceptions of the importance and relevance of sustainability within their respective disciplines and curricula, as well its integration across the entire university curriculum.

All staff members acknowledged the importance and relevance of sustainability within their respective disciplines, as well as across the entire curriculum, although staff perceptions varied considerably in terms of the extent to which it should be integrated and how best to achieve it successfully.

The findings show that 14 students believe that sustainability should be integrated into all university courses, with 11 wanting to learn more about the topic. However students were

not certain about the benefits to students' employability by integrating sustainability into the curriculum.

Objective 7: To uncover staff perceptions regarding the responsibilities and obligations of the University of Chester and its staff to include and promote sustainability education.

The findings revealed that the UoC does consider itself responsible for promoting and improving both sustainability and student's employability, although staff perceptions varied in terms of the progress the UoC is making with regards to its sustainability agenda. The majority of staff members were also found to possess a moral and personal obligation to promote and include sustainability, as well as acknowledging their professional responsibilities.

Objective 8: To identify the main barriers perceived by staff to promoting sustainability at university level and integrating it into university curricula.

The main specific barriers identified by staff members included the uptake and commitment from senior management of an institution, as well as the level of personal inclination from staff to include sustainability, due to differing personal ideologies. The major barrier identified in terms of the UoC was the conservative nature of the institution, resulting in slow development and progress in terms of sustainability.

5.2 Overall Conclusions

Overall, the project has been successful in achieving its research aims, although the majority of the data regarding student perceptions can only be used as an outline due to the small sample size. The project has revealed that the majority of both staff and students now have at least a basic understanding and awareness of sustainability, as well as having developed positive attitudes and perceptions towards the concept as it has risen to prominence. The findings indicated that students do engage with numerous sustainable behaviours, even the topic hasn't become a key priority for them in their everyday thinking. The results also indicated that universities have a heavy influence on student attitudes and perceptions. Although sustainability-related content is being increasingly integrated within university curricula due to increasing demand from students, the extent of its integration varies significantly between disciplines due to staff perceptions. Despite the assumed responsibility of the UoC to promote and embed sustainability within all of its activities, a number of barriers have prevented significant progress.

5.3 Recommendations for Practice

Based on the findings of this project, the following suggestions are offered regarding the integration of sustainability into university curricula:

- Programme Leaders and lecturing staff should be encouraged to consider how sustainability is/could be reflected in their programmes and teaching activities, and to highlight opportunities where links could be made to sustainability.
- It is suggested that sustainability is integrated and embedded into all core programmes in first-year courses and disciplines, so that students are able to engage with and develop their critical skills around this area.
- Practitioners are recommended to make the links more explicit within modules where the links can be made, as well as making it clear to students how sustainability is relevant to, and can be applied to that specific discipline.
- In modules where sustainability is incorporated and discussed within, the module descriptor should contain specific reference to sustainability and how it features within the module.
- It is recommended that sustainability is integrated into the Work Based Learning module, so that all students are provided with the opportunity to engage with the issue and develop their sustainability literacy skills and employability within the area.
- Staff development and continuing professional development courses should be utilised to engage staff with the topic and issues of sustainability and develop their understanding, so that they can then integrate sustainability-related content into their teaching and learning practices.

5.4 Implications for Future Research

Although this project was particularly successful in revealing staff perceptions of sustainability and its integration within university curricula, the small sample of students did not provide accurate and conclusive findings. Therefore further research should be conducted investigating the perceptions of students of sustainability and its integration within university curricula. It is also important that perceptions from different institutions in the UK as well as the world to discover how perceptions vary and the factors influencing those perceptions. In terms of future research at the UoC, further investigation should be conducted including other disciplines and staff members, as well as including the senior management staff in the research to reveal their perceptions on the matter, as well as monitoring of the potential impacts of this project on the UoC's practices. Further research should also be conducted with staff from the Learning and

Teaching Institute, and also Work Based Learning staff members to discover their views on their responsibilities and the potential of the suggested recommendations.

5.5 Critique of the Project

Although the project was a success in revealing and discussing staff perceptions, due to technical and communication difficulties, only a small sample of students was included in the project which was not enough to provide conclusive evidence regarding student perceptions. Another issue was that no completed questionnaires were received from Business Management and Entrepreneurship students. Therefore the Programme Leader's perceptions of sustainability's integration within their programme could not be compared to the perceptions of their students. But despite these limitations the project was a success overall and may prove beneficial to the UoC.

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Appendices

Appendix 1: Skills and Knowledge of Sustainability Literacy

The HEA's (2006. p.6) set of skills and knowledge required for an action-oriented, sustainability literate graduate include:

- an appreciation of the importance of environmental, social, political and economic contexts for each discipline;
- a broad and balanced foundation knowledge of sustainable development, its key principles and the main debate within them, including its contested and expanding boundaries;
- problem-solving skills in a non-reductionist manner for highly complex real-life problems;
- ability to think creatively and holistically and to make critical judgements;
- ability to develop a high-level of self-reflection (both personal and professional);
- ability to identify, understand, evaluate and adopt values conducive to sustainability;
- ability to bridge the gap between theory and practice; in sustainable development, only transformational action counts;
- ability to practice creatively in inter-disciplinary teams; and
- ability to initiate and manage change.

Appendix 2: How to Promote and Integrate Sustainability within University

Activities and Curricula

In 2009, the Macquarie University produced a booklet as a collaborative effort which proposes the view that universities have a special role to play in educating for a sustainable future because of the significant influence they exert on the development of the leaders and decision-makers of tomorrow. The booklet is designed to encourage discourse within the academic community about how universities and staff can promote and integrate sustainability within their activities and curricula.

Ten Ways to Incorporate Sustainability into your Curriculum (Petocz, 2006. p.18-19)

1. Prepare *yourself* by reading and thinking about sustainability in the context of learning and teaching.
2. Consider focusing on your discipline and the specific unit that you are teaching in the broadest way, so that ideas of sustainability can be incorporated naturally.
3. Provide opportunity for your students to discuss their *discipline* in a holistic way and to become aware of the range of ways in which their fellow students think about it.
4. Provide opportunities for students to make personal and professional links with the material that they are studying.
5. Encourage your students towards the broadest views of your discipline with assessment that goes beyond the technical aspects of the subject.
6. Incorporate ideas about sustainability into lecture examples, so that it becomes natural to talk about sustainability.
7. Incorporate aspects of sustainability into assessment tasks, and give students opportunity to explore them, particularly in groups.
8. Ask students, in class or as part of an assignment, to make a link between the topic they are currently studying and the notion of sustainability.
9. Explore with students the professional obligations and advantages of being aware of sustainability.
10. In your discussion of the concept, situate sustainability as one of a range of professional skills and dispositions that students acquire during a university education, giving them the advantages and responsibilities of an educated person in the 21st century.

Some Practical Tips on Incorporating Sustainability in your Courses or Program**(Chen, 2006. p.29)**

1. Decide the extent of changes in the curriculum you want to make.
2. Check out the resources available – it varies considerably depending on the topic and the extent of changes.
3. Consider new teaching methods, especially ones that encourage the students to think more deeply about the issues.
4. Look at other examples of good teaching practice elsewhere in the university or outside – many course syllabi and other articles are now available on the Internet.
5. Keep up to date on sustainability teaching – the field is fast developing and so terms and issues change rapidly.
6. Join or look at discussion groups on teaching sustainability in your field.
7. Be aware that you may need to educate or convince your students about the value of looking at sustainability for business.
8. Be aware that you may also need to educate or convince your colleagues as well.
9. Be willing to change your own views and how you teach your courses in order to take account of sustainability issues.
10. Establish a dialogue with businesses and read the business press to identify issues that are of current concern to businesses - they can also help in all the above.

What We Can Do (Techera, 2006. p.31-32)

1. Meet with colleagues in our Departments and programmes and talk about what sustainability means to us.
2. Identify where sustainability is already being taught within our programmes and Units and gaps which need to be filled.
3. Consider ideas as to how sustainability can be embedded both procedurally and substantively. For example, establishing new programmes and Units, strengthening or introducing elements of sustainability in existing courses.
4. Explore sustainability case studies for analysis. For example, socially sustainable building design, environmental ethics and philosophy, sustainable development in international politics, environmental law and policy.
5. Identify texts and course materials that address sustainability issues and build these into our Units.

Questionnaire: Student and Staff Perceptions of Sustainability and its Integration into University Curricula

(Please fill in text boxes and click appropriate checkboxes)

1. Programme of study:

2. Gender:

Male

Female

3. How would you rate your level of familiarity with the term sustainability?

Not at all familiar 1 2 3 4 5 Very familiar

4. How would you rate your level of interest towards sustainability and its associated issues?

Not at all interested 1 2 3 4 5 Very interested

5. Please write up to five keywords, concepts, ideas, or actions that come to mind when you think about sustainability.

6. Which of the following best describes your personal attitude towards sustainability?

I think it's a waste of time and effort I'm not really bothered

It's OK if others want to do it It's a good thing I am a passionate advocate

7. What is your accommodation type/status?

Living at family home and commute Halls of residence

University-managed house or flat Private accommodation Other

Other (please specify):

8. Do you consider yourself to have a sustainable lifestyle?Yes No Unsure **9. How often do you consider sustainability when making day-to-day choices?**

Never

1 2 3 4 5

Always

10. Which of the following sustainable behaviours do you engage in? Take short showers rather than baths Use public transport Recycle all I can Walk or cycle rather than drive Turn off unused appliances Buy local or organic food Use energy saving light bulbs Buy Fairtrade products Use blankets or warm clothes instead
of turning heating on/up Use reusable shopping bags Other (please specify):**11. If you do engage in sustainable behaviour, what are your main reasons for doing so?****12. What are your reasons for not engaging in/more in sustainable behaviour?****13. Which of the following has most influenced your perception and attitude towards sustainability?**Family Friends University education Previous education Media Employment Other

Other (please specify):

14. Were you taught about sustainability before you came to study at the university?

Yes

No

Unsure

15. To what extent has sustainability been incorporated into your programme of study at the university?

Not at all

1

2

3

4

5

A great extent

16. If your programme of study has incorporated sustainability, please name the module which has included the most sustainability content throughout your university studies.

Please indicate the extent to which you agree or disagree with the following statements

17. Sustainability is something which all university courses should actively incorporate and promote.

Strongly Disagree

1

2

3

4

5

Strongly Agree

18. Sustainability is something which I would like to learn about.

Strongly Disagree

1

2

3

4

5

Strongly Agree

19. Universities should incorporate sustainability into their curricula in order to enhance student employability.

Strongly Disagree

1

2

3

4

5

Strongly Agree

20. Any other comments?

Thank you very much for completing the Questionnaire!

Please email the completed word document to 1002919@chester.ac.uk,
or simply reply to sender as the replies will be directed to me.

Appendix 4: CD Containing Complete Interview Transcripts and the Entire Questionnaire Data Set

This CD contains the complete transcript of each interview with the nine staff members as Word documents. The CD also contains the entire questionnaire data set, including the coded quantitative data as well as the qualitative responses.

Appendix 5: MATHPL Interview Transcript

Interview Transcript: Programme Leader of Mathematics

The interview was conducted in the participant's office at the University of Chester on 25th June 2014, and comprised of one Mathematics Programme Leader and a single moderator.

Before the recording began, the moderator welcomed the participant and briefly explained the nature of the study. The moderator also delivered a consent form to the participant and gained permission to record the interview.

(Recording began)

Moderator: Erm, so first of all thank you very much for agreeing to this, erm and for participating in my project. Erm, it won't take too long so don't worry. Erm, so to start with, how well do you understand the term sustainability?

Participant: Erm, to ME... it means, err... really prolonged or extra life in things, so in other words instead of, getting rid of something, using something new, reusing.

Moderator: Yeah.

Participant: Err, making more use of resources in terms of efficiency so you get more out of them than, maybe otherwise you would.

Moderator: Yeah. So I'm guessing you're used to the erm, the Brundtland definition, of like meeting the needs of future generations and...

Participant: Err... no I'm not (laughter).

Moderator: Oh you're not, alright. Well that's basically erm... sustainability comes from the notion of sustainable development, erm, which is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. So that's where it comes from. Erm, but I mean all the definitions of it and understandings are about the ability to sustain or the capacity to endure. So that's the basic meaning. Erm, so how important do you consider the topic of sustainability to be in the 21st century?

Participant: Err, I think it's extremely important, because resources are becoming finite.

Moderator: Yeah. And you think awareness of this is becoming, erm, present enough that there's the urgent need [to change?]

Participant: [There is] greater awareness yeah.

Moderator: Yeah. Ok, erm... so among academics it is widely accepted now that moving towards the goal of a sustainable future requires fundamental changes in human attitudes and behaviour. Erm, so therefore progress in this direction is critically dependent on education and public awareness. Erm, how do you feel about its place at university level, and its integration into the curricula, and more specifically the Maths Department?

Participant: Erm, it is important because that's the world that our students are gonna be going out into so they need to be aware of it.

Moderator: Yeah.

Participant: Erm... in terms of the Maths curricula, I mean... in terms of using online resources etc, there is a sort of, an element of demonstrating that you practice what you preach.

Moderator: Mhmm.

Participant: And using online resources rather than lots of, you know throw away stuff, giving out hard copies and things.

Moderator: Mm.

Participant: Erm... in terms of within the curricula, students do look at applications of mathematics and mathematical modelling for example so, we've had students look at projects involving erm, looking at climate change and mathematical modelling of weather patterns and things. Not all students do that, that's [just what some students do].

Moderator: [That's optional is it yeah?].

Participant: (Nods). Err, but erm, these applications do filter into the curriculum and... a number of research activities within the department feed into it as well, for example, erm, my area of research includes mathematical ecology.

Moderator: Mm.

Participant: Erm, which... comes into some of the things that I teach to students both at undergraduate and postgraduate level.

Moderator: Mm.

Participant: Erm, so the students do see the role of mathematics in planning for the future.

Moderator: Right. Would you say that's where your understanding of sustainability has come from? Your background and...

Participant: Erm... my understanding erm... yeah some of my understanding comes from there.

Moderator: Mm.

Participant: Erm, some of my (brief laughter) understanding also probably comes from my age and how I've seen things change.

Moderator: Mm.

Participant: So in terms of manufacturing processes.

Moderator: Yeah.

Participant: Err, not necessarily for the better, so I mean, to give you an example, err I had a dishwasher that err, family had for nineteen years.

Moderator: Mm.

Participant: And it kept going because it was manufactured in a way that, with a bit of skill (laughter) and a bit of luck, it could be repaired.

Moderator: Yeah.

Participant: Whereas now, erm, new products that are bought are all moulded plastic that you can't get into if something breaks, if the same part breaks on a new device.

Moderator: Yeah.

Participant: They tell us that, oh well that device now goes in the bin and you get a new one now.

Moderator: Mhmm.

Participant: I have no idea whether, when that gets taken away by the company as an old one whether they take it for recycling or not, but to me that seems a bit strange that, what could be fixed years ago now goes in the bin.

Moderator: Yeah. Seems very wasteful doesn't it?

Participant: (Nods).

Moderator: Erm, so you mentioned ecology before, erm, is that what you most associate sustainability with, or do you think it covers a range of aspects and issues?

Participant: Well I think it covers a range of aspects and issues, but I think ecology is actually a wide ranging term, in terms of erm... a variety of species as well as the human species, and the whole ecology of the planet.

Moderator: Yeah. It's just that I mean all of the models of sustainability they look at the balance between the environmental, social and economic aspects. Erm, but most people associate environmental directly with it

Participant: Mhmm.

Moderator: Because that's what it all spans from.

Participant: Yeah.

Moderator: But the other two are often overlooked. So would you agree that education is the most effective means society possesses for confronting the challenges of the future?

Participant: Err, well the... the next generation of people who want to push this forward, need to know why it's important.

Moderator: Mhmm.

Participant: It's important to educate them now, so yeah, education is very important.

Moderator: Ok. Erm, ok so the role of higher education is especially pronounced as students are being prepared at this level to enter the labour market and emerge erm, with the knowledge and skills required to achieve a sustainable future, in a rapidly changing and less predictable global system as we've just mentioned there. Erm, so, as you said it's essential for students the impact of their lifestyles and everyday choices, and to realise the importance of it as well to go forward.

Participant: (Nods).

Moderator: Erm, so how would you feel... you said it's optional within the Maths [Department to].

Participant: [That particular], that particular project was optional yeah.

Moderator: Yeah.

Participant: Erm... but erm, there are throughout the curricula we try where we're introducing a new topic in Mathematics, err staff are encouraged to spend some time talking to students about where this particular area of mathematics can be applied in the real world in terms of solving problems.

Moderator: Mhmm.

Participant: Erm... and a number of those things do come down to sustainability, so for example there's some mathematics that's obviously used in the finance sector.

Moderator: Yeah.

Participant: I think different subjects will incorporate it at different levels in... and to differing amounts.

Moderator: Yeah.

Participant: Erm... and it has to be done in a carefully thought-out way because if it just, if it looks as if it's just bolted-on as some sort of disjoint thing.

Moderator: Mm.

Participant: Then it doesn't really work, and the students will recognise if it's integrated.

Moderator: Yeah.

Participant: But at the SAME TIME from the point you've just made about those Maths students... it needs to be integrated, but it also needs to be integrated in a way that is, sort of...

Moderator: Engaging?

Participant: Subtly signposted to the students so they know it's there.

Moderator: Yeah. Ok, erm, so in terms of obligations as a university lecturer and Programme Leader, erm, do you feel as though you have a moral and personal obligation to include sustainability, or is it more of a professional obligation about meeting the demands and interests of employers and students?

Participant: Erm... I must admit I've come at things from a sort of erm, a professional sort of, err, view that it's my obligation to, let students know... not just to give them the skillset for future careers and future life.

Moderator: Mm.

Participant: But to equip them, err, with the skillset so that they can see where it's applied, so they don't just have a set of skills they know where they can use them now, err, so I've not come at it from a sort of a moral point of view to get across sustainability, I've come from the point of view that it is important to society.

Moderator: Mm.

Participant: Err... because I tell them that, it is crucial to erm, biologists and ecologists, to know whether a species is gonna survive.

Moderator: Mm.

Participant: So they can identify whether things need to be, brought in to save them so from that point of view, erm... I don't present anything as if it's my moral opinion. I present it as fact that, there are people out there that do use this for this purpose.

Moderator: Yeah. So you're aware of the need and importance of it and you feel it should be in there then?

Participant: Mhmm (nods in agreement).

Moderator: Yeah. Ok, so as I was saying about the, the questionnaires I received from your students, erm, both of them said that they weren't that interested in sustainability but they do acknowledge it as a good thing, and something that needs to be done.

Participant: (Laughter). Right.

Participant: Because... when you think about it it's, well if we're measuring something we need to collect data and then find some way of analysing it.

Moderator: Yeah.

Participant: So actually, a mathematician, would be the natural sort of choice for a company to employ into that role to sort of, be the person in the company that looks at how they measure those three aspects.

Moderator: Yeah. I think that would be really interesting because you get a load of data and it's like how, what can we put into what, greenhouse emissions, water footprint, stuff like that and how you can actually make use of it.

Participant: Mhmm.

Moderator: Erm... so what do feel are the main barriers to integrating sustainability into university curricula, and your department as well?

Participant: Erm... the main barriers, erm... well I think we have to be... I think we have to be clear in joining the dots like I said earlier.

Moderator: Yeah.

Participant: It's there, but we just need to make it clearer to students.

Moderator: Mhmm.

Participant: Also, erm... it's... one thing that could be done is if there's something on a module descriptor for example.

Moderator: Mm.

Participant: So when a new tutor comes in and picks up a module descriptor and looks and learning outcomes and aims, so, a new tutor will see something written down that says sustainability, an example of where they see is here and then it reminds them to maybe, put it into classes.

Moderator: Mm.

Participant: Erm, in terms of barriers, I suppose with all things on curricula is erm, you need to think about how much time you devote to it, and you want, you need to do it in a way that you don't end up losing something else out of the curriculum.

Moderator: Yeah.

Participant: Although I suspect, I suspect we can avoid that by, when we talk about the applicability we talk about the sustainability at the same time.

Moderator: Mm.

Participant: So, that probably means that you, unless students are doing specific projects of something, erm, you might not see in the students' assessment, their knowledge of sustainability coming out.

Moderator: Mm.

Participant: Erm, but hopefully it will be, in their, in their memory of what's been mentioned in lectures.

Moderator: Mm.

Participant: Erm, to help them with their employability.

Moderator: Yeah.

Appendix 6: GEOPL Interview Transcript

Interview Transcript: Programme Leader of Geography

The interview was conducted in the participant's office at the University of Chester on 30th June 2014, and comprised of one Geography Programme Leader and a single moderator.

Before the recording began, the moderator welcomed the participant and briefly explained the nature of the study. The moderator also delivered a consent form to the participant and gained permission to record the interview.

(Recording began)

Moderator: Erm, so first of all, thank you very much for agreeing to this and for participating in my project.

Participant: Mhmm.

Moderator: Shouldn't take too long. Erm, so to start with, how well do you understand the term sustainability?

Participant: Reasonably well I think.

Moderator: Ok. So, what would, how would you define it in your own opinion?

Participant: Mhmm. Err, well sustainability is, fundamentally, erm, connected I suppose to the often used Brundtland definition.

Moderator: Mm.

Participant: And the variations on that.

Moderator: Yeah.

Participant: Which are, which is primarily about, err... strategies that will enable, everyone in the world at this present time.

Moderator: Mhmm.

Participant: Err, to live to, err, a decent standard without compromising the opportunities for those in the future, err, to do exactly the same.

Moderator: Yeah.

Participant: Err, so it's very much about erm, equity between generations.

Moderator: Mhmm.

Participant: Intergenerational equity is an important notion I think.

Moderator: Yeah.

Participant: When it comes to sustainability.

Moderator: Mm.

Participant: Erm, it's very much an idea that is concerned with the limits of the planet.

Moderator: Yeah.

Participant: That we are situated within.

Moderator: Mm.

Participant: Erm, working within those limits today and tomorrow.

Moderator: Yeah. So would you said you identify most with the Brundtland definition and, the definitions that have spanned off from that?

Participant: Yeah I think so.

Moderator: Yeah.

Participant: Yeah I think so yeah.

Moderator: Erm, so where has your understanding come from, how have you developed it?

Participant: Hmm... I guess primarily it's come from my studies.

Moderator: Mhmm.

Participant: Erm... I guess at the university level, I don't think so much at school and college.

Moderator: Right.

Participant: Though obviously when I was at school and college it was twenty years or so ago, so, err, sustainability, wasn't so high on the agenda then as it is now.

Moderator: Mm.

Participant: Erm, but I think my understanding began to develop at university level.

Moderator: Yeah.

Participant: Particularly in relation to natural resources, we had some really good courses on natural resources and, erm, the limits that we have, global limits that we have. But probably my real understanding has developed since I became, erm, a teacher, err, and, well partly teaching these issues but, no not primarily that, more working with people who do teach these issues.

Moderator: Yeah.

Participant: And as the, sustainability, sustainable development has grown in significance.

Moderator: Mm.

Participant: And has become central to, I think everyone would argue central to a geography curriculum at university level.

Moderator: Yeah.

Participant: Erm, at the same time my understanding of the topic has increased as well, you know you're exposed to it all of the time.

Moderator: Yeah.

Participant: You work with people who teach it and you also see an awful lot of literature connected to it.

Moderator: Yeah, and there's media influences and all sorts.

Participant: Yeah, yeah, they are there, they are in the mix, erm... yeah, and of course you use those media sources in part, err, to develop your views and use them partly for teaching, but I think, I think the educational aspect is the most dominant.

Moderator: Yeah.

Participant: For me, I think so.

Moderator: Yeah. Ok, erm, is there a particular aspect that you associate with sustainability, or do you think it just covers a wide range of concepts and issues?

Participant: Erm, it does, it does cover a wide range of issues of course.

Moderator: Yeah yeah.

Participant: Erm, and I do recognise that that is the case, but at a personal level, erm, my heart and my head almost always jump to the environmental aspects of sustainability.

Moderator: Mhmm.

Participant: Erm, when the issue is raised, and that, to an extent defines my, teaching and the influence I suppose that I have over the programme, but I'm sure more of that in question is to follow.

Moderator: Mhmm.

Participant: Erm, but more than anything in my, day-to-day life choices.

Moderator: Mm.

Participant: Err... living in as green a manner as possible.

Moderator: Yeah.

Participant: That's a very loose expression but, is, nevertheless hugely important to me.

Moderator: Mm.

Participant: And has been for a long time.

Moderator: Yeah, well I mean a lot of the students and staff I've spoke to, straight away the environment concept comes out.

Participant: Mm.

Moderator: 'Cause that's most directly linked.

Participant: Yeah, yeah.

Moderator: But then you understand that there's obviously, a whole array of issues, that it's a balance between them all.

Participant: There is. I completely accept that and understand that, but at the same time, the limit is an environmental one.

Moderator: Mhmm.

Participant: That ultimately, the limit is an environmental one in my view.

Moderator: Yeah. Ok, erm, how important do you consider the topic of sustainability to be in the 21st century?

Participant: Well it's hard to think of anything more important.

Moderator: Mhmm, ok.

Participant: That would be my answer to that (laughter).

Moderator: Yeah. Erm, any particular pushing issues that are most, urgent?

Participant: Are we talking [about?].

Moderator: [In terms] of sustainability in general, in your opinion.

Participant: Mhmm. Well, err, climate change.

Moderator: Yeah.

Participant: Underpins an awful lot.

Moderator: Mm.

Participant: Of the sustainability debate.

Participant: But its status and profile might, might vary but for us, it's pretty central to what we deliver.

Moderator: Mm.

Participant: Erm, and in writing... the, erm, aims of the Single Honours Geography programme, I have made sure that sustainable development as an expression is in there.

Moderator: Mm.

Participant: There's a relatively small number of words that encapsulate what we're trying to do here, sustainable development, is in that mix.

Moderator: Mm.

Participant: And that's very much something that, erm, I've made sure has been there, for such a long time now.

Moderator: Mm.

Participant: So it's THERE at a programme level and obviously that's reflected in, in some specific modules.

Moderator: Yeah.

Participant: And what we teach. Erm, at a wider university level the challenge is greater, I don't know if perhaps I'm jumping onto [subsequent questions].

Moderator: [No no that's fine] carry on yeah.

Participant: Erm, the challenge is obviously greater.

Moderator: Mhmm.

Participant: Outside disciplines where sustainability doesn't have a natural home.

Moderator: Yeah.

Participant: Erm, but, erm, that in no way diminishes the importance of having it there.

Moderator: Yeah.

Participant: Erm, and as I'm sure you know from reading the literature around this topic.

Moderator: Mhmm.

Participant: There is many a good book, and a lot of good literature out there which has worked on providing case studies and examples and strategies that can be employed.

Moderator: Yeah.

Participant: Erm, across disciplines, across a wide range of disciplines.

Moderator: Mhmm. Ok so, in terms of achieving or progressing towards a sustainable future, do you think that education is the most important aspect? 'Cause from my erm, from my reading I've come up with a quote, erm, the global sustainability challenge we face is first and foremost one of the mind, perception and values, hence it is a challenge to those institutions presuming to shape the minds, perceptions and values.

Participant: I agree with that quote.

Moderator: Mm.

Participant: Yeah I think it's a good one. Erm, is education the most important thing...

Moderator: Well it's all about awareness and, educating people about the importance and relevance.

Participant: Err, it's a moral and personal thing.

Moderator: Mm.

Participant: Erm, yeah, and I, no reservations about that. I have come across people who completely disagree with that.

Moderator: Mm.

Participant: Erm, and of course I respect that view.

Moderator: Mm.

Participant: Err, but you have to, erm, you have to stay true to your principles.

Moderator: Yeah, I think that's great.

Participant: Mm.

Moderator: I mean in terms of that, it all depends on whether the students see the relevance of sustainability within their departments.

Participant: Mm.

Moderator: And whether the staff feel that they should integrate it.

Participant: Mm.

Moderator: Erm...

Participant: Yeah, as an individual there's only so much you can do.

Moderator: Yeah.

Participant: Erm, as an individual lecturer, as a junior lecturer for example, erm, if you start to do things contrary to more experienced colleagues and, contrary to, erm, the traditions in the department, you're probably not gonna get very far and you're probably gonna give yourself a very hard time.

Moderator: Yeah.

Participant: Erm, but, erm, if there is a wider culture that is supportive of the interest in sustainability, erm, and the Programme Leader, and Programme Leaders are critical.

Moderator: Mm.

Participant: Very influential people in a way, erm, then you've got a chance. Heads of Department as well.

Moderator: Yeah.

Participant: Very very influential, and I'm banging on the table which is probably affecting the recording (laughter).

Moderator: (Laughter). No that's fine.

Participant: I hope not (laughter).

Moderator: I mean, I brought that up because I've already spoken to the Maths Department.

Participant: Right.

Moderator: And it was very interesting to find out that they do include sustainability within their curricula.

Participant: Yeah.

Moderator: Because most of the students I asked said they didn't even know what sustainably living meant.

Participant: Mm mm.

Moderator: Erm, even though when they said what activities they do, they come across as quite sustainable with what they do.

Participant: Mm.

Moderator: But they just don't understand the link between them.

Participant: Yeah yeah.

Moderator: Which is quite interesting.

Participant: Yeah sometimes that's a problem. Slippery term really.

Moderator: Mm.

Participant: That people aren't... people are living sustainably according to one, set of ideas or terms, yet at the same time, they may not fully recognise that or they may not think that they're working at the same definition as somebody else, or the researcher in this case.

Moderator: Mm. Well I mean, looking at definitions there is no accepted one.

Participant: No.

Moderator: Obviously the Brundtland one comes out, 'cause that's where the notion of sustainability comes from.

Participant: Mm.

Moderator: Erm, but I mean all the definitions look around the capacity to endure, and the ability to sustain.

Participant: Mm.

Moderator: But that's as broad as you can get.

Participant: Mm.

Moderator: Erm, do you think it should be integrated more within the Geography curricula, or do you think it's a fine balance?

Participant: Erm...

Moderator: 'Cause obviously it's hard, with obviously an overcrowded curricula already to introduce it.

Participant: Mm. I don't think there's a need within our context for more.

Moderator: Mm.

Participant: Erm, and for those who want more I suppose they can take the Masters programme.

Moderator: Yeah.

Participant: Which very much draws on our strengths in that area.

Moderator: Yeah.

Participant: So no I don't think in our context no.

Moderator: Ok.

Participant: Possibly in another context but that's hard for me to comment on.

Moderator: No I understand, I just thought I'd ask because looking at it, erm, at first glance you look, Sustainable Futures, to someone who doesn't understand it they'll think well that's it.

Participant: Mm.

Participant: Yeah. Erm...

Moderator: 'Cause obviously, relevance comes up, erm.

Participant: Yeah.

Moderator: Another main one that, is the link to employability, whether students see it relevant going forwards.

Participant: Yeah.

Moderator: And their career path and whether they see it relevant to their employability skills.

Participant: Mm. I, yeah, well maybe again across disciplines they may not but I think they do in ours. Although there was that HEA survey on this, fairly recently. Have you come across that one? That showed quite high.

Moderator: Yeah.

Participant: Support I think for, sustainability in the curriculum. And recognition of the connections to employability.

Moderator: Yeah.

Participant: Have you come across it? I can't remember...

Moderator: Yeah, I've come across all sorts.

Participant: I'm sure you have yeah.

Moderator: There's some that say, very positive about sustainability and its inclusion.

Participant: Mm.

Moderator: And how its gonna enhance employability.

Participant: Yeah.

Moderator: Then another report, same period of time comes out with staff don't see the relevance, they don't feel like they've got the institutional drive.

Participant: Yeah, [well that's].

Moderator: [Or even] the room to put it in.

Participant: Yeah. Well I mean that's it, in terms of barriers the... there the two other things that are in my mind really (laughter). There's personal inclination.

Moderator: Mhmm.

Participant: Err, which I suspect, is relatively low for a lot of people.

Moderator: Mm.

Participant: And the institutional pressure.

Moderator: Yeah.

Participant: Err, to do so. Erm, and let's make no bones about it, that's, the MOST important factor of all.

Moderator: Mm.

Participant: When it comes to developing a sustainable university, and not just the curricula now but, in all facets of its activities. The extent to which at the highest level at, governor stroke senior management level.

Moderator: Mm.

Participant: The extent to which they are committed, genuinely committed to, erm, developing a university in a more sustainable manner.

Moderator: Mm.

Participant: That's the most important factor of all.

Moderator: Yeah.

Participant: And it cuts across all aspects of the university.

Moderator: Mm.

Participant: Erm, and in some cases that will be a barrier.

Moderator: Mm.

Participant: Erm, it's often been a barrier here.

Moderator: Yeah.

Participant: Erm... it's a little different now.

Moderator: Mm.

Appendix 7: ENGPL Interview Transcript

Interview Transcript: Programme Leader of English Language and Literature

The interview was conducted in the participant's office at the University of Chester on 3rd July 2014, and comprised of one English Language and Literature Programme Leader and a single moderator.

Before the recording began, the moderator welcomed the participant and briefly explained the nature of the study. The moderator also delivered a consent form to the participant and gained permission to record the interview.

(Recording began)

Moderator: Ok, so first of all, thank you very much for agreeing to this [and for participating] in my project.

Participant: [It's a pleasure].

Moderator: Erm, so to start with, how well do you understand the term sustainability?

Participant: I don't think I understand the term at all.

Moderator: At all, ok. Erm, so all definitions centre around the ability to sustain, or the capacity to endure. The notion of sustainability comes from sustainable development, erm, which was defined as, err, development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Ok, so another way of putting this is, sustainability is based on a simple principle, everything that we need for our survival and well-being depends on, either directly or indirectly, on the natural environment. Ok, so, sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, err, that permit fulfilling the social, economic, and environmental requirements of present and future generations. Ok, now I think that's the best I can [explain it to you].

Participant: [Ok, well none] of that's surprising, err so broadly speaking, I'm, I'm unsurprised and I would imagine that's exactly what sustainability was.

Moderator: Yeah. Ok, so you've not come across this at all?

Participant: I've come across the term many many times, but you... I mean my impression is that erm, mainly those I would hear use it would be politicians.

Moderator: Yeah.

Participant: And they often don't seem to know what they're really talking about when they use the term.

Moderator: Yeah.

Participant: It's become a fashionable word.

Moderator: Yeah.

Participant: Sustainability.

Moderator: Yeah.

Participant: Erm, and I suppose that it's often used by those who, erm, govern, erm, to give the impression that they are in favour of, certain kinds of policies that are attractive.

Moderator: Yeah.

Participant: Generally in the media.

Moderator: Yeah. Yeah, a lot of people are using it without fully understanding what it actually means, and what it conveys. Erm... so from what you've heard is there a particular aspect that you associate it with? Like, do you associate the environment mostly with it from what you've heard?

Participant: Err from, from your definition, from what I'd understood, I imagine that what we're talking about the environment.

Moderator: Yeah.

Participant: And we're talking about erm, using its resources in a responsible way, which means the resources can be renewed.

Moderator: Yeah.

Participant: Err, there would be many examples I assume, so you wouldn't be using hardwoods from African forests.

Moderator: Mm.

Participant: You would be using sustainable renewable forest wood.

Moderator: Yeah. Stuff like water as it's running out and, places suffering with it and, it's stuff like that.

Participant: When you say water as it's running out, I mean are we talking here about better policies to preserve water?

Moderator: Well an example I've got here is, if we continue wasting water and polluting the freshwater supply we have today, err we leave future generations with no other choice than to desalinate water or treat the contaminated water for their own use. So it's things like that. And as you said cutting down trees and using sustainable ways of, conserving the resources we already have.

Participant: But these are big, difficult political issues aren't they?

Moderator: Yeah.

Participant: So for instance, I would think of myself as a socialist.

Moderator: Yeah.

Participant: And it seems to be that one of the major problems when it comes to any of these issues, ecological, sustainable, is that you have massive companies that have one aim which is to make significant profits for their shareholders.

Moderator: Mm.

Participant: So that erm... it might not make sense for their company to spend the extra millions, for instance a water company, I understand for instance that Thames Water has a pretty bad record when it comes to leakages.

Moderator: Mm.

Participant: Of course, to stop leakages, erm, requires huge investment.

Moderator: Yeah.

Participant: If you think of the infrastructure of London.

Moderator: Yeah.

Participant: Well, that's all very well but Thames Water is owned by I think RWE, a German company.

Moderator: Mm.

Participant: And its interests are the, are its shareholders in Germany.

Moderator: Yeah.

Participant: So, clearly erm, the kind of decisions that these big companies make, though they often, CLAIM they make them in the name of sustainability.

Moderator: Mm.

Participant: Usually their decisions are dictated by political motivation.

Moderator: Yeah.

Participant: And by financial gain.

Moderator: Yeah. I mean now sustainability is coming to the forefront of people's minds because it's, err, the issues of what past generations have done to our environment and the whole ecosystem, is actually coming upon us now like climate change and things like this you would have heard of. Erm, so the main thing everyone says now is that education is relevant to... integrating sustainability within all courses and curricula, to try and raise awareness within, young students erm... and also to change behaviours, and that kind of thing... and that's what I'm hoping to [gauge here].

Participant: [I don't like] the word behaviours.

Moderator: Oh right.

Participant: There's a perfectly good English word behaviour, and I think that the problem is that err, many, how could one disagree with a responsible policy about sustainability?

Moderator: Mm.

Participant: In a sense that, to talk about such a thing is rather to shadow-box.

Moderator: Yeah.

Participant: It's EASY to agree. It's not easy to take action.

Moderator: Yeah.

Participant: And the problem we have in our society at the moment is that, the kind of ACTION people TEND to be able to take are ISOLATED, UNCOORDINATED, so that you have small groups, erm, obviously some big groups as well, but basically you have groups of people trying to find various causes, ecological and otherwise.

Moderator: Mhmm.

Participant: So what you LACK is a mass movement, effectively.

Moderator: Yeah.

Participant: To do with these things, but also I think that erm, it's all very well for an individual you might interview to agree that sustainability is very important, but what are they themselves actually planning to DO about sustainability?

Moderator: Mm.

Participant: You know, so that, erm, because we are restricted and effectively act as SINGLE agents, we then wonder how serious we are as SINGLE agents.

Moderator: Mm.

Participant: If we don't even on an individual level take any action, how can we expect there to be any change?

Moderator: Mm. I understand your point. Erm, it's all about convincing people their actions at a local level can affect the global scale. But it all depends on their awareness and understandings of it. Erm, so I was gonna ask you how important do you consider sustainability to be in the 21st century? So obviously you think it's hard for the individual to make a difference. Is that what you were trying to, come across?

Participant: I'm saying I, I worry that individuals are forced to act separately.

Moderator: Mm.

Participant: And that in acting separately they don't make a big enough impact, that the issue is a political one.

Moderator: Mm.

Participant: The problem is it's, it's not an issue, sustainability, that you would find people speak against, generally.

Moderator: Mm Yeah.

Participant: They wouldn't be allowed within our culture.

Moderator: Yeah.

Participant: To speak against it.

Moderator: Yeah.

Participant: Because it's obviously in inverted commas, A GOOD THING.

Moderator: Yeah.

Participant: What this means is that, politicians and others who have power use that term all the time as a kind of, to give them credit.

Moderator: Yeah.

Participant: When... what we see is time and again in their policies, they have a cavalier attitude towards sustainability.

Moderator: Mm.

Participant: And I always feel as well (laughter) that we have a kind of, err, hypocrisy, you have to see that the situation in a worldwide global sense don't you?

Moderator: Yeah.

Participant: So that if you were thinking about the dangers of pollution you'd probably look at China more than any other country at the moment.

Moderator: Mm.

Participant: Even in our own climate where, I imagine though again I don't follow it very closely, I would guess something like ten of the most warm years in the last two-hundred years have been in the last twenty years.

Moderator: Yeah.

Participant: It would be something like that.

Moderator: Yeah.

Participant: That what I've just come up with is a guess.

Moderator: Mhmm.

Participant: But it will be something like that.

Moderator: Yeah, you're right.

Participant: And that's in OUR benign climate, well we've seen what happens in other climates which are much more vulnerable and susceptible.

Moderator: Mm.

Participant: In a sense, the most important issue would be when those climate events affect the United States and affect China.

Moderator: Yeah.

Participant: That would be the biggest, single impact.

Moderator: Yeah, I mean we've had a lot of discussion around this and it's like, there's not gonna be a major change until we are struck with the fact that we have to change, otherwise there's no other way to carry on. Before we get to the catastrophe level, there's no real push to change, because... there's no push from policy.

Participant: Yeah.

Moderator: No binding policy.

Participant: Yeah, the problem as I understand it though is that when you reach such a point it's already too late.

Moderator: Mm. Yeah there's a lot of talk now that temperatures could rise by about five degrees by 2050. Even if we stop our emissions right now, all CO₂ emissions, all pollution, our climate could still warm by about one degree over the next fifty years, because what we've already done in the past fifty years is yet to happen to us.

Participant: Yeah, but look at the point you just made.

Moderator: Mm.

Participant: I mean... the way of life as we know it would stop.

Moderator: Yeah.

Participant: Full stop.

Moderator: Yeah.

Participant: So that's not going to happen. I mean clearly there are areas where there must be more active policy, such as the use of petrol I mean obviously that is a major issue.

Moderator: Mm.

Participant: Erm, both in terms of pollution and in terms of the use of resources.

Moderator: Yeah.

Participant: There are certain areas like that.

Moderator: Mm.

Participant: And air miles.

Moderator: Yeah. I mean it's stuff like they're pushing electric cars and hybrid fuel cars, stuff like that.

Participant: Mm.

Moderator: Once we get to that stage we'll wonder what took us so long to change from it.

Participant: Yeah. Well those hybrid cars are becoming FASHIONABLE.

Moderator: Mm.

Participant: Which is good, but at the same time they are only hybrid cars.

Moderator: Yeah.

Participant: And I think they solve the conscience of people don't they?

Moderator: Mm.

Participant: You know, I don't drive.

Participant: I, I think all of this, and clearly this is only one issue, I think all issues are political on one level or another.

Moderator: Yeah.

Participant: And I think that the starting point is political activity.

Moderator: Mm.

Participant: But I don't mean I expect people to be political ACTIVISTS.

Moderator: Mm.

Participant: Erm, but they need to, exercise their vote, as a starting point.

Moderator: Mm. Ok erm, so moving more closely to education, erm, academics now accept, or widely accept that moving towards the goal of a sustainable future requires fundamental changes in human attitudes and behaviour. So you would agree with that but it also depends on the political push I'm guessing you'd say?

Participant: Yeah I think the political, those who have power have the greatest opportunity, that's the point.

Moderator: Mm.

Participant: The, the change of consciousness, which HAS been occurring hasn't it?

Moderator: Mhmm.

Participant: Gradually.

Moderator: Yeah.

Participant: These issues you're raising to me now, they wouldn't have been a major concern, people wouldn't have talked about them twenty-five, thirty years ago.

Moderator: It's only been coming from about 1960's.

Participant: Yeah.

Moderator: Environmental awareness.

Participant: Yeah, but even then I mean I was brought up as a child in the 1960's and I wasn't aware of any environmental issues.

Moderator: Yeah.

Participant: At least as political issues.

Moderator: Yeah.

Participant: Right the way through to my adult life.

Moderator: Mm.

Participant: So I suppose the first images I can remember that had any kind of political interest in ecological or whatever, were pictures of Greenpeace campaigners.

Moderator: Mm.

Participant: Erm, risking their lives at sea.

Moderator: Yeah.

Participant: Erm, and err, so we talking there about the 1970's.

Moderator: Mm.

Participant: So my memory goes back to, only the 1970's in terms of there being a real issue in the environment.

Moderator: Yeah.

Participant: And it's, well the word sustainability wasn't used then.

Moderator: No.

Participant: Erm, well it may have been but I [wasn't].

Moderator: [No it] only came up in the 1980's.

Participant: Ok.

Moderator: Real push from there.

Participant: Yeah, yeah. What we have to be careful with is that word becomes a kind of buzzword, and then everyone uses it without really having commitment to what it means.

Moderator: Mm.

Participant: But I DO think these issues are political.

Moderator: Yeah.

Participant: They're to do with political governance, and I think that we, scandalously have become a nation, perhaps even as a continent rather apolitical.

Moderator: Mm.

Participant: I was very concerned with what happened at the European elections because, there was a swing towards extremism.

Moderator: Mm.

Participant: It was understandable in Greece that that should happen, towards the left of course because of what's happened with the economy in Greece. But the, I don't take UKIP very seriously, but I do take... the French National Front seriously.

Moderator: Mm.

Participant: And err, Le Pen is MUCH more plausible than her father.

Moderator: Mhmm.

Participant: Erm, and I see that as very dangerous indeed.

Moderator: Yeah. Ok, erm, so in terms of as you say it's all about policy, would you agree that educating people that will go on to lead as political leaders, that it's important to start integrating it into the curricula, university curricula? So, I mean it's only really started to push over the last ten years from HEFCE, things like that, as universities will play a key role in shaping the minds of the individuals that could go on to lead our countries. So, would you agree with that?

Participant: I suppose then you're asking me, and I don't know the answer, how important to the curricula of the University of Oxford, and the University of Cambridge is the issue of sustainability?

Moderator: Yeah.

Participant: You're talking about people who will go on to lead the country, this is a hierarchical system.

Moderator: Yeah.

Participant: The people that will go on to lead the country are brought up in schools like Eton and they go to Oxford.

Moderator: Mm.

Participant: So as far as I remember, there's been recycling in this building.

Moderator: Yeah.

Participant: I don't just throw away one of these computer inks, I will give it in, in its bag and it will be recycled for me.

Moderator: Mm.

Participant: Yeah? So, I think we're quite good on recycling.

Moderator: Yeah.

Participant: But erm, really our main needs are paper and books.

Moderator: Yeah. Well how about specifically within, sustainability-related content within what students actually learn?

Participant: Yeah, no I mean that wouldn't interest me at all

Moderator: No, you don't see the relevance within the English Department?

Participant: (Laughter). Of course it's relevant.

Moderator: Well yeah [I know].

Participant: [It's COMPLETELY] relevant.

Moderator: On the [grand scheme].

Participant: [But I'm not] going to teach this book, I'm picking up a book now, any book from my shelf, I'm not going to teach THIS book BECAUSE it raises issues about sustainability.

Moderator: Right.

Participant: That won't be an issue for me.

Moderator: Yeah yeah.

Participant: Yeah? I can imagine such things, I've been an external examiner for a course in Saint Mary's in London, where there was a course in literature and ecology.

Moderator: Mhmm.

Participant: So you can imagine AN option, who's WHOLE aim is to explore that issue.

Moderator: Mm.

Participant: The truth about English literature is it covers EVERYTHING.

Moderator: Yeah.

Participant: I don't have to LOOK for ecological issues.

Moderator: Mm.

Participant: Because they will be EVERYWHERE.

Moderator: Yeah.

Participant: And it will be impossible not to discuss them.

Moderator: Mm.

Participant: That's what English literature's like.

Moderator: Mm.

Participant: I would imagine, that it's a pretty advanced ideology when it comes to these issues.

Moderator: Yeah.

Participant: Would that be true?

Moderator: Yeah yeah.

Participant: Yeah. So that you perhaps, as a department of geography are atypical.

Moderator: Mm.

Participant: Yeah? You may be MORE, much more engaged in these debates and issues than some other departments of geography.

Moderator: Yeah. Would you see the relevance within different courses, other than geography that can obviously address it [probably better].

Participant: [Clearly the] implication behind what we're saying is that it is an OVERARCHING political issue.

Moderator: Yeah.

Participant: So it affects everything.

Moderator: Yeah, so it should be a part of everything then?

Participant: Well, you see the distinction I've made, in other words I don't need to explicitly create a module in ecology.

Moderator: Yeah, because you've got [inclusion].

Participant: [I might] do if I was interested, if that was a subject, a discipline that I was interested in.

Moderator: Yeah.

Participant: And of course, I would simply take some of the books that I already teach that deal with such issues.

Moderator: Yeah.

Participant: So for instance, I can imagine putting *The Road* together with Jonathan Swift's *Gulliver's Travels*.

Moderator: Mm.

Participant: Swift in 1726 writes a BRUTAL critique of British colonial expansion.

Moderator: Mm.

Participant: Effectively claiming that the British Empire is going to other countries and raping them.

Moderator: Mm.

Participant: Of their resources.

Moderator: Yeah.

Participant: For gain.

Moderator: Mm.

Participant: I can see how such a book would fall in that, err, module code, a code that might say ecology in literature for instance.

Moderator: Yeah.

Moderator: Yeah.

Participant: Erm, and nothing tastes as good to him, as the food he grows with his own hands.

Moderator: Yeah.

Participant: And this is a, err, not only an important aspect of the novel in terms of his, character, his development or whatever. It's symbolically central to the novel.

Moderator: Mm.

Participant: He's been travelling across South Africa with his mother's ashes. He finally spreads the ashes, feeling that he's fulfilled his responsibility, and on the same spot where he casts her ashes he begins to grow his own vegetables.

Moderator: Mm.

Participant: Now, on the one hand this is bizarre, you know?

Moderator: Yeah.

Participant: This is a novel all about somebody growing vegetables.

Moderator: Mm.

Participant: It's not it's much more than that (laughter). But HOW WOULD YOU be able to READ, page after page, about Michael's vegetable-growing skills and experience, without thinking about sustainability? (Laughter).

Moderator: Yeah.

Participant: Especially because the whole point is there are few resources around.

Moderator: Mm.

Participant: So I think that, none of my students would miss the significance of this.

Moderator: Mm.

Participant: And all you would need to do is say, oh look, this is actually really quite interesting from the point of view of sustainability.

Moderator: Mm.

Participant: And Coetzee's writing a novel about resources. Now I'm not doing that.

Moderator: Yeah.

Participant: I don't need to.

Moderator: Yeah.

Participant: The issues are there.

Moderator: Yeah. So in terms of its integration, you don't feel like it needs any more or any less?

Participant: No.

Moderator: It depends on the literature.

Participant: That's right, it's like, so that for instance, you could take any other issue. So any book I've got here will probably contain, some issue about sex and sexuality.

Moderator: Yeah.

Participant: That doesn't mean that I'm teaching my students about sex and sexuality.

Moderator: Yeah. That's for your students to [make their own links if they want to].

Moderator: Yeah. Ok so in terms of barriers for general university curricula, do you feel that there is, I mean you mentioned about policy implications and stuff, erm, do you feel like there's a lack of institutional drive?

Participant: Oh I would hate the institution telling me I've got to have a module in sustainability.

Moderator: Oh really?

Participant: I can imagine it's the kind of thing an institution would do.

Moderator: Well it's the kind of thing, I mean HEFCE are pushing it, over the next few years you'll probably have something come across you, that [will].

Participant: [That's] fine, but you know I have, I'm totally sceptical about the motivation of those who are introducing these ideas.

Moderator: Mm.

Participant: I don't... (laughter). Having a module in something is like, WE'RE DOING SOMETHING ABOUT IT, you know WE HAVE A MODULE IN IT.

Moderator: Yeah.

Participant: Erm, that isn't what we do. I don't, I'm not interested in teaching modules about, particular, specific issues.

Moderator: Mm.

Participant: I'm interested in teaching literature.

Moderator: Yeah.

Participant: So, erm... I'm always wary as well of political trends.

Moderator: Mm.

Participant: Which are TRENDY, you know?

Moderator: Yeah.

Participant: As I say, I think the point is, in the end it's the politicians who need to do something about it, and we need to encourage them to do it.

Moderator: Yeah.

Participant: Students mostly, I mean you would hope wouldn't you, that students of politics would be EVEN MORE engaged with these issues than a student of geography?

Moderator: Yeah.

Participant: YOU, have to deal with plate tectonics as well.

Moderator: Mm.

Participant: (Laughter). Whereas a political theorist, this is at the heart of our business. It is the biggest issue, in our political life.

Moderator: Mm.

Participant: Isn't it?

Moderator: Yeah.

Appendix 8: SOCPL Interview Transcript

Interview Transcript: Programme Leader of Sociology

The interview was conducted in the participant's office at the University of Chester on 15th July 2014, and comprised of one Sociology Programme Leader and a single moderator.

Before the recording began, the moderator welcomed the participant and briefly explained the nature of the study. The moderator also delivered a consent form to the participant and gained permission to record the interview.

(Recording began)

Moderator: Ok. So first of all, thank you very much for participating and agreeing to help me out. Erm, so to start with, how well do you understand the term sustainability?

Participant: Fairly well but probably just from a kind of lay perspective.

Moderator: Right. Is there any way you'd best describe your understanding of it, a particular definition or?

Participant: Err, well sustainability it's about, erm, the extent to which we use resources.

Moderator: Mm.

Participant: Erm... in a way that's... beyond our means if you like.

Moderator: Yeah.

Participant: So, sustainability I suppose within the kind of university setting, is about trying to use resources so that it is to a sustainable level.

Moderator: Yeah.

Participant: So for example, by recycling stuff.

Moderator: Mm.

Participant: We can possibly... help protect resources by, erm, recycling, but there's other things that we can do.

Moderator: Yeah. Would you say you're familiar with the Brundtland definition?

Participant: I don't even know what that is (laughter).

Moderator: Oh right well, sustainability comes from the notion of sustainable development, and, erm, Brundtland defined it in I think 1987, erm, sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs.

Participant: Yeah.

Moderator: So that's where it comes from, so it's pretty much what you just said there.

Participant: Yeah.

Moderator: Erm, so, do you associate a particular aspect with sustainability?

Participant: Erm... not really, I suppose a lot of people like I mentioned there, I talked about recycling.

Moderator: Yeah.

Participant: But in a way that's, probably not the most advanced part of sustainability.

Moderator: Mm.

Moderator: Yeah. Well in terms of politics as you just said, erm, the main problem is a lot of people are using it, but they don't fully understand what it entails, so, governments are trying to get in on it 'cause they want to keep their credibility.

Participant: Mm.

Moderator: Without actually following through on actions and fully understanding what their responsibilities should be.

Participant: Totally yeah.

Moderator: Erm...err, so how important do you consider the topic of sustainability to be in the 21st century?

Participant: It's very, it's something fundamentally important.

Moderator: Mm.

Participant: Because, if you don't take it seriously then, well you know, it's UNSUSTAINABLE living, particularly you know the so-called developed countries.

Moderator: Mm.

Participant: The way we're living is not sustainable.

Moderator: Yeah.

Participant: But it's so easy to, to not be able to get that in your head or to ignore it, or to just carry on your unsustainable living.

Moderator: Yeah.

Participant: So I think it's of crucial important, [people need to].

Moderator: [Well I mean] things we've talked about in our geography lessons and Masters lessons is, erm, the problem is that people are fully engaged with it, until confronted with the catastrophe level.

Participant: Yeah.

Moderator: Where it's like if we don't change we're not gonna carry on.

Participant: Sure.

Moderator: Erm, but I mean that's the main problem with people, it's not so obvious unless you're looking at flooding and temperature increase and things like that.

Participant: Yeah.

Moderator: General people don't really, notice this as a main thing they need to engage with.

Participant: Or they're denying it, what really gets on my nerves is when erm, you know like it's peeing down with rain and with flooding and that.

Moderator: Mm.

Participant: And they say things like, OH GLOBAL WARMING HO HO HO you know?

Moderator: Yeah.

Participant: It's not happening look, we've got all this rain, and it's like well that is actually, this is changes in the climate.

Moderator: Yeah.

Participant: That are caused by this and sometimes that will mean like, DROUGHTS.

Moderator: Mm.

Moderator: Yeah.

Participant: So that's good so I suppose when you're in your Freshers week, you're told about that.

Moderator: Mm. Yeah they're introduced to Green Chester and stuff like that yeah.

Participant: Right that's it. That's it.

Moderator: Mm.

Participant: And we're supposed to have erm, isn't like Chester supposed to be some cycling city or something?

Moderator: Yeah.

Participant: Or it was in one year.

Moderator: Yeah it's been promoted as that before yeah.

Participant: Yeah (laughter). AND THEN YOU LOOK AT THE CYCLE LANES.

Moderator: Yeah.

Participant: They're sort of, crap.

Moderator: Yeah.

Participant: Erm... so generally I suppose we're, we're doing what I'm saying councillors and politicians do.

Moderator: Mm.

Participant: We're saying this happens which is good, it's raising awareness, but it's probably only those students that have really got a keen interest.

Moderator: Yeah.

Participant: In these kind of issues, that will pursue that.

Moderator: Mm.

Participant: I think students now... because of their home lives are more used to recycling, as part of their everyday routine, their rubbish and stuff.

Moderator: Mm.

Participant: So it's in their conscience.

Moderator: Yeah.

Participant: When I was at school I remember visiting the Machynlleth Alternative Technology Centre.

Moderator: Yeah yeah.

Participant: And I was only about eight or nine and it really STUCK in my head.

Moderator: Mm.

Participant: And doing that, doing that one trip when I was really quite young.

Moderator: Yeah.

Participant: Erm, made me really aware of... of the... the danger of not taking these issues seriously and used to probably drive my mother mad.

Moderator: (Laughter).

Participant: Yeah, sure yeah.

Moderator: Erm, but do you integrate it within [other modules?].

Participant: [Within other] modules, so the one you said.

Moderator: Mm.

Participant: For Single Honours Sociology students it's an option, not until the third year 'cause it's quite advanced 'cause it's a specialism as I mentioned before.

Moderator: Right yeah.

Participant: One of our members of staff. Erm, but, if we go right back to the first year and the core modules for every single Sociology student, whether they're Combined or Single, we've got erm, a module which is kind of topic based.

Moderator: Mm.

Participant: Erm, and within that, we have, we have a lecture so it's like, you go from talking about body image one day.

Moderator: Mm.

Participant: To looking at sustainability the next, to looking at racism the next.

Moderator: Yeah.

Participant: So it's an introductory module.

Moderator: Right.

Participant: But it's funny, so we've got the sustainability there and we've got, I think we might have cycling there as well as another one, obviously it's connected to sustainability.

Moderator: Yeah.

Participant: Erm, but we have things, so we have all sorts of different topics, but we have food and eating as well.

Moderator: Mm.

Participant: Sustainability's integral to food and eating when we compare like, you know... erm, the global north, the global south and thinking about how we consume.

Moderator: Yeah.

Participant: We look at consumption.

Moderator: Mm.

Participant: And that again relates to, to erm, sustainability. Even when you look at colonialism and racism.

Moderator: Mm.

Participant: We look at that, how that relates, so you know you can just look at, erm, different countries throughout the world and how you know, how our, GREED for petrol for example.

Moderator: Yeah.

Participant: Err, for oil.

Moderator: Mm.

Participant: Erm, makes other countries live in a very different way.

Moderator: Yeah.

Participant: And then we think about the sustainability, so I suppose, only thinking about it now, sustainability crops up.

Moderator: Mm.

Participant: At core levels in modules

Moderator: Yeah.

Participant: Specifically that one I thought, and... quite often.

Moderator: Yeah.

Participant: And it is, so although I'm talking about colonialism and racism...

Moderator: It all [links back to].

Participant: [It'll link up].

Moderator: Yeah.

Participant: And I think a sociology programme is about, linking up the historical to the political to the social.

Moderator: Mm.

Participant: Erm, and seeing that as a whole, and definitely by the time you get the third years, erm, and maybe looking at specifically the politics of sustainability are not.

Moderator: Mm.

Participant: There seeing how this comes together, so I think the mind-set of the sociology graduate.

Moderator: Mm.

Participant: Erm, will be very fundamentally aware of it.

Moderator: Right.

Participant: But also what we look at is contradictions in terms of what we know and how we live our lives.

Participant: But then, that's just it, when you get down to it, every sociology course has err, a module on power or, a module that looks at theory of power.

Moderator: Mm.

Participant: Erm, and then thinking about our second year one of the core modules is about, erm, The Shaping of Society it's called, it's basically all about power, theories of power, but how we present, Foucault, power Marx, Gramsci, whatever we look at... it's INTEGRAL to understanding sustainability.

Moderator: Yeah.

Participant: So, erm, we critique layers of government and decisions that are made in terms of policy.

Moderator: Mm.

Participant: Erm, and we will give examples, worked examples, with regards to how that might impact upon someone and I think every Sociology student has the ability to, APPLY that theory.

Moderator: Mm.

Participant: To err, a thing of their choice so my particular interest is in terms of, is disability and that.

Moderator: Mm.

Participant: But actually when I look at disability, that's about sustainability on the micro level.

Moderator: Yeah.

Participant: So like in terms of the provision of, for disabled people that some people think that we shouldn't have.

Moderator: Mm.

Participant: And certainly welfare policy has turned that way in the last five years.

Moderator: Yeah.

Participant: Erm, and people REALLY talk about the sustainability of that welfare.

Moderator: Mm.

Participant: And talk about these so-called welfare scroungers, and they think well we need to provide you know for us all, like the NHS, about the sustainability of the NHS.

Moderator: Yeah.

Participant: And I know it's then going away from the environmental thing, but...

Moderator: It's all part of [sustainability yeah].

Participant: [It all, it's part of it].

Moderator: Mm.

Participant: And fairness and inequalities.

Moderator: Yeah.

Participant: Erm, so thinking about it, SOCIOLOGY'S ALL ABOUT SUSTAINABILITY in many ways, although we might talk about it in terms of inequalities sometimes.

Moderator: Mm.

Participant: Or, erm, or the politics of the NHS or whatever. But then, what really happened interesting this year was that, when we're looking at for example the politics of the NHS.

Moderator: Mm.

Participant: We have two international students who are American.

Moderator: Right.

Participant: Come in and they, we were critiquing like the practice of the NHS, and then they were like but you've got the NHS.

Moderator: Mm.

Participant: We've got nothing.

Moderator: Yeah.

Participant: Erm... and things like that, having that dialogue, so I think diversity within the student body is really important too.

Moderator: Mm.

Participant: So you've got someone who's, erm, spent some time in Rwanda saying yeah but here they have this, like so how can we problematize this, and how are we responsible for that happening or, fantastic.

Moderator: Mm.

Participant: Erm, so yeah, I think it's crucial, and maybe we could do more in making the links more explicit in terms of sustainability.

Moderator: Mm.

Participant: 'Cause in many ways, it is all about it.

Moderator: Yeah. Well I mean it's whether you leave it there for the students to make their own links to sustainability, I mean as you were going through there you realised all the links from your modules that can be made.

Participant: Yeah.

Moderator: Erm, whereas some are more explicit, whereas some leave it up to the students to make their own, erm, links between them all. But I mean, you talk to geographers downstairs and they'll be like, so what do you associate sustainability with? And they'll say climate change, the environment, resources. And then talking to human geographers, they'll say, one gave the example of sexuality. They said if someone's, gay but they're not living that way, that's unsustainable.

Participant: Genius yeah.

Moderator: Because that's gonna be detrimental to their own wellbeing, 'cause they're not, living life how they should be, or how they would like to be.

Participant: Yeah.

Moderator: And it can be taken in any different way.

Participant: Sure, so we're, I think we're obviously really good at the social political stuff.

Moderator: Mm.

Participant: And we've got the environmental stuff there.

Moderator: Yeah.

Participant: But the social political stuff in terms of sustainable living and that, I think the key message our students have, when they leave is that, inequality is the biggest problem in terms of sustainability.

Moderator: Yeah.

Participant: Erm, 'cause... and that speaks for all sorts of different topics everywhere.

Moderator: Mm.

Participant: In the same way sustainability is a very all-encompassing term, so is inequality.

Moderator: Mm.

Participant: And one could be seen to be the problem of the other.

Moderator: Yeah.

Participant: If you like.

Moderator: Well I mean you look at inequality and consumption patterns and I remember, it's probably changed now but, erm, I remember last time I looked it was like the richest twenty percent of the world consume eighty percent or more of resources.

Participant: Yeah.

Moderator: And it's like the poorest one point five percent probably use less than one percent of all resources.

Participant: Yeah.

Moderator: And we're allowed to carry on. Whereas you look at some of the countries and their, if you're looking at how many planets you use in terms of resources, have you ever seen this how you work out how many planets you'd need?

Participant: Yeah I have seen this.

Moderator: And it's like you work out the US is something like four and we're two.

Participant: Yeah.

Moderator: And there's places down, like African countries that use like naught point two, naught point three.

Participant: Yeah.

Moderator: And they can have a normal quality of life, it's not like they're lesser than us, but because we see that and think oh well, they must be struggling.

Participant: Exactly.

Moderator: And they're really not. They've just learned how to live with what they have.

Participant: Yeah.

Moderator: And they've, found a way to do it that meets their own needs.

Participant: Exactly.

Moderator: Erm, and it's, it's just very hard trying to figure out how you can sort it out.

Participant: And it is about, the disciplines combining, so like your human geographers were right, and your other geographers were right.

Moderator: Yeah.

Participant: And the sociologists about the cultural, err, problems of accepting this and the contradictions with consuming whilst, being a critical consumer if you like. We need to, there needs to be more interdisciplinary understanding.

Moderator: Mm.

Participant: And actually, so that stats seep into the non-academic world.

Moderator: Yeah.

Participant: The world, the life that we have and to get people more consciously, critical of the things we do.

Moderator: Mm.

Participant: And you could talk about warfare and the problem with warfare and sustainability issues as well, fundamental problems in relation to, how we use our patriotism, our nationalism, erm, in terms of fighting for whatever it is we're fighting for.

Moderator: Yeah.

Participant: Or whatever it is we're told we're fighting for.

Moderator: Yeah.

Participant: Erm, and we stuff up countries left right and centre with our, heightened sense of, erm, importance and, through the guise of nationalism.

Moderator: Mm.

Participant: So then the problem is you know, recruiting people into the army in schools.

Moderator: Mm.

Participant: So we're the only country in Europe I think that do that, the UK.

Moderator: Mm.

Participant: Erm, there's problems, so many different problems.

Moderator: Yeah.

Participant: Which involve a massive cultural shift.

Moderator: Yeah.

Participant: Can't just happen by, wiping out a species and then starting again.

Moderator: No.

Participant: Although that may happen, if we [don't live in] a sustainable way (laughter).

Moderator: Yeah yeah.

Participant: Gone full circle now, going on sorry (laughter).

Moderator: (Laughter). No no it's great. I was just looking, oh I've got a quote here to see if you agree with this. Erm, so academics have identified the global sustainability challenge we face to is first and foremost one of the mind, perception and values, hence it is a challenge to those institutions presuming to shape minds, perceptions and values. Would you agree with that?

Participant: As a sociologist.

Moderator: Mm.

Participant: Changing someone, so when I'm talking about cultural shift.

Moderator: Yeah.

Participant: It's about changing your mind-set.

Moderator: Yeah.

Participant: But it sounds a but individualistic that does.

Moderator: Mm.

Participant: I think, you draw a fine line, it's almost sort of blaming the individual then for not living a sustainable way.

Moderator: Yeah.

Participant: As I explained, and as you know full well.

Moderator: Mm.

Participant: It's a whole infrastructure which enables you to, live in a sustainable way.

Moderator: Yeah.

Participant: Erm, and people are forced into making decisions that they think they've made independently of themselves.

Moderator: Mm.

Participant: But because of their culture, nothings, I think the idea of independence is total rubbish.

Moderator: Yeah.

Participant: Everybody is dependent.

Moderator: On something.

Participant: On something. Your individual decisions are because of your, culture and your social, and economic setting.

Moderator: Right.

Participant: So..., so yes, it is about changing your mind-set.

Moderator: Mm.

Participant: But, to do that you need, things in place, to EVEN IMAGINE, that mind-set is not a stupid idea, so I think there's probably a split if you looked, I don't know this, but I'm quite certain it would happen with in terms of people in the lower socio-economic classes.

Moderator: Mm.

Participant: Being more SCEPTICAL of the problems of, living the way we do than those in middle classes.

Moderator: Yeah.

Participant: So I think you know things, like people only buying organic vegetables and, and trying to be seen to be more environmentally-friendly tend to be more middle class.

Moderator: Mm.

Participant: Erm, than others, and I think there's a lot of BLAME,

Moderator: Mm.

Participant: That happens towards like lower socio-economic classes for all sorts of reasons.

Moderator: Mm.

Participant: For crime, for welfare scroungers, for all sorts of different things. But I think, that's because like, if you don't have a lot of money, if you're thinking what am I gonna eat tomorrow, how am I gonna afford to eat tomorrow?

Moderator: Yeah.

Participant: Your mind is on different things, like so what if we're all gonna die in fifty years' time like.

Moderator: Mm.

Participant: I think I might die tomorrow 'cause I ain't got enough money to put food on the table so, you can't blame individuals for having the mind-sets that they have.

Moderator: Yeah.

Participant: We have to open up the possibilities for them to imagine a brighter future.

Moderator: Yeah.

Participant: So they can live for that brighter future all together.

Moderator: Yeah. Well I mean, you can look at, so education is crucial to, raise public awareness and educate people, about sustainability and the importance of it, but also how to live more sustainably.

Participant: Yeah.

Moderator: Erm, things like there's also, we need a drive, a political drive.

Participant: Totally.

Participant: But they're few and far between.

Moderator: Mm.

Participant: And they don't usually publish a lot.

Moderator: Mm.

Participant: Erm (laughter). So we're from a particular camp if you like.

Moderator: Mm.

Participant: Erm, I've not met a sociologist who voted Conservative Part for example.

Moderator: Mm.

Participant: That I've worked with before. They do exist.

Moderator: Yeah.

Participant: Erm but...

Moderator: But they don't publish papers and they just talk (laughter).

Participant: Yeah (laughter). Or they do and they're not very popular.

Moderator: Yeah.

Participant: Or they're only cited like HELL 'cause everyone's like tearing it up.

Moderator: (Laughter). Yeah.

Participant: Erm... so there's basically within the profession, no... within the institution there's some discussions as to whether you should be quote, BIASED or not.

Moderator: Mm. Yeah.

Participant: Erm, not within the profession.

Moderator: Mm.

Participant: The profession understands what it is you know, and its background so, I think, erm, I think that idea of there being a bias in teaching is for sociology, a load of rubbish.

Moderator: Yeah.

Participant: 'Cause, everything's biased. Everything has a particular take on it so you wouldn't do geography if you weren't interested in certain things and have a particular take on things, now clearly like if there's someone who comes into my lecture and says, well you know, they should bash the welfare state and those, and those IDIOT working classes who, who BLEED off us, you know, the scroungers.

Moderator: Mm.

Participant: Now I would talk about through theory, how that might be evidenced within the sociological setting.

Moderator: Mm.

Participant: But then unfortunately for that person, the majority of the evidence is for, AGAINST that position.

Moderator: Yeah.

Participant: And shows you through statistical, qualitative, actually empirical research how that is false.

Moderator: Mm.

Participant: So I'm getting at the idea of a moral obligation I think... I don't use that term 'cause it sounds a bit... like I'm on a mission or something.

Moderator: Mm.

Participant: And I'm not on a mission.

Moderator: Yeah.

Participant: And then that sounds religious, neither am I religious.

Moderator: (Laughter).

Participant: But, I think if there's an agenda, if there's a problem like inequality in the world then I'm gonna highlight that.

Moderator: Yeah.

Participant: It's up to those people what they do with it, and then they might put a racist, sexist, homophobic slant on that information.

Moderator: Yeah.

Participant: [That's up to them].

Moderator: [As long as it's being] addressed.

Participant: As long as it's being addressed, that's what I think, I've done my job.

Moderator: Mm.

Participant: I've shown them the facts, I've dealt with that person, and we've got, increased in like UKIP.

Moderator: Mm.

Participant: Erm, students within the, within our erm, modules.

Moderator: Mm.

Participant: And we have different challenges from them, from like you know, antifeminist perspectives and stuff.

Moderator: Yeah.

Participant: Erm... so I don't, I'm not interested in going into their heads.

Moderator: Yeah.

Participant: Going like, you're wrong, I'd never do that.

Moderator: Mm.

Participant: But, I need to and the programme needs to show, the evidence against that sort of stuff.

Moderator: Yeah.

Participant: And sociology, any sociology programme's doing that, so I don't care if I'm, if someone claims that is biased.

Moderator: Mm.

Participant: Firstly they're wrong.

Moderator: Yeah.

Participant: But secondly, if there's, if we're telling a particular story it's 'cause the rest of the world is telling THIS story that the, UKIP voters or other people.

Moderator: Mm.

Moderator: Yeah.

Participant: Yeah, and your lecturers and students can see the links really well and other students maybe of psychology sometimes, if they're not into social psychology... they have a problem in doing psychology and sociology because they see it as psychology saying one thing and sociology saying another.

Moderator: Yeah.

Participant: And actually, the best students that do that combination can see the links between the two, and yeah where we, sometimes we just blummin clash.

Moderator: Mm.

Participant: But other times, there's this narrative that if they were keen sociologists they could see, how like truth is being spun in one discipline as THE truth.

Moderator: Yeah.

Participant: Erm, and that's where the conflict comes in really.

Moderator: Yeah.

Participant: So I think interdisciplinarity is really important.

Moderator: Yeah.

Participant: Definitely in sustainability and that's true, outside academia as well.

Moderator: Mm.

Participant: I think, politicians, and business owners, and capitalists, and people, just people, need to understand their impact upon each other.

Moderator: Yeah.

Participant: So it's about intersectionality and working together basically.

Moderator: Yeah. Alright, I only have one last question then. Erm, so what are the main barriers to integrating sustainability into university curricula, as well as your department? Anything you've come across?

Participant: Barriers to what sorry?

Moderator: Barriers to integrating it.

Participant: Right.

Moderator: So it's, I mean, stuff I've looked at is perceived irrelevance by staff and students, curriculum already too crowded.

Participant: Mm.

Moderator: Erm, confusion over what to teach, staff not always having the right expertise and knowledge about it, and stuff like lack of institutional drive. Can you relate to any of those?

Participant: Yeah, erm, I think it's a bit different for Sociology because, as we've explained.

Moderator: Mm.

Participant: It is about that in many ways, that's what sociology's about, sustainability.

Appendix 9: BUSPL Interview Transcript

Interview Transcript: Programme Leader of Business Management and Entrepreneurship

The interview was conducted in the participant's office at the University of Chester on 18th July 2014, and comprised of one Business Management and Entrepreneurship Programme Leader and a single moderator.

Before the recording began, the moderator welcomed the participant and briefly explained the nature of the study. The moderator also delivered a consent form to the participant and gained permission to record the interview.

(Recording began)

Moderator: Ok. So first of all, thank you very much for agreeing to this and helping me out with my project.

Participant: You're welcome.

Moderator: Erm, so to start with, how well do you understand the term sustainability?

Participant: Erm... I think I understand it reasonably well.

Moderator: Mm.

Participant: I think it's got, erm, a number of, kind of, definitions, meanings.

Moderator: Yeah.

Participant: Erm, et cetera connected to it. I think, I understand it reasonably well.

Moderator: Mm. Yeah as you said there's so many definitions.

Participant: Yeah.

Moderator: There's no universally agreed one.

Participant: Yeah.

Moderator: Erm, I mean I'm guessing you're familiar with the Brundtland definition the most?

Participant: Erm... no, I don't know Brundtland.

Moderator: Well Brundtland is erm, well the notion of sustainability comes from sustainable development, erm, which arose in 1987. Erm, and that was defined as, sustainable development is development which meets the needs of the present, without compromising the ability of [future generations to] meet their own needs. So you would have come across it.

Participant: [Future generations yeah]. Yes I have, I just, erm, yeah, I just don't connect it with that theorist I suppose.

Moderator: Yeah. I mean all the definitions centre around the ability to sustain or the capacity to endure.

Participant: Yeah.

Moderator: So that's, all of them centre around that, but that's one of the main issues with sustainability because no one fully understands it.

Participant: Yeah.

Moderator: It's hard to progress towards it.

Participant: Absolutely, I mean for me, erm, obviously working in the Business School.

Moderator: Mm.

Participant: Erm, notions of sustainability are erm, connected to business.

Moderator: Yeah.

Participant: And again, that's not necessarily so.

Moderator: Mm.

Participant: You know, sustainability can be connected to anything.

Moderator: Oh yeah.

Participant: But primarily for me.

Moderator: Yeah.

Participant: As an academic working in a business school, my teaching and learning defines that I connect sustainability with business.

Moderator: Mm.

Participant: So that's kind of my, I suppose, erm, the basis upon which I think about sustainability, on a professional level.

Moderator: Yeah.

Participant: On a personal level, it's a broader definition.

Moderator: Mm.

Participant: And I look at it much more widely, but actually on a day-to-day basis, sustainability, generally, you know I'm thinking about its connections to business.

Moderator: Yeah. Well that's great 'cause I mean the other Programme Leaders I've interviewed, they all think of environmental straight away.

Participant: Yeah.

Moderator: Because that's what it all spans from.

Participant: Yeah.

Moderator: But it's great to see the different aspects you take from it.

Participant: Yeah, yeah.

Moderator: Erm, so how important do you consider the topic of sustainability to be in the 21st century?

Participant: I see it as crucial.

Moderator: Yeah.

Participant: Absolutely crucial. And not just, I know you've just mentioned about, erm, you know the environment.

Moderator: Yeah.

Participant: And I have to say that's probably, you know, SECONDARY as I've explained.

Moderator: Mm.

Participant: Secondary in my thinking of sustainability, but THAT is probably the most CRUCIAL element of understanding sustainability.

Moderator: Yeah.

Participant: YES.

Moderator: And all that.

Participant: People, planet and, yeah.

Moderator: [Yeah and].

Participant: [And business].

Moderator: Yeah that's the one. Yeah I was gonna ask you if you were familiar with the triple bottom [line?].

Participant: [Yeah] yeah, absolutely, well I have to be.

Moderator: Yeah. Is it covered in your?

Participant: It's central.

Moderator: Is it?

Participant: Yeah it's central yeah.

Moderator: Right. That's good to know 'cause I was gonna ask you about that later.

Participant: Yeah, 'cause I do, erm, the... I introduce the first years very early on to social enterprise.

Moderator: Mm.

Participant: And obviously, erm, sustainability is, erm, a pivotal element to that.

Moderator: Yeah.

Participant: Erm, and again, erm, you know sustainable business from day one, really.

Moderator: Yeah.

Participant: And, erm, we talk in, I introduce the kind of triple bottom line to students, erm, under the notion or under the guise of a, erm, three-legged stool.

Moderator: Mm.

Participant: And if you remove one leg the stool falls over.

Moderator: Yeah.

Participant: So you know, that's for first years.

Moderator: Mm.

Participant: So it is from day one on the programme.

Moderator: Yeah, I mean we've had modules in the business aspect of it all.

Participant: Mm.

Moderator: And we covered the triple bottom line a little bit but not fully, erm, and it's like the first few years of a business they're not so worried about sustainability, but as it becomes, they become more inseparable, the environment and business.

Participant: Mhmm.

Moderator: Because otherwise they'll lose their competitive advantage in the future.

Participant: Yes.

Moderator: And big businesses want to maintain their credibility and things like this.

Moderator: Do you think that it should be integrated into the curricula, throughout?

Participant: I think it should be embedded, not just in the curricula.

Moderator: Right.

Participant: In all of the activities that an organisation undertakes.

Moderator: Mm.

Participant: So everything. I'm not, you know, so why should you just, try to, I'm gonna use the word teach now.

Moderator: That's fine (laughter).

Participant: Why should a university try to TEACH STUDENTS about, erm, sustainability if it's not reflected in its own dynamics, in its own institutional dynamics?

Moderator: Yeah.

Participant: So, if it has to, fully embrace any kind of educational institution.

Moderator: Mm.

Participant: That's teaching, say management, teaching sustainability, about the environment, should reflect to the best of their ability, erm, those kind of elements that it's trying to, to communicate to students that it, you know, uses in their educational programmes it needs to EMBRACE those and EMBED those in everything that it undertakes.

Moderator: Yeah. I mean erm, some people are more, they think sustainability should be its own course, or it should be related mostly to like biology or geography.

Participant: But it underpins everything.

Moderator: Yeah.

Participant: It underpins, erm... [all thinking].

Moderator: [It can be], yeah it's relevant to all subjects isn't it?

Participant: It IS relevant.

Moderator: Yeah.

Participant: I mean you identified maths there.

Moderator: Mm.

Participant: Well the question in MY mind is WHY ISN'T IT RELEVANT?

Moderator: Yeah.

Participant: Let's flip the coin around and say, why is it not relevant to you? Explain to me why it isn't relevant and that's a more interesting question.

Moderator: Yeah.

Participant: And, erm, because, you know as I see it, I might be biased 'cause obviously, you know, I'm a businessperson, but it's relevant to everything.

Moderator: Mm.

Participant: 'Cause if I want to see my, erm... my business flourish.

Moderator: Yeah.

Participant: I'm gonna have to, actually, be knowledgeable about sustainability.

Participant: Erm, there are charter marks for businesses that are strong in terms of environmental actions.

Moderator: Mm.

Participant: Erm... however, it's not businesses that are dictating to the government.

Moderator: Mm.

Participant: And it's not even government that are dictating to businesses, it's, you know, it's about the relationship isn't it between?

Moderator: Mm.

Participant: But businesses are not the enemy of the environment.

Moderator: Yeah.

Participant: And that, smacks to me as somebody who doesn't understand the triple bottom line concept.

Moderator: Mm.

Participant: That in order for businesses to succeed, EVERYBODY has to understand, that that business is, erm, is being ethical, you know, it has morals being run, you know, with, erm, the future with sustainability in mind.

Moderator: Yeah.

Participant: Erm...

Moderator: I mean to me there's no one person responsible for this, it's gotta be individual engagement, community engagement, businesses, politics.

Participant: Yeah.

Moderator: There's no one way to progress towards sustainability.

Participant: Yeah, business is not the enemy of sustainability.

Moderator: No.

Participant: If ANYTHING, you know, it can really, erm... I do feel that business is forging ahead with the sustainability agenda.

Moderator: Mm.

Participant: I do.

Moderator: Yeah.

Participant: And it's really pushing it because, you know, it's a competitive, erm, economy out there.

Moderator: Mm.

Participant: You know, always has been, always will be.

Moderator: Yeah.

Participant: And, and KIND OF, you might think it's unfortunate, but sustainability is one of those elements of competition.

Moderator: Mm. Yeah.

Participant: It's not just about for securing profit.

Moderator: Oh yeah.

Moderator: Yeah.

Participant: And, and so, erm, I think the minute you start saying that, it's the leaders of large groups.

Moderator: Mm.

Participant: That are responsible for this, is the time when actually you're not understanding.

Moderator: Yeah, I mean that comes from a lot of people who don't fully understand sustainability, and they don't feel capable of engaging with it, because they don't understand how to, and what, as we were saying even the smallest steps are on the way to doing it.

Participant: Mm.

Moderator: Erm, so that seems to be a get out way for a lot of people to say it's not my responsibility.

Participant: Yeah yeah. I mean it's very small turns of a ship's wheel that can change the course of a huge liner.

Moderator: Yeah.

Participant: And in terms of sustainability.

Moderator: Mm.

Participant: You know, I mean that's how I talk, I talk in those terms to my students.

Moderator: Yeah.

Participant: Erm, so it's very minor, tweaks even.

Moderator: Mm.

Participant: That people make, that can have a vast impact.

Moderator: Yeah.

Moderator: Mhmm.

Participant: Erm, so, there's been an element, I've been at Chester for thirteen years now, coming up to thirteen years in September.

Moderator: Mm.

Participant: So, there's been an element of sustainability in MY teaching and learning from the moment I arrived. But that was about ME, because to understand business you have to understand sustainability.

Moderator: Yeah.

Participant: But, and I would say that, that would be very similar for my colleagues.

Moderator: Mm.

Participant: I couldn't see a business academic, not embracing and wanting to embed sustainability in their programme.

Moderator: Yeah. I mean it's [like].

Participant: [It's] particularly interesting actually isn't it for international business?

Moderator: Yeah.

Participant: The Head of International, the Programme Leader for International Business.

Moderator: Mm.

Participant: Or entrepreneurial endeavour, which might, you know, really are the same.

Moderator: Mm.

Participant: If you are engaging in entrepreneurial endeavour, you need to have a thorough understanding of the notion of sustainability.

Moderator: Yeah.

Participant: And actually, in that particular module, the argument is that you can't engage in business just like I've been saying, you can't engage in business without being mindful of the sustainability, erm, agenda.

Moderator: Mm.

Participant: And, erm, issues related to the environment as part of that agenda.

Moderator: Yeah.

Participant: Erm, gone are the days, when you can run a cutthroat business, that's only interested in, erm, the single bottom line, that's only interested in profit.

Moderator: Yeah.

Participant: Because that business will not endure, that will not sustain.

Moderator: Mm.

Participant: So, that module is about that.

Moderator: Yeah.

Participant: You know, there is no, practice... of entrepreneurship, whether you are running your own business, or you are managing elements of somebody else's business.

Moderator: Mm.

Participant: Or you are managing products, where you can undertake those duties successfully, this is the remit now of that module and actually, the programme.

Moderator: Yeah.

Participant: Without, erm, having a good, knowledge of sustainability.

Moderator: Mm.

Participant: And the environment, and the triple bottom line.

Moderator: Yeah.

Participant: You know, I'm lumping those altogether now.

Moderator: No that's great.

Participant: And so THAT'S the basis of that module.

Moderator: Yeah.

Participant: Erm, and it's a very, you know, firm argument.

Moderator: Mm.

Participant: Erm, but that module, is not separate in itself in terms of sustainability.

Moderator: Mm.

Participant: That is one module in the programme that is FOCUSED ON, the dynamics of sustainability in organisations, in businesses.

Moderator: Yeah.

Moderator: Mm.

Participant: Or without, you know, erm, thinking about the future.

Moderator: Yeah.

Participant: You're preparing students for the future, why aren't you going to be looking at, erm, issues that are going to be ABSOLUTELY CORE in the future.

Moderator: Mm.

Participant: OR CORE NOW.

Moderator: Yeah yeah.

Participant: And have been, core in the past.

Moderator: Yeah yeah.

Participant: Erm... yeah, so why wouldn't you, why wouldn't all of those be embedded in all of the kind of traditional areas of business? I don't understand why they wouldn't be.

Moderator: Yeah.

Participant: And I think, to be fair... they probably are, maybe some colleagues are not as aware as others.

Moderator: Yeah, I mean it's like you can associate nearly everything with sustainability it's just, in certain modules it's there for the students to make the links themselves and make the connections.

Participant: Yeah, yeah. I DO... refer to sustainability.

Moderator: Mm.

Participant: I do refer to social enterprise. I do refer to the ACTIONS that are connected with sustainable practices.

Moderator: Mm.

Participant: So... so I, it's OVERT in the modules that I teach on and the programme that I head up.

Moderator: Yeah.

Participant: Erm, it might not be AS overt, in, erm, other programmes in the Business School but that's not to say that it doesn't happen.

Moderator: Yeah.

Participant: Erm... I know it does happen anyway, and I know the links are, are made with the students so, yeah, yeah.

Moderator: Mm. Ok so the last question is erm, what do you feel are the main barriers to integrating sustainability within the university curricula?

Participant: It's interesting isn't it because I think the main barriers are those you've already mentioned.

Moderator: Mm.

Participant: People's perceptions.

Moderator: Yeah, I mean the ones that have come up from other interviews are perceived irrelevance by staff and students, curriculums too crowded already, err, confusion over what to teach for those who don't have the expertise in the area, erm, and then there was stuff coming up about lack of institutional drive and commitment to these sort of things.

Participant: It's interesting that isn't it?

Moderator: Mm.

Participant: 'Cause I do, erm, an analysis with the students, one of the first activities that we do, of the university's commitment to sustainability.

Moderator: Mm.

Participant: So I get, send them away and ask them to, to go online.

Moderator: Mm.

Participant: And analyse the messages that are being sent out by the university on their commitment to sustainability.

Moderator: Yeah.

Participant: So, erm, and the commitment is there.

Moderator: Mm.

Participant: And we talk about the extent to which we've recognised that going on.

Moderator: Yeah.

Participant: Erm... so, in terms of, the university's commitment, I think that it's making a real effort.

Moderator: Mm.

Participant: Erm, in terms of a crowded, erm...

Moderator: Curricula yeah.

Participant: Curricula, I could use an inappropriate word there.

Moderator: Mm.

Participant: But I don't go along with that. As I've said, I think that... you know, that, erm, sustainability underpins everything.

Moderator: Mm.

Participant: If you are wanting to prepare your students to be job hunters and job creators, you have to embed sustainability.

Moderator: Mm.

Participant: Erm... it's, we have a responsibility to do that.

Moderator: Mm.

Participant: I don't feel we're doing our job if we don't do that.

Moderator: Yeah.

Participant: Erm... obviously they're gonna have access to that thinking, elsewhere in the environment but I think that we have to address that otherwise we're not, you know, we're not undertaking our role as educators properly, erm, or appropriately .

Moderator: Yeah.

Participant: Erm, in terms of, so there was, it's too full the curricula, there was the university's commitment, what else was the excuse?

Moderator: Err, irrelevance by staff and students, which we said it depends on their perceptions of it.

Participant: Within the Maths programme, and the building of connections, probably initially by the academic staff and then, you know, erm, prompting the students to engage in that.

Moderator: Mm.

Participant: Would have probably helped that student broaden their thinking, their thinking's very narrow at the moment, that's what I'd say.

Moderator: Yeah it's about conveying the importance and relevance of sustainability to that student I think. Because [it is].

Participant: [Not] even about the importance and relevance 'cause obviously it is important and relevant but, but helping them to even understand what business, is, see that's what you get when you have a maths course, erm, with no element of business connected to it.

Moderator: Mm.

Participant: So err, 'cause if you had an element of business connected to it.

Moderator: Mm.

Participant: And not just, numbers for the sake of adding and subtracting, and, I'm only being facile now.

Moderator: Yeah I know (laughter).

Participant: But do you know what I mean?

Moderator: Yeah.

Participant: You've got to connect that practice to something.

Moderator: Mm.

Participant: So connecting it to business, then would help them to see, the relevance of sustainability.

Moderator: Yeah.

Participant: But it's not shocking, it's just funny isn't it?

Moderator: Yeah.

Participant: It's quite amusing, or it would be if it wasn't, if we weren't talking about the future of our planet.

Moderator: Yeah, yeah you think it's funny at first but then you think, I feel bad for that student.

Participant: (Laughter). Yeah, and also, probably on an individual level, no amount of YOU talking to them or ME talking to them would help them to broaden their view, it needed to be part of that programme, that's evidence isn't it for, erm, you know, the crucial nature of embedding sustainability in all programmes.

Moderator: Mm.

Participant: To me that's a brilliant piece of evidence.

Moderator: Yeah. Well that's it, that's all the questions.

Participant: Ok, has that been useful for you?

Moderator: That's been great yeah.

(End of recording)

Appendix 10: BIOPL Interview Transcript

Interview Transcript: Programme Leader of BSc Biology

The interview was conducted in the participant's office at the University of Chester on 22nd August 2014, and comprised of one BSc Biology Programme Leader and a single moderator.

Before the recording began, the moderator welcomed the participant and briefly explained the nature of the study. The moderator also delivered a consent form to the participant and gained permission to record the interview.

(Recording began)

Moderator: Ok. Erm, so first of all thank you very much for participating in my project, I really do appreciate it. Erm, so to start with, how well do you understand the term sustainability?

Participant: Hmm, it's a good one. Well, sustainability is something that we discuss in the department.

Moderator: Mm.

Participant: And we try and build into our teaching but, err, I think I would define sustainability as, the processes that we take to try and limit our impact.

Moderator: Yeah.

Participant: Sort of going forward, particularly in the future.

Moderator: Yeah.

Participant: Erm, so you know if we're developing, erm, whatever we're doing it's doing it in a way that's sustainable with resources and not using up finite resources.

Moderator: Yeah. That's a very good explanation, probably one of the best I've heard out of everyone.

Participant: (Laughter).

Moderator: Erm, so would you say, that sounded very similar to the Brundtland definition, I'm guessing you're familiar with Brundtland?

Participant: Yeah.

Moderator: Yeah, so about meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Participant: Yeah, exactly yeah, yeah.

Moderator: Erm, so, would you say you associate a particular aspect with sustainability? Like as you were mentioning there, resources, the environment, or do you take the more broad holistic view of it?

Participant: I think because of what I do, I tend to take a more specific sort of, narrower viewpoint.

Moderator: Mm.

Participant: Err, in terms of what we do, erm, and in my role.

Moderator: Mm.

Participant: Erm, we use resources, and we use a lot that could have an impact on sustainability.

Moderator: Yeah.

Participant: So it's trying to limit our impact.

Participant: Well I know that there is, there's Green Chester and there's, there's more awareness of it now and there are projects to, you know, make the university more environmentally aware.

Moderator: Yeah.

Participant: But yeah, across the university it's erm, I think you can tell more generally I mean it comes up on the website.

Moderator: Yeah.

Participant: On the Portal and, erm, that sort of thing.

Moderator: Yeah.

Participant: I don't know how, active, individual departments are.

Moderator: Yeah.

Participant: Erm, I would like to see us using far less paper.

Moderator: Mm.

Participant: There's a lot of printing that goes on.

Moderator: Yeah.

Participant: That could be avoided I think.

Moderator: Yeah.

Participant: But I think it would take the university to put some, investment into, other ways of doing things, like having to print lots of things off.

Moderator: Mm.

Participant: Erm, you know, maybe academic staff could all have tablets to use for meetings so you don't have to print reams of paper off, but not everybody would go for that.

Moderator: Yeah.

Participant: But I think that there's a turning point certainly.

Moderator: Mm.

Participant: You can be sceptical sometimes and think that, institutions HAVE to show they're being environmentally aware.

Moderator: Yeah.

Participant: So they have these schemes to show that they are, but I think, on the whole.

Moderator: Mm.

Participant: Most, people in the university would agree that there's ways we can reduce our impact on the environment.

Moderator: Yeah. I mean all of the Programme Leaders that I spoken to, they have at least an understanding of sustainability.

Participant: Mm.

Moderator: I think, erm, the least understanding came from the English Programme Leader.

Participant: Mm.

Moderator: And they kind of took a backseat and said, oh it's a political problem, what can we do?

Participant: Right.

Moderator: And think of like holistic ways to get it in there.

Participant: Yeah.

Moderator: Erm, 'cause I mean, the English Programme Leader said, all we do is literature and things like this, power of language and stuff, and they were saying, we don't need to teach a module in sustainability, we don't need to directly address it. Because it's coming up in the literature we're covering. I said, ok so that's leaving it up to the students to make their own links to sustainability from what you're exposing them to.

Participant: Yeah.

Moderator: Whereas other departments, I mean the Geography Department, you look through their modules and nearly every single module has got a connection to sustainability.

Participant: Yeah.

Moderator: Whether environmental in Climate Change, People Hazards and Resources, erm, social sustainability in Excluded Peoples and things like that, or economic going down the business route.

Participant: Yeah.

Moderator: Erm...

Participant: I wouldn't say we, we don't do it, I mean if you looked at our modules, you'd find some modules that have it in.

Moderator: Mm.

Participant: One of my modules, one of the learning outcomes is talking about sustainability related to research.

Moderator: Yeah.

Participant: Erm, but, you know, we probably do have many modules that don't specifically mention it, so that's certainly something that we could do.

Moderator: Yeah. Well I mean it is something that students can obviously associate with.

Participant: Yeah.

Moderator: Erm, because I mean I got some questionnaires back from your students and they were obviously, linking all different modules together, which I'll go through in a bit.

Participant: Mm.

Moderator: Erm, so you think it should be in every department?

Participant: Yeah, yeah.

Moderator: Ok. Yeah, as I was just gonna say there, it is interesting 'cause one of your students said in the questionnaire that, erm, that sustainability is something that needs to be acted upon on government level. Erm, they said teaching about sustainability is a good way to encourage talk.

Participant: Mm.

Moderator: But real progress will come when British and world governments decide they need to make a real change, erm, especially when it comes down to fossil fuels and energy output.

Participant: Yeah.

Moderator: Mm.

Participant: Yeah.

Moderator: So I mean, I mean there's all sorts of theories on how to promote and integrate it, I mean, one academic suggested actually building departments and their courses around aspects of sustainability. Now I don't definitely see that certainly as the way forward, I think it needs to be smaller connections made over time.

Participant: Yeah I think smaller connections and then you build up influence and momentum as you go along.

Moderator: Mm.

Participant: And overall, then it sort of adds up doesn't it?

Moderator: Yeah.

Participant: Erm, I mean students are typically here for three years.

Moderator: Mm.

Participant: So they don't have to know it all straight away.

Moderator: Yeah.

Participant: You can pick up different elements of it as you go along.

Moderator: Yeah.

Participant: But something like WBL, would be a good place to really reinforce it.

Moderator: Mm.

Participant: You could introduce it in the first year, they do Work Based Learning at the end of second year.

Moderator: Mm.

Participant: Erm, and then that would give them going into their third year, of course this is just talking about the undergraduates for that.

Moderator: Yeah yeah.

Participant: But going into their third year they're fully aware of it.

Moderator: Mm.

Participant: And it might maybe have an impact on their dissertation.

Moderator: Yeah.

Participant: Erm, which is something that could be measured.

Moderator: Mm.

Participant: Erm, and there's other ways to do it, you know, for Masters students and beyond that as well.

Moderator: Yeah. Yeah I was gonna ask you is there like a specialisation route going through the Biology programme?

Participant: With Biology, erm, they get to choose nearly all their modules.

Moderator: Oh right.

Participant: Erm, but they tend to go towards either the human biology or the animal side.

Moderator: Yeah.

Participant: So the animal side would probably become more aware of sustainability because of the types of things that they'll be learning about.

Moderator: Yeah.

Participant: Whereas the biology side can be a bit more, the human biology side can be a bit more sort of specific laboratory type stuff, but it still does build in there.

Moderator: Mm.

Participant: But maybe not as much so, I mean one thing I should really do is look at, if they take those two alternative paths.

Moderator: Mm.

Participant: Do they end up with the same knowledge about sustainability or not.

Moderator: Yeah.

Participant: Erm, and then there's some biology students who really do keep their degree quite general.

Moderator: Mm.

Participant: They probably have the most rounded view I would have thought.

Moderator: Yeah.

Participant: But I must admit it's not something I've asked them.

Moderator: Yeah, it's just interesting, I mean talking to the different Programme Leaders, I mean, the Maths Programme Leader was the first one I did, erm, and, I only got two questionnaires back from their students which was a shame.

Participant: Yeah.

Moderator: But both of their students said inclusion of sustainability was non-existent to very minimal.

Participant: Mm.

Participant: Erm, and there are some parallels with sort of the medical stuff as well.

Moderator: Mm.

Participant: In terms of how it's done and, of course, like you said about traveling.

Moderator: Mm.

Participant: Erm, if it's the cheapest and most ecological way to travel, sometimes it can be the best for health as well.

Moderator: Yeah.

Participant: So there's a link there.

Moderator: Yeah. [I mean].

Participant: [But whether] we're good at making that, making that aware to students we probably could do more on that.

Moderator: Mm. I mean it's something you could look into doing in the future.

Participant: Yeah.

Moderator: Erm, I mean it's funny there talking about the cheapest way of doing things, I mean obviously a lot of the push now is saying, if you do this it can be cheaper as well as being sustainable.

Participant: Mm.

Participant: Yeah.

Moderator: It's just whether the students make the direct link.

Participant: That's right yeah.

Moderator: Erm, so, I mean, obviously there's not very, not a lot to go on there but were you surprised by any of them?

Participant: I'm not really, I'm not surprised that some would say a lot and some would say not so much.

Moderator: Mm.

Participant: Erm, because of the, there's no, I mean I don't know if it's unique to programmes in other departments but certainly in our department, it's unique in a way that no two Biology students are the same.

Moderator: Yeah.

Participant: Whereas we have a Biomedical Science Degree that I also teach on.

Moderator: Mm.

Participant: Where they all have done EXACTLY the same modules, exactly the same coursework, whereas the Biology students are so varied so I think you will get, a variation in their, erm, opinions.

Moderator: Yeah.

Participant: So yeah that's probably what I'd expect.

Moderator: Ok, erm, just a few more findings, these are quite positive these ones. Erm, so, although one student remained neutral the other five agreed that all university courses and programmes should actively incorporate and promote sustainability.

Participant: Right.

Moderator: Erm, responses varied when they were asked if they'd like to learn more about it, but that obviously depends on what they want to go ahead into with career-wise I'm guessing, erm, at this point especially, but also about how much they've learned about it already.

Participant: Mm.

Moderator: Erm, 'cause three agreed, two were neutral and one disagreed, erm, but when asked about the employability link, whether they feel that learning about it has enhanced their employability, erm, three agreed, one remained neutral and two disagreed.

Participant: Mm.

Moderator: Now, I mean, obviously a lot of students have been split on this because obviously it depends on what they want to do.

Participant: Yeah.

Moderator: Erm... so, I mean I did expect there to be a few more agrees for biology students 'cause whatever they're gonna go into, they will have like, probably be exposed to it in one aspect or another.

Participant: Yeah, mm.

Moderator: Erm, but I don't know, maybe they were just thinking about exactly what they want to go into and they don't see it as that relevant.

Participant: Yeah, they might have been thinking about specific things that they're gonna go into and how it relates, but yeah slightly surprising that one, yeah.

Participant: But in terms of implementing more, or doing a better job of promoting sustainability, no I don't think of any obvious barriers.

Moderator: Mm.

Participant: Thinking about an institutional level.

Moderator: Yeah.

Participant: I think it relates to what you were saying about different departments with different focuses like English or history and so on.

Moderator: Mm.

Participant: Erm, as to building up a consistent approach across the university depends on maybe personal ideologies sometimes.

Moderator: Yeah.

Participant: Erm, yeah that would be the main barrier I can think of.

Moderator: Mm. I mean it helps to have like yourself and the Head of Department who will push it and include it.

Participant: Yeah.

Moderator: Because obviously you see the relevance yourselves so you want it in there for your students.

Participant: Yeah.

Appendix 11: DAQE Interview Transcript

Interview Transcript: Dean of Academic Quality and Enhancement

The interview was conducted in the participant's office at the University of Chester on 18th July 2014, and comprised of one Dean of Academic Quality and Enhancement and a single moderator.

Before the recording began, the moderator welcomed the participant and briefly explained the nature of the study. The moderator also delivered a consent form to the participant and gained permission to record the interview.

(Recording began)

Moderator: Ok, erm, so first of all, thank you very much for agreeing to this and participating in my project.

Participant: It's fine.

Moderator: So to start with, how well do you understand the term sustainability?

Participant: Well that's an interesting question because erm, sustainability has two key meanings, particularly in management in higher education.

Moderator: Mhmm.

Participant: One is to do with sort of environmental, ecological kind of sustainability.

Moderator: Yeah.

Participant: Which I guess is what you're interested in to a point.

Moderator: Erm, well I take it all into account.

Participant: And the, but the other is a very particular term which is to do with, erm, things like financial sustainability of an organisation.

Moderator: Yeah.

Participant: So our, erm, Higher Education Funding Council for England and, erm, sort of various other studies that go on are to do with how sustainable financially is an organisation as a business.

Moderator: Yeah.

Participant: In terms of what it's doing and how it's planning.

Moderator: Mm.

Participant: Which is, err, quite different in some ways.

Moderator: Well no 'cause sustainability is such a broad term, there's no single definition of it.

Participant: Ok.

Moderator: I mean obviously, have you heard of the Brundtland definition?

Participant: No.

Moderator: Ok well that's the main one, sustainability comes from the notion of sustainable development.

Participant: Erm, I'm interested in the design of programmes and what goes in learning programmes and what goes in them academically for students to learn.

Moderator: Yeah.

Participant: But also as a manager of the department for the organisation, I'm concerned about the broader sustainability of the organisation of my department, of the organisation in terms of its, as you were saying before, business and financial viability.

Moderator: Yeah.

Participant: And are we planning to do the right sorts of business, programmes, delivering them in the right way.

Moderator: Yeah.

Participant: In a way that's going to enable us to stay competitive, successful with good quality provision, and therefore continue healthily into the future.

Moderator: Mhmm.

Participant: So there's both of those, I mean I'm aware and interested in both of those aspects I guess.

Moderator: Yeah, so you have a pretty broad view of it.

Participant: I do, yeah I do have a broad view of it, I suppose if you asked me within my ROLE, which is the primary view, I guess my ROLE requires me to take the primary view of the business viability.

Moderator: Yeah.

Participant: Because, erm, if the organisation is planning and designing new courses, new programmes which my department, one team in my department is responsible for conducting the approval procedures for and all the rest of it.

Moderator: Yeah.

Participant: We ought to be making sure that the approval, you know, part of all the approval procedures should be testing out whether enough, market research or, err, there's enough indication of demand, and whether we've got the resources to deliver that particular programme, all of that, all of those things are tested out, as part of the approval process before a new programme is agreed.

Moderator: Yeah.

Participant: And it could be beautiful quality, very high standard of staff qualifications and resources.

Moderator: Yeah.

Participant: But actually, if you only recruit about five students to it it's not viable.

Moderator: Yeah.

Participant: So it isn't sustainable.

Moderator: Yeah, yeah that's a great way of looking at it yeah.

Participant: Mm.

Moderator: Erm, so where would you say you've developed your understanding, is it education, any certain influences of it, or is it just through your work how you've been exposed to it?

Participant: Erm... I would say, slightly different answer for each of those, I would say in terms of the business sense of sustainability as survival and viability of an organisation, erm, I would say that's through my work context primarily.

Moderator: Mhmm.

Participant: Erm... with the, wider environmental notions of sustainability, erm, in its broadest sense, broadest global sense, I would say that's through, through media, reading newspapers, news whatever.

Moderator: Yeah.

Participant: Mm.

Moderator: Erm, would you agree with that or do you think it's a lot more important than just education? Obviously education is a very broad term but...

Participant: Well I think education obviously is important, I believe in education and the importance of it and value of education otherwise I probably wouldn't be working where I'm working you know?

Moderator: Yeah.

Participant: Erm... I do think education's important, I think it's, erm, but as I say it's how to embed than meaningfully, I suppose I'm repeating myself that that is the challenge over it.

Moderator: Yeah.

Participant: But yeah I do think education is important and I think if it's, erm, ignored, then that's at our risk, but I think when you start talking about how you deliver VALUES.

Moderator: Mm.

Participant: Erm, because there are values associated with this, it isn't just knowledge, there is knowledge but there's also an awareness, but there's also values in there.

Moderator: Yeah.

Participant: Erm, it's a bit like how do you deliver equality in the curriculum.

Moderator: Mm.

Participant: Err, and an understanding of that, you know, it... it becomes more difficult, and of course there are a lot of people who think that, learning a SUBJECT or a vocational skill.

Moderator: Yeah.

Participant: Erm, or profession, shouldn't, be the vehicle for all sorts of wider, other wider social things as well.

Moderator: Yeah.

Participant: Erm, but, and that may be the case in some contexts but I think, certainly at this University we put a high value on trying to prepare students for employment.

Moderator: Mm.

Participant: Right the way through so, erm, it doesn't mean that everything they do has to have a strictly practical focus but, that they are encouraged to develop, learn, and become aware of

what will help to make them successful employees, and an awareness of sustainability is one of those things that I think will help to make them successful employees in both senses of the, what I see as both senses of the term.

Moderator: Yeah, that's really interesting 'cause I mean we were talking about this before, erm, because universities aren't actually obliged to prepare students for employment it's like an unwritten thing everyone believes.

Participant: Well they're not because they're not obliged to do any, you know, well they are obliged to do things but, erm, in terms of what is taught no, you're getting back to the really interesting stuff in my mind which is the fundamental questions what are universities for, what are they meant to do?

Moderator: Yeah.

Participant: And, people will argue that different types of universities perhaps have different primary aims and missions.

Moderator: Mm.

Participant: You know, whether it's research-driven or teaching.

Moderator: Mm.

Participant: Err, oh god what have we got to put in about sustainability, you know, find something, rather than a genuine engagement.

Moderator: Mm.

Participant: And this has often been the case, say going back to the example of equality and diversity it's often been the case.

Moderator: Yeah.

Participant: I mean it's a bit similar to internationalisation, I mean that's another area, you know, do we, are our curricula very Anglocentric, very Western-centric, with what we teach, erm, wouldn't it benefit all students if we, our programme content in a lot of areas was more diverse, had more global perspective.

Moderator: Mm.

Participant: But of course, you know, one student's programme of study has to be quite limited, you can't necessarily put everything into everything.

Moderator: Yeah.

Participant: Some of them are quite specialised, so I suppose, they can only be designed with... I'm still verging towards the slightly softer approach to this.

Moderator: Mm.

Participant: That people should be asked to, erm, CONSIDER how equality, you know, diversity, internationalisation, sustainability, other similar values, erm, and types of knowledge, associated types of knowledge and understanding, are reflected in their programmes, rather than, erm, SPECIFYING a checklist.

Moderator: Yeah.

Participant: Where people have to SHOW where it, all of those things appear.

Moderator: Mm.

Moderator: Yeah.

Participant: The, erm... I guess I would prefer I think, it's a slower burn, but ultimately, potentially a more meaningful burn.

Moderator: Yeah.

Participant: Is to look at it through the approach, look at it through staff development.

Moderator: Mm.

Participant: Erm, through the learning and teaching institute, which is in this department.

Moderator: Yeah.

Participant: How, and then enhance students, the quality of students' learning opportunities, by building in.

Moderator: Mm.

Participant: I mean there are other things, you know, the Students' Union do stuff, you don't just do this one in isolation.

Moderator: Yeah yeah.

Participant: There are other, erm, multi-pronged, erm, ways of raising awareness of this. But I think there perhaps is, is scope for, erm, in the, erm, Continuing Professional Development programmes that staff do, whether they're doing it to get their teaching qualification to teach in the university.

Moderator: Yeah.

Participant: Or whether it's sort of the doing it through other different sorts of workshops and events.

Moderator: Mm.

Participant: To sort of keep raising that, asking those questions.

Moderator: Yeah.

Participant: Erm, about how can you build this into your students' awareness, but of course, you know, if the lecturer doesn't really grasp it, or doesn't really see it, they're not going to be able to transmit that to the students.

Moderator: Yeah, yeah.

Participant: And if they DON'T really grasp it or see it, you can't REGULATE for that, you have to develop, people to do that, I think.

Moderator: Mm, yeah. Erm, so the next question I'm gonna ask you where do you feel the responsibility lies in integrating sustainability, but I'm guessing from what you've said there there's no one responsibility, it's combined?

Participant: There's no one answer to that.

Moderator: Yeah.

Participant: Erm, but it might be, I mean you say that some people have talked about top-down leadership and all the rest of it.

Moderator: Yeah.

Participant: I guess it's something that all levels, everybody should perhaps more aware of.

Moderator: Mhmm.

Participant: That it should perhaps be more embedded in, the discourses that we have.

Moderator: Yeah.

Participant: About managing education, erm, and as I say, one thing where we could take some more responsibility, something that the Director of Learning and Teaching and I can talk about is how we feed that into staff development.

Moderator: Yeah.

Participant: In the same way as we, try and feed in awareness for inclusion of all students, not shutting certain students out from certain ways of teaching and, you know, and things like this.

Moderator: Yeah.

Participant: But they're, but values things are... difficult to codify and prescribe.

Moderator: Yeah.

Participant: And that's largely what this is about I think.

Moderator: Yeah.

Participant: Because if somebody tries to TEACH it, but doesn't really believe in that or hold those values.

Moderator: Yeah.

Participant: They won't, well they probably won't even start off trying, but if somebody was MAKING them do it, they wouldn't do it effectively.

Moderator: Yeah.

Participant: They would be more likely to breed and generate some of their own cynicism or disbelief, transmit their disbelief.

Moderator: Yeah.

Participant: So if somebody DOESN'T hold those values, it, we can't force somebody to profess beliefs that they don't hold.

Moderator: Yeah, because that's the key, it's about values.

Participant: Yes.

Moderator: So if you're forcing someone to teach them, they're not getting it across.

Participant: Mm.

Moderator: If you educate them, you should turn the light off because, that doesn't make any impression really.

Participant: Mm, mm.

Moderator: Erm, it's about why you should do it, the importance of it, this is your world.

Participant: Because that's what will affect behaviour.

Moderator: Yeah.

Participant: It is raising awareness, it is helping people to see the links between what they do already through having this conversation.

Moderator: Yeah.

Participant: Erm, so yes, it's a, mm, yeah, that's a kind of model which has obviously got people thinking, so if you go back to what we were talking about and developing staff more generally, more widely.

Moderator: Yeah.

Participant: That's clearly a model which is quite productive.

Moderator: Mm, yeah. Well that's the end of the questions, unless you've got anything else to add.

Participant: Yeah, well only to go back to that remark that you said about, I think in the Maths Department, they're gonna put it in their module description and all the rest of it.

Moderator: Yeah.

Participant: I think that's great, I think if we said everybody MUST put something in, in their module descriptor.

Moderator: Yeah.

Participant: Going back to what we were talking about previously, if they haven't reached that point in their thinking, it would be meaningless.

Moderator: Yeah. Pushing people, it's got to be a developing thing that comes across, and I mean sustainability's been around since the 1980s, environmental awareness 1960s, but it's only the past ten years that it's really been pushed and people are starting to understand about it.

Participant: Mm.

Moderator: And I think it's not only education, it's more media influences and just seeing the world change from experience and age.

Participant: Mm.

Moderator: So I don't think there's one way we can solve the problem.

Participant: Mm.

Appendix 12: HoS Interview Transcript

Interview Transcript: Head of Sustainability

The interview was conducted in the participant's office at the University of Chester on 23rd July 2014, and comprised of one Head of Sustainability and a single moderator.

Before the recording began, the moderator welcomed the participant and briefly explained the nature of the study. The moderator also delivered a consent form to the participant and gained permission to record the interview.

(Recording began)

Moderator: Ok so first of all, thank you for agreeing to this and for participating in my project. Erm, so to start with, how well do you understand the term sustainability?

Participant: Erm... have you got a measure of what wellness is? (Laughter).

Moderator: Erm, ok is, is there a particular definition you associate with to explain your understanding?

Participant: Ok, right, that's a good question. Err... from my Masters we learned the Brundtland report definition.

Moderator: Mm.

Participant: Erm, but I, these days, TEND to, my understanding around sustainability focuses much more on the balance between, err, to put it simply, humanity and nature.

Moderator: Mhmm.

Participant: Erm, the triple bottom line John Elkington stuff kind of came into force a lot after that so economy, society and the environment and that balance is sustainability.

Moderator: Yeah.

Participant: Erm, I think that, the most important thing for me about the MEANING of the word sustainability is that it doesn't just mean to sustain something, it's not just about longevity of legacy for per se for its own sake.

Moderator: Mm.

Participant: It's about, erm, creating the society that we want to live in and that means balancing the things that we need to, erm, create the society.

Moderator: Yeah. I mean erm, as you were saying there, I mean there's loads of different definitions but there's no universally agreed one. Obviously the Brundtland definition is sustainable development and that's where the notion of sustainability comes from. Erm, but all of the definitions centre around either the capacity to endure or the ability to sustain.

Participant: Yes.

Moderator: Erm, but it's all about how we actually get that message across.

Participant: Yes.

Moderator: Erm, so how would you say you've developed your understanding? I know you mentioned a little bit before but is it through your schooling, education?

Participant: Err, yeah I mean my background is in sustainability spaced through education and through my work experience.

Moderator: Mm.

Participant: Erm... so obviously I did a Masters in it and I did that in 2002, so a long time ago now.

Moderator: Yeah.

Participant: And what they taught then has changed and my Masters is still going and it's a great Masters.

Moderator: Mm.

Participant: But I learned at the time a lot about corporate social responsibility and reporting.

Moderator: Mm.

Participant: Erm, from 2001, transparency and monitoring and stuff like that which was pretty dry.

Moderator: Mm.

Participant: And also there's a lot of, err, there's a lot of debate around... how useful that is in terms of, what we want to achieve, which is the kind of society that we want to live in.

Moderator: Yeah.

Participant: One that has businesses which don't exploit, erm, to the detriment of the ecosystem and the planet.

Moderator: Yeah.

Participant: And allow us to still live the way we want to live.

Moderator: Yeah.

Participant: Erm, so... I'm really pleased that the conversation has moved on from just corporate social responsibility and reporting because I think sustainability, err, as a CONCEPT encompasses a lot more than that and it encompasses this idea of collaboration and balance.

Moderator: Yeah.

Participant: And, erm... err, prioritising as well, our needs. Erm, but I also think that we do need to be wary and I learned a lot from working at WWF with Marks and Spencer.

Moderator: Mm.

Participant: Businesses get criticised a lot for greenwashing and we did it when I did my Masters, we criticised them and quite right that we should, everybody should critique, erm, but there was also things that I learned from Mike Barry who I think you saw in the interview didn't you?

Moderator: Yeah yeah.

Participant: So Mike always talks about this idea of Marks and Spencer being on a journey and quite rightly he says that 'cause he doesn't want to come out and say hey we're really sustainable and everyone will be like err, no you're not actually.

Moderator: Yeah.

Participant: So he's shrewd enough to do that, but actually what he's, erm, what he's done is very very clever because what he's saying is, we've gone from philanthropy to CSR to sustainability, and that's just where we are now and that's the way, that's the language that we're using now and we don't know where we're going to, at the moment there's this kind of empty space which we're moving towards and who knows, how that will be defined or what that will look like.

Moderator: Mm.

Participant: But I think it's important when we, erm, try to navigate the meaning of sustainability, and in order to make the right choices that we don't forget that, the meaning is only important to an extent.

Moderator: Yeah.

Participant: What we actually DO is really important.

Moderator: Yeah, I mean that's, there's so much debate about the actual meaning of sustainability and it can be frustrating at times, you think stop talking about it and actually do something.

Participant: Yes.

Moderator: We're not gonna make any progress if you actually come out and say, right we've actually discovered what we want to do here.

Participant: Yeah.

Moderator: As long as we're making progress, making any change, that's what we need, erm, and it's about what's the best way to push it forward. And one way I'm looking at is integrating it into the curricula, university curricula, obviously all the way across education it's becoming more relevant, like geography becoming more compulsory within schooling and stuff like that. Erm, so it's now widely agreed that moving towards the goal of a sustainable future requires fundamental changes in human attitudes and behaviour, therefore, among academics, they say progress is critically dependent on education and public awareness, erm, I'm guessing you'd agree with that? I mean obviously there's a lot more that comes into it than just that, but education is a very broad term.

Participant: Mm, yeah I think that erm, (sigh), I... it's interesting actually 'cause it leads back to your comment about the fact that we just have to do something, we need to stop talking about it and do it, and that's a very ASTUTE comment.

Moderator: Mm.

Participant: Erm, the reason that people quite often want to debate the meaning of things in order to challenge the decisions about what to do is because, people who have been on the planet longer than us have seen things going full circle.

Moderator: Yeah.

Participant: Time and time again and unintended consequences of the best laid plans of, you know, mice and men.

Moderator: Yeah.

Participant: So erm, it's quite right to want to do something, it's also right to want to do the best thing.

Moderator: Mm.

Participant: Erm, or better things, err, however we have to take risks, education is a way that we can make sure we keep our eye on the ball in terms of, err, what we HAVE done and so, learn our lessons and research and then that should inform policy and, erm, business critical decisions about what we do do.

Moderator: Yeah.

Participant: Erm, I think that having come in to the university's academic higher education sector only a couple of years ago from the kind of public sector and business sector, strictly public sector.

Moderator: Mm.

Participant: And NGO side of things, erm, I was really shocked to see how behind the majority of the higher education sector is.

Moderator: Yeah.

Participant: And I totally agree with your comment about education and human behaviour was it?

Moderator: Yeah, it's about human behaviour and awareness really.

Participant: And awareness yeah, being the most critical factors that we have because, what we've kind of come to perceive in the sector is that government are not, is not gonna do it.

Moderator: Mm.

Participant: Politics does not work for this kind of change, businesses are doing, some are doing really great things, like Marks and Spencer, they're also doing really bad things, really s**t things.

Moderator: Yeah.

Participant: And erm, businesses, are great exemplars of things that could be done.

Moderator: Mm.

Participant: Erm, but most businesses are not, and for some time now, will not be in a position to deal with the dichotomy between consumption and, erm... between... the fact that it doesn't matter how green your business is, we have to stop consuming as much as we are.

Moderator: Right.

Participant: And so that, that consumption dichotomy is, when you're trying to green your business and you're creating green products so to speak.

Moderator: Mm.

Participant: It doesn't matter how b****y green your product is, we need to stop consuming, we need to stop digging up minerals from the earth, polluting it and causing issues because we've gone too far.

Moderator: Yeah.

Participant: Erm, I saw a really interesting quote recently, erm... I might be able to try and find it for you but it was kind of talking about, you know, what will a country look like which is in, say fifteen, twenty years' time.

Moderator: Mm.

Participant: If it were sustainable and this quote from quite an eminent and also controversial environmentalist was like, it will look like a third world country.

Moderator: Mm.

Participant: That's what we'll look like (laughter).

Moderator: Yeah.

Moderator: Yeah.

Participant: It's up to the businessmen who are deciding how their businesses should be performing, what kind of transparency they have along their supply chains, how they're treating people along their supply chains, and it's up to adults, up to voters to vote in the politicians which they want to make those changes as well and, erm, it becomes almost unwieldy, which makes it easier to go, students are the future, you know?

Moderator: Yeah.

Participant: Erm, I think probably possibly a better way of putting it is that, erm, students and universities have the potential to have the biggest impact on creating a more sustainable world, a more just and sustainable future.

Moderator: Mm.

Participant: Erm, but, politicians have the responsibility to do it, and the duty of care to do it.

Moderator: Yeah.

Participant: And he or she, the English Programme Leader is also right in the sense that we're, I talk a lot about systems change when I talk about sustainability because, we have to understand that we're operating within these big finance systems, energy systems, erm, food systems and the global powers that, erm, and relationships and partnerships that happen mean that, erm, they set the wheels in motion for certain impacts which, it's no good just kind of, trying to tackle the impacts we have to tackle the systems that are making them happen, so if we're putting all of our pension funds into the fossil fuel industry then we're gonna have a big fossil fuel industry (laughter).

Moderator: Yeah.

Participant: If we put them into the renewables industry we'll have a big renewables industry, it's quite, you know, big systems are at work and we have to look at those, and they have to be accountable.

Moderator: Yeah, I mean essentially there are those who have more power to make change than others.

Participant: Mm.

Moderator: But at the end of the day, everyone has an impact on this world so everyone is responsible, and as you mentioned before, progress towards sustainability requires collaboration and holistic thinking across, if you talk about curricula across disciplinary and institutional boundaries, but also between businesses, social communities, there's no one responsible thing for pushing it forward.

Participant: Exactly.

Moderator: Erm, and I think because the English Programme Leader, they had a bit of a narrow-minded view of sustainability, they weren't too aware of what it meant.

Participant: Mm.

Moderator: And after I explained it to them, they looked straight away at the environment, whereas I'm guessing you take a more broad view of the whole thing.

Participant: Yeah.

Moderator: Erm, so it's those that take the more narrow-minded view, they try and pass the blame onto others sometimes.

Participant: Mm, mm.

Moderator: Erm, rather than seeing their responsibilities, probably because they don't understand how they CAN have an impact.

Participant: Yeah or where they fit in, yeah.

Moderator: Yeah.

Participant: And that's, and so then you come full circle back to this idea that people want to keep trying to explain the meaning of sustainability 'cause they want people to understand how they fit in, but that's not really how you get people to understand anything by explaining the meaning, you have to demonstrate or show them or you know, DO something about it and then, they experience the meaning rather than intellectually kind of understand it.

Moderator: Yeah, I mean erm, that's, I had an interview with the Dean of Academic Quality and Enhancement last week, erm, and talking about getting it in the curricula, there's a difference between teaching it and it becoming a procedure like a tick box, do we include sustainability within our course? And actually engaging students and passing on the values.

Participant: Yes.

Moderator: 'Cause values is the most fundamental thing we need to pass on.

Participant: Absolutely.

Participant: Mm.

Moderator: Because they're gonna be faced with issues to do with sustainability.

Participant: Mm.

Moderator: And it's our world that we're gonna be making at the end of the day.

Participant: Mm.

Moderator: Erm, so they're gonna, they want to make it more clear in the module descriptor, things like that, and spell it out more clearly to students.

Participant: Mm.

Moderator: Erm, other Programme Leaders have said similar things, 'cause most teach things that can be related to it, but the students don't always see that.

Participant: Yes, which is really interesting so, one of the things I think will be much better this year, erm, is, kind of a bit more of a pulling together with the way that we're engaging around curricula.

Moderator: Mm.

Participant: We've had some good changes and the Dean of Academic Quality and Enhancement is great, and, erm, we've got I think quite a few things that we're doing, like for example, erm, EYE Training so employability enhancement training is what it stands for.

Moderator: Yeah.

Participant: And giving students an option to do that, making sure that every Work Based Learning students gets a small training around sustainability as part of their Work Based Learning 'cause every student has to do that.

Moderator: Yeah.

Participant: So it's not necessarily that you teach, you train them on sustainability skills, you give them literacy so you get them to be able to speak about sustainability so hopefully, they will get an understanding of the issues, err, which might be coming up in their area that they're going to, and an ability, a skill to go and find solutions to those issues and to understand that they are sustainability issues.

Moderator: Yeah.

Participant: Erm, and then kind of pulling together a lot more with the Student Union this year to, err, encourage the Ethics and Environment Forum to work more closely as Green Ts and to, erm, be part of Green Impact which is the staff's initiative obviously.

Moderator: Yeah.

Participant: So hopefully they'll be more of a meshing between staff and students, and more conversations and dialogue around it as well, and also through the stars as well, the academic reps.

Moderator: Yeah.

Participant: Erm, so I feel like if we manage to pull that together well this year that could be quite a big change in, erm, culture for the university, for the staff and students to actually realise that there is stuff going on at a curriculum level around it, maybe.

Moderator: Yeah. Ok, so we've spoke about this university, I'm guessing general university level promoting sustainability...

Participant: I think some universities are doing it really really well and other universities are not, and it all just comes down to whether or not the Senior members of staff are interested in it.

Participant: Which most lecturers are supposed to do unless they've already been lecturing for a certain amount of time when they join, and I think it is, I don't exactly understand the boundaries.

Moderator: Mm.

Participant: So I've done a couple of those sessions and I think they're once or twice a year, erm, but it's an hour, you know, there's only so much you can get through.

Moderator: Yeah.

Participant: Erm, and, erm... I think... rather than trying to integrate anything specific into the curriculum, working with lecturers earlier on around these issues would possibly be more important or work better maybe.

Moderator: Yeah, well that was a great answer 'cause that's pretty much exactly what the Dean of Academic Quality and Enhancement said about it, they're worried about it going from, being something that's emerging in importance to being taking a backseat, because it kind of goes over students and it becomes a tick box thing as we said. Erm, and the other main barrier is with the staff, whether they have the expertise and knowledge to teach about it.

Participant: Mm.

Moderator: Erm, and if they don't, if they don't see sustainability as an important thing they're not gonna engage and convey the values that are needed for students to acquire.

Participant: Mm.

Moderator: Erm, so, I mean that's, that's the tricky thing because obviously, we want it to be in all courses and all subjects, but we don't, we need to keep it engaging.

Appendix 13: DLT Interview Transcript

Interview Transcript: Director of Learning and Teaching

The interview was conducted in the participant's office at the University of Chester on 31st July 2014, and comprised of one Director of Learning and Teaching and a single moderator.

Before the recording began, the moderator welcomed the participant and briefly explained the nature of the study. The moderator also delivered a consent form to the participant and gained permission to record the interview.

(Recording began)

Moderator: Erm, ok, so first of all, thank you very much for agreeing to this and for participating in my project. Erm, so first of all how well do you understand the term sustainability?

Participant: That's a good question.

Moderator: It is (laughter).

Participant: So I'm giving a little thought to it.

Moderator: Ok.

Participant: Erm... I think it, well to ME it's a very broad term and encompasses quite a few different areas.

Moderator: Mhmm.

Participant: Erm, at an individual level, I think it's about a person's sense of responsibility for, resources.

Moderator: Mhmm.

Participant: That's very much the sort of geographical approach I suppose.

Moderator: Yeah.

Participant: But beyond that it can also include, erm, a whole range or life activities.

Moderator: Mm.

Participant: That could be sustainable so for example, you might set up a sustainable financial, plan for your life.

Moderator: Yeah.

Participant: You might set up a care plan for an older person that was sustainable, so I think, I think it's much broader than just that.

Moderator: Oh yeah.

Participant: In terms of a sort of world view, I think again most people tend to think about it in terms of resources.

Moderator: Mm.

Participant: Particularly things like recycling and, use of energy and those sorts of things. But again it can have a much broader, broader, remit than that.

Moderator: Yeah.

Participant: Erm, and an example from my area learning and teaching there's, there's been quite a lot of interest, over quite a few years now in the idea of sustainable assessment, in other words forms of student assessment that, prepares them for future life.

Participant: So that all helps, and through my work, as a teacher, erm, over the years, and more recently, in a managerial role thinking about curriculums.

Moderator: Yeah.

Participant: I've, I've had to pay some attention to thinking about, how education for sustainable development might be incorporated in the curriculum and there's been some quite interesting debates, when I've had the opportunity to talk to colleagues across the university for example about this.

Moderator: Yeah.

Participant: Because there are very widely differing views.

Moderator: Mm.

Participant: Erm, and it also links in to, erm, work I've done, again over a few years I suppose, in looking at, interpreting the university's mission.

Moderator: Yeah.

Participant: Erm, because, universities like most organisations say things about what their aims are.

Moderator: Mm.

Participant: And then when you look at the practice, there's often a dissonance between the two.

Moderator: Yeah.

Participant: And when you explore that with people on an individual level in terms of the behaviour and their, attitudes of what they do.

Moderator: Yeah.

Participant: There's often some quite interesting debates to have.

Moderator: Yeah, yeah, I mean I've come across a lot of varying perceptions, 'cause I've interviewed Programme Leaders in five departments so far. Geography, Sociology, I'm hoping to do Biology, erm, across to Business, English, and the Maths Department which are more neutral subjects.

Participant: Yeah.

Moderator: Erm, all of them include sustainability in one way 'cause it's hard not to 'cause everything can be linked.

Participant: Mm.

Moderator: Erm... some obviously address it more directly.

Participant: Mm.

Moderator: Obviously Geography takes a broad view, we cover it in first year in like People, Hazards and Resources.

Participant: Yeah yeah.

Moderator: Where you talk about environmental disasters and how they affect social and economic processes.

Participant: Mm.

Moderator: Erm... English, the English Programme Leader had a bit of a negative view on it.

Participant: Mm.

Moderator: Mm.

Participant: And, and the crunch, from my experience, the crunch comes when you present somebody with the, a Programme Leader say, with the argument that they should adjust the content, of their curriculum.

Moderator: Yeah.

Participant: To provide, erm... applications of knowledge for students that reflect this theme, so for example, you might concentrate, as taking the example of English does, on, erm, pre and post-colonial literature in the curriculum.

Moderator: Yeah.

Participant: To give students an understanding of where our attitudes towards race come from.

Moderator: Mm.

Participant: As a broad.

Moderator: Yeah.

Participant: Erm, erm, it's more difficult for the university to come to terms with things to do with our, Christian foundation, that's VERY hard for people to get their head around.

Moderator: Yeah.

Participant: But equally you could say well promoting equality for all is a basic principal of that, and you could introduce that into any subject, discipline.

Moderator: Mm.

Participant: Erm... people, in my experience are more comfortable with it being the preserve of geography or biology or something business.

Moderator: Yeah yeah.

Participant: You know, where it's, where it's seen to be, traditionally part of the curriculum and it's making, it's getting people to make that SHIFT that's so hard.

Moderator: Yeah.

Participant: I mean the argument, you know, it's not my discipline to do that.

Moderator: Mm.

Participant: And it also relates to, how far, individual subject areas and programmes feel that they are responsible for the graduate outcomes of our students.

Moderator: Yeah.

Participant: So graduate outcomes can be much broader than those within the discipline and they always are.

Moderator: Mm.

Participant: Erm, but people tend to think about them in terms of what the programme that they're studying seeks to achieve and leave the other things to Student Support and Guidance and volunteering and other activities.

Moderator: Yeah.

Participant: So you've hit the nail on the head there I think (laughter).

Moderator: Yeah. I mean it's, erm, the English Programme Leader said that they don't feel that there should be a module that they should teach to across sustainability.

Participant: Don't forget to mention that because actually getting into conversation with people helps a lot.

Moderator: Yeah.

Participant: Erm, you know that's broadened people's minds about how they could do it.

Moderator: Mm.

Participant: And of course the other thing to bear in mind is that our students will come here, expecting that these things will be talked about because it's been talked about in school and college.

Moderator: Yeah.

Participant: And, like some other areas of what we do, we're a little bit behind the times.

Moderator: Yeah.

Participant: And we need to make sure that we're responding to student expectations.

Moderator: Yeah.

Participant: Erm, which can be things like having recycling bins around and things like that.

Moderator: Mm.

Participant: Which erm, most people take for granted now but sometimes aren't there.

Moderator: Mm.

Participant: And it's been great to have the Head of Sustainability here because they've worked really hard but it's, I know they've found it quite a, quite a challenge getting everything put in place that we really ought to have.

Moderator: Yeah. I mean speaking to them last week, erm, I said so how do you feel you're coming across, how do you feel you're progressing? And they said to be honest I'm not very happy with it, I feel like it's progressing very slowly.

Participant: Mm.

Moderator: But that's mainly because they're very ambitious, and they have high hopes for what they want to achieve.

Participant: Yeah, and we're a very conservative university.

Moderator: Yes, they did come up with that a lot.

Participant: Yes (laughter). Things change very slowly here (laughter).

Moderator: Yeah. I mean, I said to them because they seemed to get a little bit down on themselves when they were talking about this, I said yeah but if you're not ambitious in the role you have, then you're gonna underachieve anyway 'cause it's a very hard thing to push forward to engage the students properly.

Participant: Mm.

Moderator: Erm, and it's all about, how we can engage students, 'cause it's one thing teaching about it, but if we don't embed the values needed to make change, then it seems irrelevant to tell them how they can make change.

Participant: Mm.

Moderator: Erm, and that's what I'm hoping to gauge when I'm interviewing people.

Participant: Yeah, yeah because I think, yes, thinking about our students, erm, whilst a lot of them will have expectations of having some exposure to sustainable attitudes and values and practice.

Moderator: Mm.

Participant: A lot of them are, very unsophisticated when they come here and have come from backgrounds, they're perhaps first generation university students a lot of them.

Moderator: Mm.

Participant: So, they won't necessarily have had the, experience of being in an environment where people discuss things.

Moderator: Yeah.

Participant: And have different points of view.

Moderator: Mm.

Participant: And there's no doubt about it if you're going to behave in a sustainable way, you have to make some, less comfortable choices than perhaps you would like to make.

Moderator: Yeah.

Participant: And erm, unless people see the long-term consequences and are accepting, and are prepared to accept their individual responsibility for something which affects everybody.

Moderator: Yeah.

Participant: Which is a hard step for some people to make.

Moderator: Mm.

Participant: It's going to be a bit difficult so, we've got two factors, the conservativeness of the institution and the, mm, lack of vision sounds hard but the, erm... probably there's a fairly low level engagement with sustainability amongst our students before they come.

Moderator: Mm.

Participant: So those are two things that we've got to overcome.

Moderator: Yeah.

Participant: And if things aren't made easy for them in that way.

Moderator: Mm.

Participant: Erm, I think there is a balance to be struck between, doing it, emphasising sustainability in a, err... not a, I don't mean to use the word subversive, what's the word I want? You know, erm, hidden (laughter).

Moderator: Yeah.

Participant: It's, it's, sometimes if you talk about something very obviously, it puts people off.

Moderator: Yeah.

Participant: It's trying to find a ways that awaken people's interest and makes them aware, in both concrete and sort of more subtle ways I suppose.

Moderator: Yeah. I mean, that was a main concern of both the Dean of Academic Quality and Enhancement and the Head of Sustainability, erm, obviously the Programme Leaders, there was mixed opinions of yes we should embed it in all courses, all curricula, other ones thought specific modules throughout, erm, but it's going from something that's emerging in importance within students and practitioners, to it maybe taking a backseat if it becomes this sort of bolt-on thing.

Participant: Yes yeah.

Moderator: Erm, the Dean of Academic Quality and Enhancement was talking about, we would lose the whole meaning of trying to push sustainability if it becomes like a tick box procedure.

Moderator: Yeah.

Participant: We need some sort of approach to say to people, what are you doing?

Moderator: Yeah.

Participant: So you've been round collecting data for your research project and that's got people to think but, we don't have people doing that all the time (laughter).

Moderator: Yeah.

Participant: You know, the way you've done it has been probably much more valuable than anyone ticking a box because you've engaged in a conversation about it.

Moderator: Yeah.

Participant: Finding time, and encouraging people to have a conversation about it within departments and so on.

Moderator: Yeah.

Participant: Is, perhaps the best way that we could move forward.

Moderator: Yeah, I mean it's like throughout I've been more interested in them trying to see the links for themselves.

Participant: Mm mm.

Moderator: Me trying to give them subtle hints and them saying oh yeah actually I do see why it's related.

Participant: Yes, yes yeah.

Moderator: Erm, but another thing that both the Head of Sustainability and the Dean of Academic Quality and Enhancement brought up is Professional Development courses, erm, for practitioners to, 'cause obviously, a lot of them I spoke to, other than the English Programme Leader, had a pretty good grasp of what sustainability is.

Participant: Yes yeah.

Moderator: Obviously it depended on what their background and expertise on what they perceived it to be, erm, but they all had an understanding of it which they employed within their curricula.

Participant: Yeah.

Moderator: Erm, so it's just about, addressing it to those that don't quite have a grasp and, may not feel, capable, of passing it on to their students and implementing it within their teaching practice.

Participant: Yeah, yeah yeah. It might be helpful if you've got time, it might be helpful for you to talk to my colleague who runs the Postgraduate Certificate in Learning and Teaching.

Moderator: Oh right.

Participant: Because that's the programme for all new staff who come to the university to learn to teach.

Moderator: Mm.

Participant: And, and this would be one of the topics that, they would, ideally would have some mention of in the curriculum.

Moderator: Mm.

Participant: But it's really hard to get everything in (laughter), where there are so many other things, that need to be included, but that would be an opportunity, where we could provide some development and thinking and discussing time to new staff.

Moderator: Mm.

Participant: Because, certainly if you start with people who are, who are at the beginning of their career.

Moderator: Mm.

Participant: It's a good way to, embed attitudes and thoughts about how this should be addressed.

Moderator: Yeah.

Participant: And it's often hard to change people's ideas when they've been here for a long time.

Moderator: Yeah.

Participant: That might be something to think about.

Moderator: Yeah, that sounds good. Erm, so... obviously we've talked about the specifics within university curricula but how do you feel generally about its integration within courses? Do you feel it should be more of like a scattergun approach so students are exposed to it throughout but in small amounts?

Participant: Yeah.

Moderator: 'Cause obviously at the moment, from what I've looked at in the departments, as you go through the years you get to third year and you specialise more, so you can go into like in Business you've got Sustainable Entrepreneurship.

Participant: Mm.

Moderator: Erm, in Geography we've got Sustainable Futures, things you go into, whereas at the start it's more the core subjects, or the core modules seem to give you a broad sense of everything.

Participant: Yeah. Well, that's a good question as well, erm... mm... if all students are going to be given some opportunities to develop their critical thinking in this area.

Moderator: Mm.

Participant: The only way to ensure that through the disciplines is to make sure that there's some emphasis placed on it in the core of all programmes.

Moderator: Yeah.

Participant: If then, those students who are particularly interested in it can take an optional module later on, that's, that's a good way of doing it.

Moderator: Yeah.

Participant: Because you give the opportunity to those who are particularly interested.

Moderator: Mm.

Participant: But you don't... rabbit (laughter), or make it a requirement for everybody else.

Moderator: Yeah, yeah.

Participant: Whilst, whilst maintaining a focus of it in some way that is appropriate to the discipline, all the way through.

Moderator: Mm.

Participant: Erm, if you accept that everybody should have some, knowledge and opportunities to adapt their behaviour towards this.

Moderator: Mm.

Participant: Which I think it would be very hard to argue against really.

Moderator: Yeah.

Participant: I was thinking about this earlier on today, because, erm, I was, I don't know, I was listening to the radio, and erm, I was thinking about sustainability and other things which really should be part and parcel of people's lives, and of course if you go to the world out THERE.

Moderator: Mm.

Participant: There will be quite a few, you know, quite a high proportion of people who still DON'T THINK that sustainability is something that they need to think about.

Moderator: Yeah.

Participant: Erm, so we've got, I think we have got quite a responsibility as a university.

Moderator: Mm.

Participant: Because if you think about a university as being, the way in which we, DEVELOP, the YOUTH principally of our country to face the future, then we have a huge responsibility to make sure that, all sorts of attitudes are spread widely because their job is actually to, we're training people here, developing people to LEAD others and to INFLUENCE.

Moderator: Yeah.

Participant: And it's about influence.

Moderator: Yeah.

Participant: And perhaps following on from that what we ought to be teaching students as well is how to influence people.

Moderator: Yeah yeah.

Participant: Because a lot of them have quite a bit of knowledge.

Moderator: Mm.

Participant: But they don't know what to do with it so they'll go home and, you know, people have got windows open and the heating turned up you know?

Moderator: Yeah, yeah.

Participant: It's, it's not just about knowledge it's about skills as well.

Moderator: Yeah.

Participant: So erm, it's much broader based than just content.

Moderator: Yeah.

Participant: But yes, I would go for, everybody looking to see where they, almost like a mapping exercise, where do we talk about this in the curriculum.

Moderator: Mm.

Participant: 'Cause USUALLY when you ask people and they spend some, you get them to spend some time but they can do it (laughter).

Moderator: Mm.

Participant: It's just everybody's so busy with one initiative after the other.

Moderator: Yeah.

Participant: And seeing which is the most important and, and REALLY finding ways that where, in which we can be influential.

Moderator: Mm.

Participant: Because I don't have control over the curriculum, it would be nice to think that I (laughter), that we might have.

Moderator: Yeah.

Participant: But that's, that's not the way the university works.

Moderator: Mm.

Participant: UNLESS there is a very strong external driver.

Moderator: Yeah.

Participant: So faculties are quite important.

Moderator: Yeah.

Participant: You know, generally speaking people who work at universities see themselves as independent academics who work here, rather than being part of a, a GRAND scheme that's doing something particular for each student.

Moderator: Yeah.

Participant: Erm, so I have to be quite subtle about it really.

Moderator: Mm.

Participant: If, I'm quite sure if the University was presented with the opportunity to say, have a five million pound grant if we could demonstrate to the funding council that we were embedding sustainability across the University, all of a sudden, we put out loads of workshops and everybody would do it.

Moderator: Oh yeah yeah.

Participant: But with the range of different things we've got to do.

Moderator: Mm.

Participant: My personal responsibility for ensuring that this, as opposed to any other, or alongside any other initiatives is, is, mm, unfortunately limited I suppose I would say.

Moderator: Yeah.

Participant: That doesn't mean I don't use my, own particular views where I think they're, they're, erm, they parallel where the university would want to go because I think if you spoke to the Senior Management Team about this they would say oh YES sustainability ABSOLUTELY yes, very important for our graduates.

Moderator: Yeah.

Participant: But erm, actually supporting us to do something about that.

Moderator: Yeah.

Participant: Would be, is an economic decision of them, ultimately.

Moderator: Yeah.

Participant: As much as one of principal.

Participant: Yes.

Moderator: Because it's quickly getting out of our hands if we carry on living unsustainably obviously.

Participant: Yeah yeah.

Moderator: But, it's looking at the main ways of engaging people, and the main debate between what we've had in our lectures and lessons are, trying to influence people and encourage them by saying you could save money by being more sustainable.

Participant: Yeah, yeah.

Moderator: But then you have the downside of, so people stay at home, they live more sustainably at home, save all their money and then go on holiday, and blow a load of carbon credits just by a long haul flight.

Participant: Yes yeah (laughter).

Moderator: And it's more about the slow progression of developing values, and seeing why they should engage with it.

Participant: Yeah. Coming back to my responsibility it's also about organisational structures.

Moderator: Yeah.

Participant: So to put a slightly more positive thing on it, erm, for the last... for the last eight years, we have been without a structure where there's a clear link for learning and teaching between jobs such as mine, and individual departments.

Moderator: Mm.

Participant: We used to have a series of roles including Learning and Teaching Coordinators who were, members of staff who had some time set aside for developing learning and teaching within their department and faculty.

Moderator: Yeah.

Participant: And for various reasons, these posts were discontinued, and it's taken eight years to get them back in again, and we've just got a network back in.

Moderator: Mm.

Participant: Ok so I now have, the university has a Senior Teaching Fellow in each faculty.

Moderator: Right.

Participant: Now, we will have I hope by the beginning of next year. Now part of what I'm doing with those Senior Teaching Fellows is going through in a series of meetings, erm, with them about topics that are things we have to talk about, and do things about in all of the departments, in all of the programmes, so we're looking at, routine things like peer observation of teaching and module evaluation, but they're also topics that we're looking at, so we're looking at academic integrity and so on.

Moderator: Yeah.

Participant: Now, I can put sustainability and employability on that set of debates to have with those individuals when we come together for our six weekly training meeting.

Moderator: Mm.

Participant: And we can put it on their list for something to look for and talk about in their departments, now that's a mechanism now for doing something about it.

Moderator: Yeah.

Participant: Now, because of the influence that I potentially have in my role, I can actually put that on their list of things to look at.

Participant: It would be hard for somebody to argue with that, but they did argue, they had a big debate about entrepreneurship amongst the Deans about whether than should be included.

Moderator: Right.

Participant: And there were a lot of mixed feelings about it.

Moderator: Mm.

Participant: I think it would be less difficult to argue about sustainability but I think you would have an intellectual argument from some that that's not our business.

Moderator: Yeah, it's a hard thing to argue AGAINST, sustainability isn't it?

Participant: Yeah.

Moderator: Erm, yeah. Ok so, the last question I have is erm, about the barriers that you feel, obviously we've touched upon things like expertise, erm, institutional drive and commitment. Are there any other barriers that you feel?

Participant: I think the biggest barrier, erm, for discussing anything that's different or new or involves change is actually time.

Moderator: Yeah.

Participant: Erm, higher education has changed a lot over the last fifteen or twenty years.

Moderator: Mm.

Participant: Erm, there is much more pressure on people to do lots of different things.

Moderator: Yeah.

Participant: And we are organised in a different way now, now here at the University of Chester that's partly a function of size, we've gone from being a very small institution to being quite a large institution in a fairly short space of time.

Moderator: Yeah.

Participant: Talking about ten, fifteen years. Erm, and what that has done is, inevitably... lessened the opportunities for staff in different disciplines to spend time with each other.

Moderator: Yeah.

Participant: So when I started teaching here in 1996 (laughter), there were, we had a single common room.

Moderator: Mm.

Participant: And colleagues from the Geography and English Department would all be there at the same time in the morning having a cup of coffee.

Moderator: Yeah.

Participant: It was that scale of thing so, so you would be familiar with other people and if there was something you wanted to ask it would be easy to do so.

Moderator: Yeah.

Participant: And you could say that, electronic communication which didn't exist then.

Moderator: Yeah.

Participant: To all intents and purposes has now given loads of opportunities, but there's nothing to beat face-to-face meeting people.

Moderator: No no, it's very segregated now.

Appendix 14: Main Questions Asked During the Interviews with Programme**Leaders**

Although the moderator asked more questions during the interviews with Programme Leaders due to the various discussions that took place, the main questions asked included:

1. So to start with, how well do you understand the term sustainability?
2. Where has your understanding of the term come from?
3. Is there a particular aspect that you associate sustainability with, or do you believe the concept covers a broad range of aspects and issues?
4. How important do you consider the topic of sustainability to be in the 21st century?
5. How do you feel about its place at university level and about its integration into university curricula, and more specifically your department?
6. In terms of your obligations as a university lecturer and Programme Leader, do you feel as though you have a moral and personal obligation to include and promote sustainability education, or is it more of a professional obligation and meeting the demands and interests of employers and your students?
7. Would you agree that in order to progress towards a sustainable future, holistic thinking and collaboration across disciplinary and institutional boundaries is required?
8. What are the main barriers to integrating sustainability into university curricula, and more specifically your department?

Appendix 15: Main Questions Asked During the Interviews with Senior Support Staff Members

Although the moderator asked more questions during the interviews with senior support staff members due to the various discussions that took place, the main questions asked included:

1. So to start with, how well do you understand the term sustainability?
2. Where has your understanding of the term come from?
3. Is there a particular aspect that you associate sustainability with, or do you believe the concept covers a broad range of aspects and issues?
4. How important do you consider the topic of sustainability to be in the 21st century?
5. It is now widely accepted among academics that moving towards the goal of a sustainable future requires fundamental changes in human attitudes and behaviour. Therefore, progress in this direction is critically dependent on education and public awareness. Would you agree with this?
6. How do you feel about its place at university level and about its integration into university curricula?
7. Do you feel that sustainability is relevant to all subjects and courses at the university?
8. Would you agree that in order to progress towards a sustainable future, holistic thinking and collaboration across disciplinary and institutional boundaries is required?
9. Do you believe that its inclusion within university curricula would enhance the employability of students?
10. In terms of your obligations as (specific role), do you feel as though you have a moral and personal obligation to include and promote sustainability and sustainability education, or is it more of a professional obligation and meeting the demands and interests of employers and your students?
11. Where do you feel the responsibility lies for integrating sustainability into a university's curriculum?
12. What are the main barriers to promoting sustainability at university level and integrating it into university curricula?

Appendix 16: Pilot Questionnaire
with Modifications

Project title changed to "Staff and Student" as the focus altered due to the low response rate from students.

Questionnaire: Student and Staff Perceptions of Sustainability and its Integration into University Curricula

(Please fill in text boxes, mark checkboxes with an 'X', and circle numbers to answer)

1. Programme of study:

2. Gender:

Male

Female

Selectable checkboxes were added rather than participants placing an 'X' or circle on the answer. So the text changed to "Please fill in text boxes and click appropriate checkboxes".

3. How would you rate your level of familiarity with the term sustainability?

Not at all familiar 1 2 3 4 5 Very familiar

4. How would you rate your level of interest towards sustainability and its associated issues?

Not at all interested 1 2 3 4 5 Very interested

5. Please write five keywords, concepts, ideas, or actions that come to mind when you think about sustainability.

Changed to "Please write up to five" so students don't have to write exactly five.

6. Which of the following best describes your personal attitude towards sustainability?

I think it's a waste of time and effort I'm not really bothered

It's OK if others want to do it It's a good thing I am a passionate advocate

7. What is your accommodation type/status?

Living at home with parent(s) or guardian(s) and commute Halls of residence

University-managed house or flat Private accommodation Other

Other (please specify):

Changed to "Living at family home and commute" to make it more compact.

8. Do you consider yourself to have a sustainable lifestyle?

Yes No

Added the option "Unsure" in case students don't understand the concept.

To make them more compact and understandable, "Thoroughly recycle" changed to "Recycle all I can", and "Turn off lights and unused appliances" changed to "Turn off unused appliances".

9. How often do you consider sustainability when making day-to-day choices?

Never 1 2 3 4 5 Always

10. Which of the following sustainable behaviours do you engage in?

Shortened to "drive".

- | | |
|--|---|
| <input checked="" type="checkbox"/> Take short showers rather than baths | <input checked="" type="checkbox"/> Use public transport |
| <input checked="" type="checkbox"/> Thoroughly recycle | <input checked="" type="checkbox"/> Walk or cycle rather than driving |
| <input checked="" type="checkbox"/> Turn off lights and unused appliances | <input type="checkbox"/> Buy local or organic food |
| <input type="checkbox"/> Use energy saving light bulbs | <input type="checkbox"/> Buy Fairtrade products |
| <input type="checkbox"/> Use blankets or warm clothes instead of turning the heating on/up | <input checked="" type="checkbox"/> Use reusable shopping bags |
| <input type="checkbox"/> Other (please specify): | |

Removed "the".

11. If you do engage in sustainable behaviour, what are your main reasons for doing so?

It's important that we preserve the planet. Only so much resource around.

Changed to "What are your reasons for not engaging in/more in sustainable behaviour?"

12. What are the main reasons for not engaging in/more in sustainable behaviour?

Usually expensive, looked down on as hippies and extra effort and time is needed.

Changed to "Which of the following has most influenced your perception and attitude towards sustainability?"

13. Which of the following has influenced your perception and attitude towards sustainability most?

- Family Friends University education Previous education
Media Employment Other

Other (please specify):

14. Were you taught about sustainability before you came to study at the university?

- Yes No

Added the option "Unsure" in case students cannot remember.

Changed to "Please name the module".

15. To what extent has sustainability been incorporated into your programme of study at the university?

Not at all 1 2 3 4 5 A great deal

16. If your programme of study has incorporated sustainability, name the module which has included the most sustainability content throughout your university studies?

Sustainable Futures

Added "Please indicate the extent to which you agree or disagree with the following statements".

17. Sustainability is something which universities should actively incorporate and promote.

This question was removed as the following question is very similar.

Strongly Disagree 1 2 3 4 5 Strongly Agree

18. Sustainability is something which all university courses should actively incorporate and promote.

Strongly Disagree 1 2 3 4 5 Strongly Agree

All three students involved in the pilot failed to see a difference in the two questions.

19. Sustainability is something which I would like to learn about.

Strongly Disagree 1 2 3 4 5 Strongly Agree

20. Sustainability should be an important issue for universities in order to prepare students with the knowledge and skills required in a future job market.

Strongly Disagree 1 2 3 4 5 Strongly Agree

21. Any other comments?

Reworded as "Universities should incorporate sustainability into their curricula in order to enhance student employability".

Thank you very much for completing the Questionnaire!

All three participants in the pilot stated that the questionnaire only took approximately five minutes to complete.

Included instructions on how to send the completed questionnaire back to the researcher.

Appendix 17: Questionnaire Consent Form



Consent Form to Participate in the Questionnaire

I am researching final year Single Honours students' perceptions of sustainability at the University of Chester, as part of my MSc dissertation in Sustainability for Community and Business. The questionnaire should only take approximately 5 minutes to complete.

Your responses to the questionnaire will assist me to understand student views and attitudes towards sustainability and its integration into university curricula, and how these perceptions affect the sustainability of student lifestyles.

Participation in this study is voluntary and although your responses will be used, you will remain anonymous. If you have any questions before you choose whether to participate or not, you are welcome to email me at 1002919@chester.ac.uk. If you participate in the questionnaire you will have the chance to win one of three Amazon gift vouchers, with one worth £20 and two worth £10. Your entry into the draw is optional and will only occur if you complete both the consent form (indicating your choice to be entered) and a completed questionnaire. The prize draw will take place on Monday 14th July and the winners shall be contacted via email or phone so they can arrange receipt of their prize.

To enter the prize draw, please enter your email address or contact number.

(Optional):

Project Title: Student and Staff Perceptions of Sustainability and its Integration into University Curricula

Researcher: Alex Lerczak

Please read the following statements and click the appropriate boxes:

1. I confirm that I have read and understand the information provided about the study.
2. I understand that my participation in the Questionnaire is voluntary, and that I am free to withdraw at any time, without having to supply any reason for the withdrawal.
3. I agree to take part in the Questionnaire.

<input type="text"/>	<input type="text"/>	<input type="text"/>
Name of Participant	Date	Signature
Alex Lerczak	05 / 05 / 14	A. Lerczak
Researcher	Date	Signature

(Details for one participant and one researcher)

Appendix 18: Interview Consent Form



University of
Chester

Consent Form to Participate in the Interview

I am researching perceptions of sustainability among Programme Leaders and senior support staff at the University of Chester as part of my MSc dissertation in Sustainability for Community and Business. I would be grateful if you would consent to being interviewed and recorded. The Interview will take approximately 30-60 minutes.

Your contribution will help me to understand staff views and attitudes towards sustainability and its integration into university curricula. Your response will remain anonymous, unless you consent to identification of your specific role at the University of Chester.

Participation in this study is voluntary and you may withdraw at any time. If you wish so, a transcript of the interview can be sent to you for approval before it is included in my project.

Project Title: Staff and Student Perceptions of Sustainability and its Integration into University Curricula

Researcher: Alex Lerczak

Please read the following statements and tick the appropriate boxes:

1. I confirm that I have read and understand the information provided about the study, and that I have had the opportunity to ask questions about it.
2. I understand that my participation in the Interview is voluntary, and that I am free to withdraw at any time, without having to supply any reason for the withdrawal.
3. I agree to take part in the Interview.

...../...../.....
Name of Participant	Date	Signature
Alex Lerczak	05 / 05 / 14	A. Lerczak
.....
Researcher	Date	Signature

(Details for one participant and one researcher)

Appendix 19: Risk Assessment for Project



GE7008 Dissertation

RISK ASSESSMENT

Please complete the information below and the risk assessment pro forma for any fieldwork activities. Depending on the nature of your data collection, you may need to complete one risk assessment for each of the sites that you are using. Further pro formas are available from Moodle or the Department Office.

Once completed, please ensure that both you and your supervisor sign the forms in the appropriate place. Please also leave a copy of this paperwork with Tammy Hunt or one of the administrators in the Departmental Office.

Fieldwork Details	
Location University of Chester – Office of each participant	
Date(s) of Visit June-August	Outline of fieldwork activities Interviews with Programme Leaders from six different disciplines and three senior support staff members in each of their offices. The dates depend on the availability and preference of staff members.

Are you staying at a study centre? **NO**

If **YES**, please collect the appropriate assessment sheet from the Dept. Office.

Is your fieldwork abroad? **NO**

If **YES**, please collect the appropriate assessment sheet from the Dept. Office.

Does your fieldwork involve you using the premises of another organisation or business? **NO**

If **YES**, please collect the appropriate assessment sheet from the Dept. Office.

Transport
What are the transport arrangements? N/A

Next of Kin information	
Name Sue Lerczak	Contact details, including telephone number Mobile: 07703120960 Home: 01606 862585

PTO

Is personal insurance cover necessary for this fieldwork? **NO**

Have you made or ensured appropriate first aid and medical arrangements for all parts of the fieldwork?

N/A

Have you checked that your immunisation against tetanus is up to date? **N/A**

Declarations

To the best of my knowledge, this risk assessment information is a true record of the fieldwork arrangements being made.

Signed (student): A.Lerczak

Print: ALEX LERCZAK

Date: 19/04/2014

As the supervisor of this research project, I agree to the fieldwork detailed taking place and am satisfied that all necessary arrangements have been made to ensure that the event is successful, safe and is not likely to bring the University name into disrepute.

Signed (dissertation supervisor): R.Alexander

Print: ROY ALEXANDER

Date: 19/04/2014

Site Risk Assessment

Site: University of Chester

Grid Reference: N/A

Date(s) of visit: June-August

Risk Assessment carried out by: Alex Lerczak

Date of assessment: 19/04/2014

Specific hazard	Likelihood score	Severity score	Risk score	Specific control measures
Upsetting or angering interviewees	1	1	1	Careful consideration of discussion and questions asked by the researcher. Interview conducted at UoC in a safe environment.
Exposure of personal information/details	2	1	2	Maintain anonymity of participants by not using names or specific details.
Interruption during interview	3	1	3	Be flexible with interview as interruptions can occur.
Faulty equipment – Dictaphone not recording	2	1	2	Test equipment before commencing the interview.

Emergency Services: 999
01244 511000

University of Chester:

Nearest phone: Pocket

Nearest Doctor: Boughton Health Centre. Tel: 01244 325421

Nearest hospital: Countess of Chester Hospital Tel: 01244 365000

Landowner contact permission: N/A

Student signature: A.Lerczak

Date: 19/04/2014

Appendix 20: Tables for Student Understandings of Sustainability

Table 7: Students' Familiarity with the Term Sustainability by Programme of Study

<u>Programme of Study</u>	<u>Level of Familiarity</u>					<u>Total</u>
	<u>Not at all Familiar</u>	<u>Slightly Familiar</u>	<u>Somewhat Familiar</u>	<u>Moderately Familiar</u>	<u>Very Familiar</u>	
BSc Biology	0	0	1	3	2	6
Geography	0	0	1	0	4	5
Sociology	0	0	0	2	1	3
English Language and Literature	0	0	1	2	0	3
Mathematics	0	0	2	0	0	2
Business Management and Entrepreneurship	0	0	0	0	0	0
<u>Total</u>	0	0	5	7	7	19

Table 8: Most Associated Themes with Sustainability by Students

<u>Response</u>	<u>Frequency</u>
Recycling	9
Future	5
Environment	4
Green	3
Renewable Energy	3
Self-Sufficiency	3
Replanting Trees	3
Three-Legged Stool	2
Preserve the Environment	2
Energy-Sufficient	2
Important Issue	2
Increasing Population	2
Reuse	2
Waste Reduction/Management	2
Wind Farms	2
Solar Power	2

Table 8 contains all the responses from students that occurred more than once. All of the other keywords, concepts, ideas, and actions that appear on the Wordle were only stated once by students.

A total of 88 answers were given from 19 students.

Appendix 21: The Three-Legged Stool Model of Sustainability

The three-legged stool model (Figure 9) illustrates the three dimensions of sustainability: environmental, economic, and social. If any leg is more or less important (i.e. shorter or longer) than the others, the stool will be unstable, but perhaps still usable for a while at least. If any leg is missing, the stool simply will not work. But if all three legs are the same length (i.e. environmental, economic and social considerations have been given equal weight), the result will be a well-balanced stool. Therefore all three elements are equally as important to progressing towards sustainability.

Figure 9: The Three-Legged Stool Model of Sustainability

**Image removed due to
copyright restrictions**

Source: Kramer (2014)

Appendix 22: Tables for Student Attitudes Towards Sustainability

Table 10: Students' Interest Towards Sustainability and its Associated Issues

	<u>Level of Interest</u>					
<u>Programme of Study</u>	<u>Not at all Interested</u>	<u>Slightly Interested</u>	<u>Somewhat Interested</u>	<u>Moderately Interested</u>	<u>Very Interested</u>	<u>Total</u>
BSc Biology	0	0	2	3	1	6
Geography	0	0	0	4	1	5
Sociology	0	0	1	1	1	3
English Language and Literature	0	0	1	2	0	3
Mathematics	0	1	1	0	0	2
Business Management and Entrepreneurship	0	0	0	0	0	0
<u>Total</u>	0	1	5	10	3	19

Table 11: Students' Attitudes Towards Sustainability

	<u>Attitude</u>					
<u>Programme of Study</u>	<u>I think it's a waste of time and effort</u>	<u>I'm not really bothered</u>	<u>It's OK if others want to do it</u>	<u>It's a good thing</u>	<u>I'm a passionate advocate</u>	<u>Total</u>
BSc Biology	0	0	0	6	0	6
Geography	0	0	0	4	1	5
Sociology	0	0	0	3	0	3
English Language and Literature	0	0	0	3	0	3
Mathematics	0	0	1	1	0	2
Business Management and Entrepreneurship	0	0	0	0	0	0
<u>Total</u>	0	0	1	17	1	19

Appendix 23: Additional Comments of a BSc Biology Student

14. Were you taught about sustainability before you came to study at the University?

Yes

No

Unsure

15. To what extent has sustainability been incorporated into your programme of study at the University?

Not at all

1

2

3

4

5

A great deal

16. If your programme of study has incorporated sustainability, please name the module which has included the most sustainability content throughout your University studies.

Please indicate the extent to which you agree or disagree with the following statements

17. Sustainability is something which all university courses should actively incorporate and promote.

Strongly Disagree

1

2

3

4

5

Strongly Agree

18. Sustainability is something which I would like to learn about.

Strongly Disagree

1

2

3

4

5

Strongly Agree

19. Universities should incorporate sustainability into their curricula in order to enhance student employability.

Strongly Disagree

1

2

3

4

5

Strongly Agree

20. Any other comments?

Sustainability is something that needs to be acted upon at the government level. The teaching of sustainability is a good way to encourage talk but I believe real progress will come when the British and world governments recognise the dire need for a more ecologically friendly approach especially when it comes down to the use of fossil fuels being used as the majority energy output.

Thank you very much for completing the Questionnaire!

Please email the completed word document to 1002919@chester.ac.uk, or simply reply to sender as the replies will be directed to me.

Appendix 24: Tables for Student Behaviours and Lifestyles

Table 12: Student Consideration of Sustainability in Relation to Their Lifestyle

<u>Daily Consideration</u>	<u>Sustainable Lifestyle</u>			<u>Total</u>
	Yes	No	Unsure	
Never	0	0	1	1
Rarely	0	0	4	4
Sometimes	2	1	5	8
Often	2	0	3	5
Always	0	0	0	0
No response	1	0	0	1
<u>Total</u>	5	1	13	19

Table 13: Student Consideration and Programme of Study

<u>Programme of Study</u>	<u>Daily Consideration</u>						<u>Total</u>
	Never	Rarely	Sometimes	Often	Always	No response	
BSc Biology	0	1	3	1	0	1	6
Geography	1	0	2	2	0	0	5
Sociology	0	1	1	1	0	0	3
English Language and Literature	0	0	2	1	0	0	3
Mathematics	0	2	0	0	0	0	2
Business Management and Entrepreneurship	0	0	0	0	0	0	0
<u>Total</u>	1	4	8	5	0	1	19

Table 14: Sustainable Student Lifestyles

	<u>Sustainable Lifestyle</u>			
<u>Programme of Study</u>	Yes	No	Unsure	<u>Total</u>
BSc Biology	2	1	3	6
Geography	1	0	4	5
Sociology	1	0	2	3
English Language and Literature	1	0	2	3
Mathematics	0	0	2	2
Business Management and Entrepreneurship	0	0	0	0
<u>Total</u>	5	1	13	19

Appendix 25: Geography Student's Completed Questionnaire

Questionnaire: Student and Staff Perceptions of Sustainability and its Integration into University Curricula

(Please fill in text boxes and click appropriate checkboxes)

1. Programme of study: BSc Geography and Natural Hazard Management

2. Gender:

Male

Female

3. How would you rate your level of familiarity with the term sustainability?

Not at all familiar 1 2 3 4 5 Very familiar

4. How would you rate your level of interest towards sustainability and its associated issues?

Not at all interested 1 2 3 4 5 Very interested

5. Please write up to five keywords, concepts, ideas, or actions that come to mind when you think about sustainability.

Recycling, Carbon emissions, Green

6. Which of the following best describes your personal attitude towards sustainability?

I think it's a waste of time and effort I'm not really bothered

It's OK if others want to do it It's a good thing I am a passionate advocate

7. What is your accommodation type/status?

Living at family home and commute Halls of residence

University-managed house or flat Private accommodation Other

Other (please specify):

8. Do you consider yourself to have a sustainable lifestyle?

Yes

No

Unsure

9. How often do you consider sustainability when making day-to-day choices?

Never

1

2

3

4

5

Always

10. Which of the following sustainable behaviours do you engage in?

Take short showers rather than baths

Use public transport

Recycle all I can

Walk or cycle rather than drive

Turn off unused appliances

Buy local or organic food

Use energy saving light bulbs

Buy Fairtrade products

Use blankets or warm clothes instead
of turning heating on/up

Use reusable shopping bags

Other (please specify):

11. If you do engage in sustainable behaviour, what are your main reasons for doing so?

It is the law (e.g recycling bins).

12. What are your reasons for not engaging in/more in sustainable behaviour?

Can be more expensive

13. Which of the following has most influenced your perception and attitude towards sustainability?

Family

Friends

University education

Previous education

Media

Employment

Other

Other (please specify):

Appendix 26: Students' Engagement with Sustainable Behaviours and their Accommodation Type

Table 15: Total Sustainable Behaviours Engaged in

<u>Total Behaviours Engaged in</u>	<u>Frequency</u>
0	0
1	0
2	0
3	0
4	2
5	3
6	6
7	3
8	3
9	2
10	0
11	0

A total of 122 sustainable behaviours were engaged in by 19 students

Table 16: Accommodation Type of Students in the UK

<u>Accommodation Type</u>	<u>%</u>
Privately rented house or flat	38
Parental home	27
Halls, flat or house run by university of college	19
Own home	6
Privately owned halls of residence	4
Property rented from council or housing association	3
Other property owned by student or their family	2
Property owned by a friend	1

Source: National Union of Students (2013), cited by The Parenting Village (2013)

Appendix 27: Fairtrade and Local produce Cost Almost Double Quote

8. Do you consider yourself to have a sustainable lifestyle?

Yes

No

Unsure

9. How often do you consider sustainability when making day-to-day choices?

Never

1

2

3

4

5

Always

10. Which of the following sustainable behaviours do you engage in?

Take short showers rather than baths

Use public transport

Recycle all I can

Walk or cycle rather than drive

Turn off unused appliances

Buy local or organic food

Use energy saving light bulbs

Buy Fairtrade products

Use blankets or warm clothes instead
of turning heating on/up

Use reusable shopping bags

Other (please specify):

11. If you do engage in sustainable behaviour, what are your main reasons for doing so?

Care about the planet, environment, mainly animal conservation- global warming will destroy habitats and change ecosystems.

12. What are your reasons for not engaging in/more in sustainable behaviour?

Laziness, forgetfulness or cheapness. Fairtrade and local produce cost almost double, and I'm just a student.

13. Which of the following has most influenced your perception and attitude towards sustainability?

Family

Friends

University education

Previous education

Media

Employment

Other

Other (please specify):

Appendix 28: Food From Foreign Countries is Often Better Quality Quote

8. Do you consider yourself to have a sustainable lifestyle?

Yes

No

Unsure

9. How often do you consider sustainability when making day-to-day choices?

Never

1

2

3

4

5

Always

10. Which of the following sustainable behaviours do you engage in?

Take short showers rather than baths

Use public transport

Recycle all I can

Walk or cycle rather than drive

Turn off unused appliances

Buy local or organic food

Use energy saving light bulbs

Buy Fairtrade products

Use blankets or warm clothes instead
of turning heating on/up

Use reusable shopping bags

Other (please specify):

11. If you do engage in sustainable behaviour, what are your main reasons for doing so?

Save energy, fits in with my lifestyle

12. What are your reasons for not engaging in/more in sustainable behaviour?

Food from foreign countries is often better quality

13. Which of the following has most influenced your perception and attitude towards sustainability?

Family

Friends

University education

Previous education

Media

Employment

Other

Other (please specify):

Appendix 29: As a Student I Find it Difficult to Make Much of an Impact Quote

8. Do you consider yourself to have a sustainable lifestyle?

Yes

No

Unsure

9. How often do you consider sustainability when making day-to-day choices?

Never

1

2

3

4

5

Always

10. Which of the following sustainable behaviours do you engage in?

Take short showers rather than baths

Use public transport

Recycle all I can

Walk or cycle rather than drive

Turn off unused appliances

Buy local or organic food

Use energy saving light bulbs

Buy Fairtrade products

Use blankets or warm clothes instead
of turning heating on/up

Use reusable shopping bags

Other (please specify):

Purchase sustainably caught fish

11. If you do engage in sustainable behaviour, what are your main reasons for doing so?

Conservation of wild species.

12. What are your reasons for not engaging in/more in sustainable behaviour?

As a student I find it difficult to make much of an impact, though I always try to keep electricity bills down!

13. Which of the following has most influenced your perception and attitude towards sustainability?

Family

Friends

University education

Previous education

Media

Employment

Other

Other (please specify):

Appendix 30: Little Steps Help the Bigger Picture Quote

Questionnaire: Student and Staff Perceptions of Sustainability and its Integration into University Curricula

(Please fill in text boxes and click appropriate checkboxes)

1. Programme of study:

2. Gender:

Male

Female

3. How would you rate your level of familiarity with the term sustainability?

Not at all familiar 1 2 3 4 5 Very familiar

4. How would you rate your level of interest towards sustainability and its associated issues?

Not at all interested 1 2 3 4 5 Very interested

5. Please write up to five keywords, concepts, ideas, or actions that come to mind when you think about sustainability.

6. Which of the following best describes your personal attitude towards sustainability?

I think it's a waste of time and effort I'm not really bothered

It's OK if others want to do it It's a good thing I am a passionate advocate

7. What is your accommodation type/status?

Living at family home and commute Halls of residence

University-managed house or flat Private accommodation Other

Other (please specify):

Appendix 31: Relevant to the Department - Influenced my Actions Quote

8. Do you consider yourself to have a sustainable lifestyle?

Yes

No

Unsure

9. How often do you consider sustainability when making day-to-day choices?

Never

1

2

3

4

5

Always

10. Which of the following sustainable behaviours do you engage in?

Take short showers rather than baths

Use public transport

Recycle all I can

Walk or cycle rather than drive

Turn off unused appliances

Buy local or organic food

Use energy saving light bulbs

Buy Fairtrade products

Use blankets or warm clothes instead
of turning heating on/up

Use reusable shopping bags

Other (please specify):

11. If you do engage in sustainable behaviour, what are your main reasons for doing so?

Although it is not particularly a focus of my degree, it is something that is very relevant to the department, so I guess that has influenced my actions.

12. What are your reasons for not engaging in/more in sustainable behaviour?

13. Which of the following has most influenced your perception and attitude towards sustainability?

Family

Friends

University education

Previous education

Media

Employment

Other

Other (please specify):

Visits abroad which illustrate the impact of climate change

Appendix 32: Previously Taught About Sustainability Before University

Table 19: Taught About Sustainability Before University

<u>Programme of Study</u>	<u>Previously Taught About Sustainability</u>			<u>Total</u>
	Yes	No	Unsure	
BSc Biology	5	0	1	6
Geography	3	1	1	5
Sociology	2	1	0	3
English Language and Literature	3	0	0	3
Mathematics	2	0	0	2
Business Management and Entrepreneurship	0	0	0	0
<u>Total</u>	15	2	2	19

Appendix 33: Tables for The Role of Education

Table 21: All University Courses Should Incorporate Sustainability

<u>Programme of Study</u>	<u>Student Opinion</u>					<u>Total</u>
	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly Agree</u>	
BSc Biology	0	0	1	4	1	6
Geography	0	1	0	2	2	5
Sociology	0	0	0	1	2	3
English Language and Literature	0	1	0	2	0	3
Mathematics	1	1	0	0	0	2
Business Management and Entrepreneurship	0	0	0	0	0	0
<u>Total</u>	1	3	1	9	5	19

Table 22: Would Like to Learn About Sustainability

<u>Programme of Study</u>	<u>Student Opinion</u>					<u>Total</u>
	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly Agree</u>	
BSc Biology	0	1	2	3	0	6
Geography	0	0	3	1	1	5
Sociology	0	0	0	3	0	3
English Language and Literature	0	1	0	2	0	3
Mathematics	1	0	0	1	0	2
Business Management and Entrepreneurship	0	0	0	0	0	0
<u>Total</u>	1	2	5	10	1	19

Table 23: Incorporating Sustainability into University Curricula to Enhance Student Employability

<u>Programme of Study</u>	<u>Student Opinion</u>					<u>Total</u>
	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly Agree</u>	
BSc Biology	0	2	1	3	0	6
Geography	0	2	1	1	1	5
Sociology	0	0	1	1	1	3
English Language and Literature	0	0	2	1	0	3
Mathematics	1	0	1	0	0	2
Business Management and Entrepreneurship	0	0	0	0	0	0
<u>Total</u>	1	4	6	6	2	19

Appendix 34: Sustainability Should Be Taught More at a Young Age Quote

14. Were you taught about sustainability before you came to study at the University?

Yes

No

Unsure

15. To what extent has sustainability been incorporated into your programme of study at the University?

Not at all

1

2

3

4

5

A great deal

16. If your programme of study has incorporated sustainability, please name the module which has included the most sustainability content throughout your University studies.

Please indicate the extent to which you agree or disagree with the following statements

17. Sustainability is something which all university courses should actively incorporate and promote.

Strongly Disagree

1

2

3

4

5

Strongly Agree

18. Sustainability is something which I would like to learn about.

Strongly Disagree

1

2

3

4

5

Strongly Agree

19. Universities should incorporate sustainability into their curricula in order to enhance student employability.

Strongly Disagree

1

2

3

4

5

Strongly Agree

20. Any other comments?

I feel sustainability should be taught more at a young age, rather than at university.

Thank you very much for completing the Questionnaire!

Please email the completed word document to 1002919@chester.ac.uk,
or simply reply to sender as the replies will be directed to me.

Appendix 35: I Don't Really See How it's Relevant To Many Courses Quote

14. Were you taught about sustainability before you came to study at the University?

Yes

No

Unsure

15. To what extent has sustainability been incorporated into your programme of study at the University?

Not at all

1

2

3

4

5

A great deal

16. If your programme of study has incorporated sustainability, please name the module which has included the most sustainability content throughout your University studies.

Please indicate the extent to which you agree or disagree with the following statements

17. Sustainability is something which all university courses should actively incorporate and promote.

Strongly Disagree

1

2

3

4

5

Strongly Agree

18. Sustainability is something which I would like to learn about.

Strongly Disagree

1

2

3

4

5

Strongly Agree

19. Universities should incorporate sustainability into their curricula in order to enhance student employability.

Strongly Disagree

1

2

3

4

5

Strongly Agree

20. Any other comments?

Other than not using too much paper and turning off computers, I don't really see how it's relevant to many courses. It would be better approached as a separate seminar, possibly in Freshers' week.

Thank you very much for completing the Questionnaire!

Please email the completed word document to 1002919@chester.ac.uk, or simply reply to sender as the replies will be directed to me.

Appendix 36: I Have No Need To Waste Time...Learning About Sustainable Living Quote

14. Were you taught about sustainability before you came to study at the University?

Yes

No

Unsure

15. To what extent has sustainability been incorporated into your programme of study at the University?

Not at all

1

2

3

4

5

A great deal

16. If your programme of study has incorporated sustainability, please name the module which has included the most sustainability content throughout your University studies.

Please indicate the extent to which you agree or disagree with the following statements

17. Sustainability is something which all university courses should actively incorporate and promote.

Strongly Disagree

1

2

3

4

5

Strongly Agree

18. Sustainability is something which I would like to learn about.

Strongly Disagree

1

2

3

4

5

Strongly Agree

19. Universities should incorporate sustainability into their curricula in order to enhance student employability.

Strongly Disagree

1

2

3

4

5

Strongly Agree

20. Any other comments?

Very relevant questions up until 17-19. I study maths because I want to get into corporate banking and insurance, because of this I have no need to waste time in my lectures learning about sustainable living when I could be learning about more important things with in the subject I chose. Employers do not care about this unless you are going into an area of work which this is directly linked which not many people do in proportion to those who don't. If a student wants to learn about this they should take a course related or read up on it in their own time. So I'd say doing what you can to lead a sustainable life at home and when you're out and about is great, but no way should it be taught in University modules that do not need it.

Thank you very much for completing the Questionnaire!

Please email the completed word document to 1002919@chester.ac.uk, or simply reply to sender as the replies will be directed to me.

Appendix 37: If Not For Employability, Just For General Life Quote

14. Were you taught about sustainability before you came to study at the University?

Yes

No

Unsure

15. To what extent has sustainability been incorporated into your programme of study at the University?

Not at all

1

2

3

4

5

A great deal

16. If your programme of study has incorporated sustainability, please name the module which has included the most sustainability content throughout your University studies.

Sustainable futures

Please indicate the extent to which you agree or disagree with the following statements

17. Sustainability is something which all university courses should actively incorporate and promote.

Strongly Disagree

1

2

3

4

5

Strongly Agree

18. Sustainability is something which I would like to learn about.

Strongly Disagree

1

2

3

4

5

Strongly Agree

19. Universities should incorporate sustainability into their curricula in order to enhance student employability.

Strongly Disagree

1

2

3

4

5

Strongly Agree

20. Any other comments?

If not for employability, just for general life. I know people would complain that it would be seen as a controlling of the curriculum towards a liberal left view but from the evidence of climate change and the damage humans have caused to the environment, action should be taken to educate people from a younger age.

Thank you very much for completing the Questionnaire!

Please email the completed word document to alex@intektra.co.uk, or simply reply to sender as the replies will be directed to me.

Appendix 38: The Triple Bottom Line

The Triple Bottom Line was first used in 1989 by John Elkington, who is the co-founder of the British consultancy SustainAbility. He argues that companies should be preparing three different bottom lines to measure their success, based on their profit as well as their human and natural capital over a period of time. However, there is still much debate over how to measure the social and environmental performance of a business. Many believe that only a company that produces a TBL is taking account of the full cost involved in doing business.

Figure 21: The Triple Bottom Line (TBL)

**Image removed due to
copyright restrictions**

Source: C.H.E.S.S. LLC (2014)

Appendix 39: BSc Modules With Sustainability-Related Modules

14. Were you taught about sustainability before you came to study at the University?

Yes

No

Unsure

15. To what extent has sustainability been incorporated into your programme of study at the University?

Not at all

1

2

3

4

5

A great deal

16. If your programme of study has incorporated sustainability, please name the module which has included the most sustainability content throughout your University studies.

Ecology, Behavioural Ecology, Essential Physiology, Physiology and Behaviour, Applied Microbiology

Please indicate the extent to which you agree or disagree with the following statements

17. Sustainability is something which all university courses should actively incorporate and promote.

Strongly Disagree

1

2

3

4

5

Strongly Agree

18. Sustainability is something which I would like to learn about.

Strongly Disagree

1

2

3

4

5

Strongly Agree

19. Universities should incorporate sustainability into their curricula in order to enhance student employability.

Strongly Disagree

1

2

3

4

5

Strongly Agree

20. Any other comments?

Thank you very much for completing the Questionnaire!

Please email the completed word document to 1002919@chester.ac.uk, or simply reply to sender as the replies will be directed to me.

Appendix 40: Talked About in Terms of Animal Conservation and Welfare Quote

14. Were you taught about sustainability before you came to study at the University?

Yes

No

Unsure

15. To what extent has sustainability been incorporated into your programme of study at the University?

Not at all

1

2

3

4

5

A great deal

16. If your programme of study has incorporated sustainability, please name the module which has included the most sustainability content throughout your University studies.

Any modules that included an element of conservation

Please indicate the extent to which you agree or disagree with the following statements

17. Sustainability is something which all university courses should actively incorporate and promote.

Strongly Disagree

1

2

3

4

5

Strongly Agree

18. Sustainability is something which I would like to learn about.

Strongly Disagree

1

2

3

4

5

Strongly Agree

19. Universities should incorporate sustainability into their curricula in order to enhance student employability.

Strongly Disagree

1

2

3

4

5

Strongly Agree

20. Any other comments?

Some courses already include elements of sustainability, such as with animal studies, though sustainability is only talked about in terms of animal conservation and welfare.

Thank you very much for completing the Questionnaire!

Please email the completed word document to 1002919@chester.ac.uk, or simply reply to sender as the replies will be directed to me.

Appendix 41: Politics of Sustainability (1)

14. Were you taught about sustainability before you came to study at the University?

Yes

No

Unsure

15. To what extent has sustainability been incorporated into your programme of study at the University?

Not at all

1

2

3

4

5

A great deal

16. If your programme of study has incorporated sustainability, please name the module which has included the most sustainability content throughout your University studies.

Politics of Sustainability

Please indicate the extent to which you agree or disagree with the following statements

17. Sustainability is something which all university courses should actively incorporate and promote.

Strongly Disagree

1

2

3

4

5

Strongly Agree

18. Sustainability is something which I would like to learn about.

Strongly Disagree

1

2

3

4

5

Strongly Agree

19. Universities should incorporate sustainability into their curricula in order to enhance student employability.

Strongly Disagree

1

2

3

4

5

Strongly Agree

20. Any other comments?

Thank you very much for completing the Questionnaire!

Please email the completed word document to 1002919@chester.ac.uk,
or simply reply to sender as the replies will be directed to me.

Appendix 42: Politics of Sustainability (2)

14. Were you taught about sustainability before you came to study at the University?

Yes

No

Unsure

15. To what extent has sustainability been incorporated into your programme of study at the University?

Not at all

1

2

3

4

5

A great deal

16. If your programme of study has incorporated sustainability, please name the module which has included the most sustainability content throughout your University studies.

Politics of Sustainability

Please indicate the extent to which you agree or disagree with the following statements

17. Sustainability is something which all university courses should actively incorporate and promote.

Strongly Disagree

1

2

3

4

5

Strongly Agree

18. Sustainability is something which I would like to learn about.

Strongly Disagree

1

2

3

4

5

Strongly Agree

19. Universities should incorporate sustainability into their curricula in order to enhance student employability.

Strongly Disagree

1

2

3

4

5

Strongly Agree

20. Any other comments?

Thank you very much for completing the Questionnaire!

Please email the completed word document to 1002919@chester.ac.uk,
or simply reply to sender as the replies will be directed to me.