

**Contextualising Geography Fieldwork: Perspectives within
European Higher Education**

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by

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Contextualising Geography Fieldwork: Perspectives within European Higher Education

Abstract

Creating a European Higher Education Area (EHEA) by 2010 was considered as a priority by the European Commission; the aim being to provide students with greater mobility, choice in their studies and enhanced employability by offering a high quality education system, with comparable qualifications across European universities. This area has been formed through the implementation of the Bologna Declaration, and has meant that European higher education has experienced numerous changes in the past ten years. Geography fieldwork offers many of the generic skills linked to enhanced employability, and this outcome is considered to be one of its outstanding characteristics. It is within this context that this study explores the position, and roles, of geography fieldwork in European higher education institutions.

This research provides a thorough analysis and overview of the state of European geography fieldwork, from the perspectives of both academics and students, from universities in 27 European countries. It investigates fieldwork teaching, and the knowledge and skills gained through this; exploring its frequency, scope and the importance placed upon it. A number of constraints on fieldwork's continuation at current levels are highlighted. Academics considered time, funding, student numbers and out-dated equipment as threatening fieldwork provision. Conversely, whilst students listed external commitments, such as working in addition to their studies, family, cost and duration of fieldwork, they conclusively perceived it as being central to their degree studies.

The Bologna Declaration focused on improving graduate employability through skill acquisition, and geography fieldwork is a pivotal teaching method in this regard. Despite this, the academics surveyed listed only subject specific skills, such as spatial thinking and understanding process and change, as outcomes of fieldwork. However, students cited numerous employability skills attained through this method of learning including team work, leadership, communication and analytical skills.

Attitudes towards fieldwork are changing, and the introduction and increase of tuition fees in some European countries, are fundamental to this. Students are increasingly demanding value for money and universities using exotic fieldwork locations as a means of attracting students. Both of these issues are impacting on the provision of fieldwork within degree courses. Furthermore, it has become apparent that the EHEA has not been conclusively achieved to-date, with confusion still remaining about the length and status of university degree courses. Fieldwork provision varies across Europe, and the reasons for this cannot be separated from the effects of the Bologna Process, which weaves throughout this research and contextualises the state of fieldwork in Europe.

Recommendations arising from this study include: the formation of an overarching European geography association, specifically concerned with learning and teaching, that will champion fieldwork; and that benchmark statements for fieldwork should be available to all higher education geography departments within the EHEA. In addition, methods of disseminating the EHEA should be improved, so that decisions and recommendations reach the wider academic community.

Chapter 1 Overview of Research

1.1 Introduction

This research aims to contextualise geography fieldwork in European higher education, generate a unique record of the state of geography fieldwork in contemporary Europe and undertake a critical analysis of the diversity of its role. As European universities face increasing funding constraints, field studies are often being shaped by financial rather than academic imperatives (Dewsbury and Naylor, 2002). Gaining the opinions of students who have undertaken fieldwork, in addition to those of their educators, forms the basis of this research study, providing a sound understanding of their perspectives. The duality and comprehensive nature of this survey is important as it forms the first European-wide investigation of this kind. The amount of information collected is noteworthy as no survey on this scale, investigating the state of contemporary European geography fieldwork in light of the Bologna Declaration, has been previously undertaken. In order to gain a clear understanding of the situation, academics and students from as many European countries as possible needed to provide input on their perspectives.

The Bologna Process was the single most important change taking place in European higher education, which took place during the period of this research (2006-2011), and affects all 47 countries who are now signatories to it (Table 2.1). Bologna is important, within the fieldwork context, as it highlights the creation of opportunities for students to develop skills to enhance their employability. Geography fieldwork is well placed to provide both subject specific and generic employability skills, in terms of how students are taught and how they engage with learning whilst in the field. As such, this makes fieldwork a platform to ensure that geography students across Europe, regardless of the countries in which they choose to study, will graduate with a wide range of skills and thereby meet the aims of the Bologna Process.

The results of this study create a practical insight to educators in considering curriculum design and delivery, providing a snapshot of fieldwork during this period of educational transition as universities endeavour to conform to the Bologna

Process. In addition, this analysis offers an insight into the future position of fieldwork within the European higher education geography curriculum.

The compulsory nature of fieldwork is investigated to show the importance placed on fieldwork by higher education institutions and whether students are being provided with the opportunities to develop a sound background in fieldwork skills. Additionally, in light of financial restrictions within many geography departments, geography without fieldwork is explored with the views of academics and their teaching experience paramount to this. Due to the multifaceted nature of the discipline, comparisons are made between human and physical geography in terms of the importance of fieldwork within each of these sub-disciplines. Finally, aspects of fieldwork and constraints are presented with regard to the changing needs of academics and students alike.

1.2 Rationale

The creation of a European Higher Education Area by 2010 was seen as a priority by the European Commission (EC); its purpose being to provide a quality education system with comparable qualifications whilst allowing students greater mobility and choice in their studies (European Commission, 1999). This Area has been created as the result of the implementation of the Bologna Declaration and has meant that European higher education has experienced many changes in the past ten years. The central aims of the Bologna process are to create mobility between universities and enhance employability whilst maintaining and respecting the fundamental principles of individual institutions, i.e. their diversity and autonomy (European Commission 2000). To this end the European Higher Education Area will allow for compatibility and comparability within degree courses, resulting in structural changes to geography degree courses, thus allowing students registered for a degree at one European university to study and undertake fieldwork at different universities and in different countries. This will, therefore, have an impact on how institutions market their geography courses, and fieldwork, to encourage applications. Despite the content of the degree courses being comparable, the fieldwork and cultural differences experienced by studying in a different country is particularly interesting to geographers: cross-cultural experiences brought about through student mobility can

lead to the merging of geographical traditions in the making of a geographer, ultimately creating a new geographical tradition of 'Europe'.

This study is framed within the Bologna Process as it moved towards the creation of the European Higher Education Area in what is a period of transformation and uncertainty in European higher education. The Bologna Process is the single most important change taking place in European Higher Education at the time of this study. It is necessary to build a base on which to create an implicit snap shot of the state of geography fieldwork in Europe and this would have been impossible without taking into account the new legislation and changes in higher education. These changes have triggered protests in many countries, from both academics and students (Gardner, 2009; Mundell, 2009), about the length and quality of the new comparable degrees. Inevitably, changes in the duration of degree courses will impact on the quantity of teaching and thereby have a possible influence on the amount of time geography academics can realistically provide for fieldwork.

The European Higher Education Area aims to raise the standards of European higher education in order to compete in the global market (Vlaanderen, 2010). Therefore, learning and teaching in Geography has never been so important, as Europe embraces the reforms outlined through the Bologna Process. This research investigates fieldwork and its associated learning and teaching within the context of the Bologna Process as it sought to establish the 3+2+3 system - three years Bachelor's, two years Master's and three years PhD (European Commission, 2000).

The educational transformation, taking place through the Bologna Process, is based on creating learning outcomes for courses. It is achieved through quality assurance (European Commission, 2010) and ensures that subsequent qualifications relate closely to competences that mirror the needs of employers. In embracing the Bologna Process, academics should reflect on learning and teaching approaches, leading to structural pedagogical changes (Chalmers, 2005) and make certain that student-centred learning approaches are developed.

Higher education in Europe has experienced great change during the adoption of the Bologna Process (European Commission, 2010). As teaching becomes student-

focused in line with the process (Stubbings & Brine, 2004), the development of courses and programmes at both undergraduate and postgraduate level mean that academics will be working in new ways. Increasingly, courses within the new learning and teaching philosophy of Bologna will aim to prepare students for professional careers with activities increasingly being led by skill acquisition, technology and life-long learning.

In order to facilitate skill acquisition within higher education in 2003, the EC set out a method of 'Tuning' academic subjects in order to compare the outcomes of university education in Europe. This TUNING programme was undertaken within geography by the EC funded HERODOT Network for Geography in European Higher Education. Within this context a survey of academics, students and employers was undertaken with the aim of improving the image of geography and the employability of geography students (Wall and Donert, 2004).

In 1986 Stoddart stated that 'real' geographical knowledge is gained through the experience of fieldwork as a result of the physical, mental and emotional interaction. However, in more recent times students have highlighted many issues in undertaking fieldwork, e.g. fitness, health, finances and family commitments (Maguire, 1998), and due to these issues some students therefore do not see fieldwork as a positive educational experience (Nairn *et al.*, 2000). The implementation of the Bologna Declaration across European universities may also place further strain on fieldwork. With some degree courses having to be condensed into a shorter time frame (Brock-Utne, 2002; Mundell, 2009), decisions have to be made as to what aspects of the students' education will be changed (Gardner, 2009). As fieldwork is time intensive and expensive (Gold *et al.*, 1991; Foskett, 2004) it could suffer cuts in some European countries as university courses adhere to the new system. European higher education is changing significantly as it conforms to the Bologna Process and the standardisation of degrees (Wall and Donert, 2004). Where universities once had a four year undergraduate degree this is now changed to three years to conform to Bologna thereby generating uniformity across Europe and facilitating increased student mobility with the option to study for their degree in more than one country. However, in the case of geography this can have an effect on the amount of time available for fieldwork as four years of study are condensed into three.

Many academics have written about the essential nature of fieldwork in geography teaching and learning (Lonergan & Andresen, 1988; Gold, 1991; McKwen, 1996; Kent *et al.*, 1997; Nairn 2005; Fuller *et al.*, 2006; Hope, 2009; Fuller, 2011) arguing that it allows educators to bring together many theoretical contexts within a practical environment and is necessary to students becoming qualified geographers.

To gain a clear understanding of the contemporary issues facing geography fieldwork in European higher education a comparison of academic and student perspectives was required. This research study has therefore questioned academics and students within 27 European countries in order to gauge the importance placed on fieldwork within a geography degree. The frequency and scope of field trips and the issues surrounding the provision of fieldwork both at the university and departmental scale and from the students' viewpoints is also investigated.

Some academics argue that there is little that fieldwork needs to be an integral part of geography education in order to gain an undergraduate degree (McEwen, 1996; Nundy, 1999; Sykes *et al.*, 2011). However, in the UK the Quality Assurance Agency (QAA) (2007) and Her Majesty's (HM) Inspectorate (HMI) (1992) outline the importance of fieldwork to geography education. Geographers include fieldwork despite there being no rulings as to its inclusion - fieldwork is embedded in the discipline of geography, and as a result, a degree course without fieldwork is rare. As geography and fieldwork have gone hand in hand for so long, it is accepted as the norm, not requiring explanation and justification, despite its inclusion in the geography curriculum not being compulsory in some European countries.

Whilst there is widespread consent that fieldwork is invaluable in geography education, this claim is actually very difficult to prove and in a climate of increasing accountability, such as demonstrating value for money, levels of risk and fear of litigation, this point is of increasing pertinence. Many geographers passionately believe that the value of fieldwork exceeds any numerical or quantifiable achievements or grades (Nairn *et al.*, 2000; Fuller *et al.*, 2003). Therefore an exploration of the ways in which European academics geographers evaluate student experiences of learning resultant from fieldwork is central to understanding its importance within the geography degree and in the making of a 'geographer'. In an

editorial, Driver (2000) stated that, whilst fieldwork is a term known to all geographers, its place within the discipline was rarely reflected upon, with little regard given to its history and geographical dimensions which create our geographical traditions:

“If we think instead of geographical knowledge as constituted through a range of embodied practices – practices of travelling, dwelling, seeing, collecting, recording, and narrating – the subject of field-work, its geography and its history, becomes more difficult to escape.”

(Driver, 2000:267)

1.3 Aims

The aims of this research project are:

- To generate a record of the state of higher education geography fieldwork in contemporary Europe, and provide insights into fieldwork during a period of educational transition, as the Bologna Process led to the creation of the European Higher Education Area.
- To investigate and critically analyse European higher education geography fieldwork, its teaching, and the knowledge and skills gained from it.
- To explore in depth the perspectives of European geography academics and students regarding fieldwork, including its frequency, scope and importance placed upon it, and so highlight any issues pertaining to its provision.
- To provide a critique for decision makers, educators and curriculum designers, of the state of European higher education geography fieldwork in order to provide insight and recommendations, for the enhancement of both teaching and learning in fieldwork.

1.4 Research Questions

In light of the aims of this research outlined in section 1.3 this study will investigate the following five research questions in order to understand more fully the current position of geography fieldwork in European higher education :

- What is the status of geography fieldwork in European higher education?
- What are the perceptions of European academics and students with regard to geography fieldwork?
- How important do academics and students consider geography fieldwork to be within higher education teaching and learning?
- What, if any, are the principal issues facing fieldwork?
- Given the importance of Bologna in the development of a European Higher Education Area, do academics recognise changes in line with this?
- What employability skills do academics and students consider that geography fieldwork provides?

Investigating these questions will require the provision of an in-depth background to the Bologna Process. A review of literature with regard to this process is important in order to frame the educational transition affecting European universities, during the temporal scope of this study. A thorough overview of fieldwork will be presented on academic writing on the importance of fieldwork to geography, its learning and teaching and the theories underpinning it. The changing needs of academics and students will be discussed, in addition to considering ways forward for fieldwork.

1.5 Reviewing Current Literature and Themes

The Bologna Declaration, created to restructure European higher education, was signed by 33 countries (Table 2.1) in 1999. This Declaration aimed to generate a European Higher Education Area (EHEA) by 2010 which would provide students with high quality, easily readable, comparable degrees. Degree structures would follow the cycle of three years bachelor's, two years masters and three years PhD (3+2+3 cycle), allowing students mobility in Europe and providing them the opportunity to study in more than one country. The history of the process and the

issues arising from it are discussed in Chapter 2. It is a theme that weaves throughout this thesis contextualising the position of geography fieldwork in European higher education and is therefore the starting point of this research. Geography in Europe is discussed, and an outline of the implications of the Bologna Process on geography fieldwork provided, together with an investigation of the challenges in conforming to it. There is disparity in higher education geography in European Union Member States. This is mainly due to the political upheaval and fall of communism in Central, Eastern and Southern Europe post-1989. The political discourse, as the Cold War period disintegrated, left some countries in a period of transition as they attempted to cope with the social and financial issues attached to these events (Chilton, 1998). European geography in higher education and the issues in conforming to Bologna are therefore split and an outline of education in traditionally 'Western' and 'Eastern' European countries is also provided in this Chapter.

A review of literature with regard to fieldwork in geography is provided in Chapter 3. Here the importance of fieldwork to the discipline by both academics and students is discussed together with the methods of teaching and benefits gained. Fieldwork as a method of teaching and learning is central to the subject of geography and can be justified within current pedagogical theory. These theories are outlined highlighting experiential learning as a key factor in student development and skill acquisition (Table 3.4). Employability skills are also an important aspect of the Bologna Declaration therefore linking directly to geography fieldwork. Previous studies, in particular the European Commission instigated TUNING survey (Wagenaar, 2010) undertaken in 2004 (Tables 3.6 and 3.7) which investigated the skills gained through geography fieldwork, and those required by employers, are outlined here. The approaches and methods of teaching geography fieldwork are discussed as is student learning. There are issues associated with providing and undertaking fieldwork, e.g. financial, student numbers, risk and justification and these are also addressed in this Chapter. In contemporary higher education the needs of both staff and students are changing which impacts upon the level and style of fieldwork offered within degree courses. Students are now more likely than ever before to work whilst studying and have family commitments or specific needs. This being due, for example, to the necessity to pay tuition fees; coming to education later

in life or from non-traditional educational backgrounds, in addition to changes in disability legislation leading to all-inclusive education. Universities are increasingly under pressure to provide 'value for money' particularly in light of the introduction and increases in tuition fees and the student role could therefore now be argued to be moving towards a consumerist attitude of entitlement and higher expectations.

Technological advances in recent years have led to the increased use of virtual fieldwork and the usefulness and role of such computer led fieldwork compared to traditional 'real world' experiences is commented upon in Chapter 3. Such technology is becoming more readily accessible with students using GPS (Geographical Positioning Systems) and GIS (Geographical Information Systems) mapping on laptop computers, PDAs (Personal Digital Assistant) and mobile phones. These methods of teaching and learning within geography fieldwork are discussed together with the benefits, or otherwise, compared to traditionally led fieldwork.

Geographers are well placed to work within a variety of different academic disciplines and as such interdisciplinary work is valued as a means of drawing upon the multi-faceted nature of geography. Chapter 3 also puts forward a case for interdisciplinary work particularly as a catalyst for unity within the subject. Finally, the issue of student recruitment and the promotion of fieldwork are discussed. Increasingly university prospectuses are used as a marketing tool for geography highlighting the exotic locations of their fieldwork and pitting one university against another. Emphasis on such fieldwork has become a concern to educators planning trips in that there is a danger of creating a two-tier system of fieldwork within institutions, based on the financial situation of individual students, and leading to an inequality in the fieldwork experience.

1.6 Investigating Fieldwork in Geography in European Higher Education

This investigation has covered new research territory and as such it has been necessary to draw upon a range of methodological tools and to triangulate them to

specifically address the aims of the research. In doing so, a variety of techniques were used throughout the period of research in order to obtain the results.

The methodology of this research project is provided in Chapter 4. Two questionnaires were designed – one targeted at academic geographers and the other at geography students, allowing for a comparison of perspectives. In addition academics were questioned on their teaching, and students on their learning. Questionnaires were issued to higher education institutions in 28 European countries (Table 4.1) with 72 academic responses and 340 student responses returned from a total of 27 countries. Focus groups and discussions, in addition to e-mail questioning and correspondence, with both geography academics and students, were used as supplementary data to provide clear triangulated insight into opinions and perspectives on the discipline in Europe and in particular fieldwork.

For the purpose of this study, Europe is defined as all 27 European Union (EU) States (as at 2007), as these countries are currently taking on board the changes in Higher Education in light of the Bologna Declaration. However, being merely a European Union State was not adequate qualification for this study; the countries chosen were also required to have active academic geography departments, (details of which were made available through HERODOT: Network for Geography in European Higher Education, 2003) On this basis in addition to the 27 EU Member States Iceland, Norway and Turkey were added to the sample and as both Cyprus and Luxembourg do not have academic geography departments they were removed from the research sample. This makes a total of 28 countries, all of which have ratified the Bologna Process and the EHEA.

This research benefits from wide ranging responses from a considerable number of both academics and students across Europe and provides insights into the implementation of the Bologna Declaration in relation to the current state of geography fieldwork in European higher education.

Data input and analysis is outlined in Chapter 4 including various methods considered in preparing and presenting these data. Thematic analysis was used in order to draw out the topics considered to be most important by the respondents,

rather than apply a pre-selected range of topics. This allowed for the key relevant themes, as considered by both academics and students, to be presented and means that the research is respondent led.

1.7 Perspectives on the Current State of Geography Fieldwork in Europe

Results from the questionnaires, focus and discussion groups and personal communications are presented in Chapter 5. Here the themes emerging from the data collected are addressed individually and analysed on a question by question basis from the questionnaires returned by academics and students (Tables 5.1 and 5.5). A comparison is drawn of academic and student perspectives with regard to the questionnaires and data obtained from additional information sources, e.g. the focus and discussion groups and personal communications are considered. Details of all the focus and discussion groups undertaken are provided in Appendix 2, together with summary notes, and the questionnaire distribution and results at Appendix 3 (academics) and Appendix 5 (students).

The centrality and importance of geography fieldwork to teaching and learning is a recurrent theme throughout this thesis and Chapter 5 provides a perspective on its place and usefulness within the curriculum as considered by respondents. Skill acquisition, which is so important within Bologna, is presented here too. Academics highlight what they consider to be constraints on fieldwork provision and the nature and amount of fieldwork undertaken is documented, together with an indication of costs to students. Finally, important issues relating to fieldwork that have not been explored previously in depth are discussed.

The results from the data collected for this study are evaluated, reflected upon and discussed in Chapter 6. In order to identify similarities and differences within these data a method of thematic analysis was used (Chapter 4). This ensured that the discussion of questionnaire responses was data driven with support from focus and discussion groups, and from personal communications, and that the key observations from both academics and students were covered. This method provided several key

relevant themes which were considered as the most important aspects by respondents.

Following on from these discussions, Chapter 7 provides a synopsis of the key findings of this thesis together with an overview of issues arising and recommendations for future research.

Chapter 2 Literature Review: Higher Education Geography in Contemporary Europe

2.1 Introduction

“A Europe of Knowledge is now widely recognised as an irreplaceable factor for social and human growth and as an indispensable component to consolidate and enrich the European citizenship, capable of giving its citizens the necessary competencies to face the challenges of the new millennium, together with an awareness of shared values and belonging to a common social and cultural space.”

Bologna Declaration 19th June 1999
(European Commission, 1999:1)

The implementation of the Bologna Declaration has played a major part in the restructuring and creation of a European Higher Education Area (EHEA) and is a recurring theme in higher education writing (Brock-Utne, 2002; Neave, 2003; Brandt *et al.* 2006; Tapiador *et al.*, 2007). This major overhaul of the higher education system in European Union Member States has been met with varying levels of acceptance and protest (Gardner, 2009; Mundell, 2009). It is a key driver in the shaping of contemporary geography degree structures and is impacting on curricula and fieldwork in higher education. The background and history of the Bologna Process is presented here, together with the issues and concerns that were raised by academic staff and students. This links to the general state of the discipline in Europe and the challenges in conforming to the Bologna Process highlighting the disparity in geography higher education in Europe. Many countries, particularly those in Eastern Europe, have had issues within their education systems in addition to having the necessity of creating a new structure for higher education to comply with Bologna. The history and current state of the discipline in several European countries is outlined, with some reference to school geography, as the emphasis placed on the subject at school level ultimately impacts on higher education (Castree *et al.*, 2007).

2.2 Background to the Bologna Process

According to the European University Association (2008) there are some 31 million students studying at 5,600 institutions in 47 European countries (European Higher Education Area, 2010) involved in the transformation of higher education due to the implementation of the Bologna Process in creating the EHEA.

The World Conference on Higher Education convened by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in Paris (September 1998), made higher education, as a means of social development, a priority (Barblan, 2002). In order to achieve this a project was developed, supported by the European Commission, to discover the expectations of higher education on all levels: governmental, enterprise and educational. To this end four areas were considered 'essential' in the enhancement of higher education institutions and their wider role in Europe, thereby creating the basis for the Bologna Declaration:

“(i) human resources development; (ii) social and cultural development; (iii) regional and economic development; (iv) communication development.”
(Barblan, 2002:55)

Following the political upheaval of 1989 resulting in the fall of the Iron Curtain and the integration of former Soviet Union countries into Europe (i.e. East Germany, Czech Republic, Poland, Hungary and Romania), Barblan, (2002) contends that there were clear signs that the loss of European identity and meaning was not being replaced by a feeling of common purpose. Europeans had discovered commonalities and differences and in light of the Yugoslav war (1991-1995) understood fully the dangers of some allegiances (Bruter, 2005; Schneeberger, 2010).

In discussing the advent of the Bologna Declaration Barblan (2002), states that by signing the Declaration in 1999, the signatory countries reaffirmed the common role of universities in Europe. The Bologna Declaration aimed to develop a European Higher Education Area by 2010 by means of commonality, for example the three-tier degree structure; 3 year bachelor's degree, two years master's degree and 3 year PhD, the European Credit Transfer System (ECTS), the Europeanization of curricula

and the implementation of quality evaluation. In applying ECTS, adaptations are required across universities necessitating the comparison of learning outcomes leading to compatibility in order to ensure students reach the appropriate degree level across Europe (European Commission, 2003; European University Association, 2008). In turn, this enables the accumulation of degree credits thereby facilitating mobility throughout Europe.

Mobility and exchanges are seen as central to the success of the Bologna Process. Speaking on international cooperation and mobility, Ond Vlaanderen, EU Commissioner for Education, Culture, Multilingualism and Youth, in his 2010 opening statement to the Bologna Policy Forum commented that:

“...every new exchange of students, researchers and staff is a potential source of innovation and advancements...[Exchanges are] the best way to share with the world our effort to bring together peoples of diverse cultural backgrounds and traditions and build stable, respectful and peaceful relations among peoples and countries – both within Europe and with our neighbours across the world.” (Vlaanderen, 2010:8)

By 2010 therefore, action across European higher education allows the free-flowing of students providing them with opportunities to experience different cultures and providing a wider range of educational choice (European Commission, 2000). However, despite the strengths of the Bologna Declaration, Barblan (2002) contends that it could fail, as it is based on working towards controlling an ideal. The differences across European higher education are many, and the actual difficulty in implementing and adhering to the structure, could in fact lead to the Declaration's downfall. Its success is also dependent on the type of society and education system expected by Europeans (Keeling, 2006), and whether investment in higher education is considered to be for the good of society and State as a whole (Barblan, 2002).

2.2.1 The Bologna Process

The European Commission (2009) outline the history of the Bologna Declaration, which is a non-binding agreement signed in 1999 by 29 countries and which by 2010

had reached 47 European countries (Table 2.1) who are now participants in the Bologna Process and aiming to achieve the goals of the EHEA.

Table 2.1: European Countries Participating in the Bologna Process/EHEA
Source: Adapted from European Commission (2010) and Europe Unit (2011)

Participating Since 1999	Participating Since 2001
Austria	Croatia
Belgium	Cyprus
Bulgaria	Liechtenstein
Czech Republic	Turkey
Denmark	Participating Since 2003
Estonia	Albania
Finland	Andorra
France	Bosnia-Herzegovina
Germany	Holy See
Greece	Russian Federation
Hungary	Serbia (and Montenegro*)
Iceland	The former Yugoslav Republic of Macedonia
Ireland	Participating Since 2005
Italy	Armenia
Latvia	Azerbaijan
Lithuania	Georgia
Luxembourg	Moldova
Malta	Ukraine
Netherlands	Participating Since 2007
Norway	Montenegro (as independent state*)
Poland	Participating Since 2010
Portugal	Kazakhstan
Romania	
Slovak Republic	Current Applicants to the Process
Slovenia	Kyrgyzstan (Kyrgyz Republic) ¹
Spain	Turkish Republic of Northern Cyprus ²
Sweden	Israel ³
Switzerland	Kosovo ⁴
United Kingdom	
NOTES:	
1	Kyrgyzstan ratified in 2004 but not party to European Cultural Convention and is therefore deemed to be ineligible as they are not considering signing.
2	North Cyprus is not an independent political entity, and not party to the European Cultural Convention. It is, therefore, not eligible to join the process.
3	Israel is not eligible, although it has observer status to the European Cultural Convention it is not a party to it.
4	Due to late application, in 2009, difficulties in re-building their higher education structure and not having taken part in the lead up to 2010, it was considered too late for Kosovo to be part of the process.

This process has led to major reforms in European higher education institutions and the European Commission (2009) contend that the relationships between higher education institutions, European governments, staff, students and quality assurance agencies are crucial to the success of this process (Table 2.2).

Table 2.2: Additional Members and Consultative Members to the Bologna Process

Source: Adapted from European Commission (2010)

Additional Member
European Commission
Consultative Members
Council of Europe
UNESCO European Centre for Higher Education
European University Association
European Association of Institutions in Higher Education
European Students' Union
European Association for Quality Assurance in Higher Education
Education International Pan-European Structure
BUSINESSEUROPE

Creating comparable degrees is one of the best known objectives of the Process agreed to in a joint declaration of European Ministers of Education in June 1999 (European Commission, 1999). In providing a structure of three years bachelor's, two years master's degree and three years PhD (3+2+3 system) the European Commission (2010) state that the diverse structures in European higher education will converge and become comparable in line with standards agencies. Neave (2003) points out that the Bologna Declaration provides for a degree structure that is homogeneous, applying to all higher education systems both universities and non-universities (vocational) in Europe.

The three cycles of qualification within the Bologna Process are considered a major component, they are based around the now internationally accepted qualification descriptors developed across Europe and commonly referred to as the 'Dublin descriptors' (Table 2.3) (Bologna Process, 2009c). These descriptors are generic, as they need to cover degrees across a wide number of different disciplines, and are used to convey a statement of learning outcomes achieved upon qualification. These

competences include knowledge, understanding, communication and learning skills (Trowler, 2004).

Table 2.3: Outline of Dublin Descriptors
Source: Adapted from Bologna Process (2009c:6)

First Cycle: Bachelor's
Qualifications that signify completion of this cycle are awarded to students who:
<ul style="list-style-type: none"> • have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge at the forefront of their field of study; • can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study; • have the ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues; • can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences; have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy.
Second Cycle: Master's
Qualifications that signify completion of this cycle are awarded to students who:
<ul style="list-style-type: none"> • have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with the first cycle, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context; • can apply their knowledge and understanding, and problem solving abilities in new or unfamiliar environments within broader (or multi-disciplinary) contexts related to their field of study; • have the ability to integrate knowledge and handle complexity, and formulate judgements with incomplete or limited information, but that include reflection on social and ethical responsibilities linked to the application of their knowledge and judgements; • can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously; • have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.
Third Cycle: PhD
Qualifications that signify completion of this cycle are awarded to students who:
<ul style="list-style-type: none"> • have demonstrated a systematic understanding of a field of study and mastery of the skills and methods of research associated with that field; • have demonstrated the ability to conceive design, implement and adapt a substantial process of research with scholarly integrity; • have made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which merits national or international refereed publication; • are capable of critical analysis, evaluation and synthesis of new and complex ideas; • can communicate with their peers, the larger scholarly community and with society in general about their areas of expertise; • can be expected to be able to promote, within academic and professional contexts, technological, social or cultural advancement in a knowledge based society.

Whilst considered by the EC policy makers to be founded on the so called 'Anglo-Saxon' model (Hunt, 2006), i.e. based on the specialist three year degree offered in English universities, it is also tied into the credit transfer system allowing for life experiences to be taken into account in place of formal qualifications. Lifelong learning is therefore, a key feature of the process. It should be noted, however, that this basis for a 3+2+3 system is fundamentally flawed by the idea that a single 'Anglo Saxon' model even exists. In the UK it is common to find one year master's degrees and in Scotland four year undergraduate degrees (Hunt, 2006).

The most innovative result of the Bologna Process is the joint degree programme (Bologna Process, 2009b), which allows for cross-border study, thereby providing opportunities for mobility between both staff and students in partner institutions. These degrees are awarded jointly by two institutions and are recognised fully in all European signatory countries. In order to create such a degree that is recognisable across Europe it was necessary to create a governing quality assurance agency and a set of suitable standards. To this end the European Standards and Guidelines were created in 2008 and these together with the European Quality Assurance Register in Higher education (EQAR), which names all institutions operating to these standards, are the means of ensuring quality degrees across the board (European Commission 2010).

2.2.2 Ensuring Quality and Standards

In the drafting of their standards and guidelines the European Association for Quality Assurance in Higher Education, (EAQA, 2005) conceded that the term of 'quality assurance' had different interpretations. Some agencies accrediting programmes thought it essentially to be consumer protection - implementation of which required keeping a distance between the higher education institutions whose work they assess and their quality assurance agency. Whilst other agencies felt that external quality assurance should be for advice and guidance only in order to improve standards and the quality of programmes of study. Many, however, wished to adopt a balanced position between the two with a system providing for quality improvements and accountability. The same is true of higher education institutions and student bodies, with universities wanting autonomy (Haug, 2003) and minimal external evaluation

and regulation, whilst students wanted their institutions to be publically accountable (Campbell and van der Wende, 2000) undergoing regular inspection of the level of qualification provided by their programmes.

The recommendations and proposals set out in the EAQA's (2005) report highlighted the need for increased transparency for the benefit of universities and students alike and stated that their guidelines would offer higher education institutions clear recognition and future opportunities to prove their dedication to quality education in a competitive market and provide quality assurance agencies with a means of enhancing their credibility and allowing them to connect with relevant professional European bodies.

2.2.3 Achieving the European Higher Education Area

The creation of the EHEA has taken 12 years (European University Association, 2008) and the path taken is outlined in Table 2.4. The Bologna Process has been achieved through a detailed work programme, the direction of which is decided upon by ministerial conference every two to three years. Conferences were prepared by a 'Bologna Follow-up Group' (BFUG) which received information from regular working groups/seminars. The BFUG meetings were held every six months and hosted by the country holding the current Presidency of the European Union.

Education Ministers meeting in 2009 (Leuven/Louvain-la-Neuve) and 2010 (Budapest/Vienna) looked to the future. In Leuven Ministers overviewed the achievements of the Bologna Process releasing a communiqué outlining the next decade of the EHEA and its priorities. These are outlined by Bologna Process (2009a) as striving to:

- Improve widening participation and lifelong learning in order to maximise the talents of European citizens.
- Create active and responsible citizens through student-centred learning and mobility in order to meet the needs of changing technologies and the labour market.

- Ensure public investment in higher education in order to integrate education and research at all levels thereby providing economic recovery and sustainable development.

Table 2.4: The Ministerial Conferences and Resultant Communiqués
Source: Adapted from European Commission (2010)

Conference Dates	Written Outcome
Sorbonne: 24-25 May 1998	Sorbonne Declaration: France, Italy, UK and Germany sign a declaration on the 'Harmonisation of the Architecture of the European Higher Education system'.
Bologna: 18-19 June 1999	Bologna Declaration: 29 European ministers for higher education form the basis for the establishment of the European Higher Education Area (EHEA) - the Bologna Process.
Prague: 18-19 May 2001	Prague Communiqué: Social aspects are included in the reform.
Berlin: 18-19 September 2003	Berlin Communiqué: PhD degrees are included in the scope of the EHEA.
Bergen: 19-20 May 2005	Bergen Communiqué: Ministers of education adopt overarching framework for qualifications and agree on a set of standards and guidelines for quality assurance.
London: 17-18 May 2007	London Communiqué: The creation of a register of quality assurance agencies is supported. Ministers agree a strategy to improve the global dimension of Bologna and national plans to promote the social dimension.
Leuven/Louvain-la-Neuve: 28-29 April 2009	Leuven/Louvain-la-Neuve Communiqué: Call for lifelong learning and widening participation in universities.
Budapest/Vienna: 10-12 March 2010	Budapest/Vienna Communiqué: Ministers call for open communication between higher education and research institutes across the world

During the Budapest/Vienna conference in March 2010 Ministers highlighted certain priority areas which still need to be addressed, at both national and institutional level, to implement the Bologna reforms. To this end the European Commission (2010) outline that the BFUG will lead the work plan for the next ministerial conference in 2012 giving particular attention, through working groups, to the following areas:

“Social dimension; qualifications frameworks; international openness; mobility; recognition; reporting on the implementation of the Bologna Process and transparency mechanisms.” (European Commission, 2010).

In a response to the European Education Ministers’ communiqué on the EHEA in the next 10 years, the UK (Europe Unit, 2010) outlined that it was considered to be crucial to retain institutional autonomy and primary responsibility for quality assurance. Additionally, those actions that have been slowest to progress must be given priority, these were outlined to be: recognising qualifications (inside and outside the EHEA); increasing staff and student mobility and lifelong learning becoming a reality, all of which should be achieved through the sharing of good practice across European higher education institutions.

2.2.4 Post 2010: Status of the Bologna Process and the European Higher Education Area

As previously stated, the EHEA was to take 12 years to implement (European University Association, 2008), with a final deadline of 2010 for the Area to be in place and functioning. The Bologna Process which led to the creation of the EHEA should therefore be complete. However, in reality, work continues towards mobility and comparability of degrees with the Bologna Follow-up Group (BFUG), in 2012, beginning to discuss the next decade. In addition, Ministerial Conferences and Bologna Progress Meetings are already planned in Romania (2012) and Armenia (2015). During Romania 2012 the Bologna Policy Forum will focus on enhancing worldwide cooperation in higher education through the development of close links between EHEA and other national education systems globally. This Forum’s theme is *‘Beyond the Bologna process: Creating and connecting national, regional and global higher education areas’* (BFUG, 2012).

At the 2010 conference of the European Association for International Education in Nantes, France, a seminar was specifically aimed at evaluating the success of Tuning, Bologna and Lisbon (European Universities Association, 2010) with many themes devoted to the Bologna Process highlighting mixed reactions to the changes leading to the EHEA (Labi, 2010). Representing the University of Groningen in the Netherlands, which coordinates the Bologna Tuning Educational Structures in

Europe project, Robert Wagenaar, considered that the implementation of the Bologna Process had been limited (Robert Wagenaar, 2010). Many of those involved in the changes are still unsure about central aims such as defining and measuring mobility (Labi, 2010). For example, Bologna targets 20% mobility by 2020 yet no Europe-wide consensus on whether institutions should be counting both outward and inward mobility to reach this target and whether mobility outside European can even count (Liba, 2010). Siebert Wuttig, head of the Germany Academic Exchange Service, discussed the European Union's Erasmus programme for student mobility, which was cited as the inspiration for Bologna, having been in existence since 1987. The ERASMUS goal of three million mobile students by 2012 means that the impact of Bologna cannot be measured as it is not clear how much of student mobility can be attributed to the success of Bologna and how much to the success of ERASMUS (Wuttig, 2010).

In addition to the issues of mobility, a former expert in education for the European Commission, David Coyne, has stated that the Ministerial Meetings do nothing more than produce new communiques, without reflecting on what has really been achieved (Labi, 2010). Furthermore, the bureaucratic approach to the implementation of Bologna has led to confusion (Labi, 2010). The President of the University of Maastricht, Jo Ritzen, considered the implementation of the Bologna Process to be weak as European countries have tended to nationalise the process, rather than being guided by a central European agency (European Universities Association, 2010). Ritzen also concedes that the vision of the European Commission had not been fulfilled, despite the official creation of the European Higher Education Area in 2010 (Tuning USA, 2011).

Although ministers produce regular updates of their progress towards the EHEA, institutions have in many cases, been unwilling to embrace some of the changes required by Bologna, including the 3+2+3 degree system (Tuning USA, 2011). For example, in Germany and the Netherlands, splitting their longer degree cycles into bachelor's and master's degrees has impeded mobility, with students considering a bachelor's degree too low a qualification to move elsewhere to undertake a master's level study (Dempsey, 1999). This attitude is being supported by the universities with students being pressurised to continue to study at the same institution for their

second degree (Dempsey, 1999). Compressing the period of the bachelor's degree into three years has also resulted in additional time pressures on students, ultimately curtailing their ability to study elsewhere (van der Hijden, 2010).

2.3 Issues Raised by the Bologna Process

Not all those involved in European higher education are in favour of the Bologna Declaration and EHEA. Concerns have been raised by both academics and students as to the changes Bologna brings to their national education systems. Whilst Bologna moves forward towards meeting its aims, such criticisms could threaten implementation, slowing down the process at national level.

2.3.1 Staff and Student Concerns

Discussing the threat to universities from the Bologna Declaration, Brock-Utne (2002), outlines that the pre-Bologna Declaration discussions in 1998 were initiated by the French (and attended by the UK, Germany and Italy) as they were critical of the proposed integration of European higher education, particularly in line with the UK. Additionally, there were concerns raised about the 'portfolio' assessment proposed – where students presented a full account of their study; progress, papers, presentations, skills etc. This proposed common degree system, whilst integrating the academic and employment market of the EU States enabling transferrable credits or '*Bildungseuro*' (educational Euro), was not seen by all as a positive step. As discussed by Brock-Utne (2002), the new system under the Bologna Declaration does, for many European universities, mean shorter, more effective studies. At the same time it means students have to cram more for examinations dedicating less time to critical thought and exploration of depth. The old 'Humboldtian' tradition of long periods of study and space for contemplation and critical thinking is lost (Brock-Utne, 2002; Mundell, 2009).

The changes have led to protests from academics and students alike across Europe, indeed student protests lasting for weeks took place in Germany, Belgium and Denmark (Brock-Utne, 2002). Protests against Bologna in France in 2005 led, writes Marshall-Paris (2005), to the closure of University of Paris 8 Vincennes-Saint-Denis.

Staff and students occupied a lecture hall for two weeks following the closure of anthropology and its relocation as a sub-discipline of sociology, in an effort to conform to the new Bologna degree cycle. One key issue that students protested against in Spain was outlined by Euroresidentes (2008) as the fear of the privatisation of public universities resulted in higher tuition fees. Spanish Vice-Chancellors denied this would happen and urged their Government to provide a statement as to the positives of the Declaration in order to reassure students and put a stop to protests.

Plans to disrupt the meeting of Education Ministers during the Leuven Bologna meeting 28-29 April 2009, are outlined by Mundell (2009) who states that protests were increasing within student movements and that recent protests included French students and academic staff concerned about reforms to teacher training and budget cuts leading to job losses; Italy protested against budget cuts and Irish students against tuition fees. According to Mundell (2009) Spain has been the most vocal with major concerns about the abolition of the traditional degree, lasting up to five years, to the shorter cycles for bachelor's and master's degrees. Students argue that the undergraduate first degree is being devalued thereby forcing them to take a master's degree at additional costs, leading to those with little or no financial support to work to pay for their studies. This research has also highlighted the concerns of academics in Germany and Romania who feel Bologna will result in a loss of 'quality' and the devaluation of their degrees. Clearly, many feel that Bologna is leading to the privatisation of higher education (Brock-Utne, 2002; Mundell, 2009) by raising funds through student tuition fees and moving teaching to more business-related courses. Such a situation can only be expected given the sweeping changes Bologna brings.

In November 2009 Gardner (2009) reports that, as part of the campaign led by the International Students Movement '*Education is not for \$A£€*', some 80,000 students demonstrated in many European university cities against Bologna and the threat of increased tuition fees. They called for the Bologna Process to be abandoned as courses were becoming too rigid and their contents crammed into shorter courses. Protests in Germany were held in 20 universities which led to some response from the German government in that officials looked for a way to restructure new courses and provide students with better financial support.

Whilst discussing mobility and internationalisation in relation to Bologna, Aittola *et al.* (2009) state that the number of Italian students studying in other countries is below 2%. The reasons given for this are purely financial, with little assistance provided to students wishing to study abroad. A deciding factor is often the financial support of parents, thereby creating a disparity in which only wealthier students can afford to go to another country to study. It is stressed that student mobility:

“... increased understanding and tolerance toward different cultures, which is desirable for responsible future citizens.” (Aittola *et al.*, 2009: 308)

Academic staff interviewed for the study carried out by Aittola *et al.* (2009) worried about the equality of educational experiences offered to their students particularly as such opportunities prepare students for the global labour market.

2.3.2 *The Language of Bologna*

Using local languages as the language of higher education is, according to Brock-Utne (2002), a way to maintain culture and tradition. However, European universities are turning to the greater use of English as a globalised language. Courses taught in English are a growing trend and one example is cited as Finland where the Organisation for Economic Co-operation and Development (OECD) (2009) praises higher education for its use of English in teaching. So too in Sweden, where English has become a principal foreign language; encouraging mobility through ERASMUS programmes, Sweden now offers courses in English (Brock-Utne, 2002). In the course of legislating for compliance with the Bologna Process universities across Europe have begun to initiate courses taught in other languages, for example the Hungarian Ministry of Education (2006) educational reform document states that:

“In addition to training programmes delivered in Hungarian, the number of programmes where the language of instruction is a foreign language is increasing in higher education institutions.” (Hungarian Ministry of Education, 2006:14)

Brock-Utne (2002) cites Professor Ritzen, Minister for Education in the Netherlands, who outlined that in order to open up Dutch higher education to as many foreign students as possible, English should replace Dutch as the language of instruction, referring to English as “the Latin of the 21st Century” (Brock-Utne, 2002:293). This opinion caused the Dutch parliament to step in and ensure that no course should be offered in another language unless it was offered in Dutch too.

Language is therefore becoming increasingly difficult in European higher education with 23 official languages (European Commission, 2009) and Brock-Utne (2002) suggests that it is time for an open discussion on the selection of a few working languages. Indeed, language is extremely important to the European Commission and a recent survey urges businesses to improve export performance by appointing native speakers to work in export markets (European Commission, 2009; Brock-Utne, 2002) sees this situation as a further preference to English speakers. Despite the fact that the European Commission state language is our cultural inheritance, English is advancing as the foreign language of choice even within the European Commission, replacing French. In addition, academics are often paid for publishing in an international language rather than their mother tongue, further leading to lack of academic development within their own language (Garcia-Ramon, 2003).

Discussing the EHEA and globalisation, Aaviksoo (2001) considers that that greater mobility of people, ideas and economies will impact significantly on higher education, as it becomes a commodity for the good of communities and society as a whole. Society, education and commerce should converge through networking, with Aaviksoo (2001) suggesting that the universities which identify themselves as having a wider remit will be the drivers of change in the creation of a EHEA. These institutions will, as they develop networking strategies, become the recognised centres of excellence at an international level. One of the most important considerations in reaching this level Aaviksoo (2001) states, is language. “Knowledge is carried forward by language” (Aaviksoo, 2001:118) and in the case of Europe many languages. This, Aaviksoo (2001) contends, is a problem as little has been done to address the differences and as such it will create an obstacle in the future of the EHEA with universities having to develop a culture of bi or tri-lingualism. Whilst it is true that some future technology could allow instantaneous

course translation this will not be readily available to all and therefore courses in 'foreign' languages will be a necessity. This is not unheard of, particularly in Eastern European education and Aaviksoo (2001) provides the example of Estonia where students live with Estonian, German and Russian within their culture. One solution to this would be the twinning of universities who could provide teaching in each other's languages and go some way to solving the issues of language and comparable degrees (Aaviksoo, 2001).

The Anglo-centric manner of academic language and writing is now commonplace in Europe and Garcia-Ramon (2003) concludes that it is time the English-speaking academics made the effort to work in other European languages feeling that research and writing is ignored if not in English. Some Spanish geographers work in two languages on a day-to-day basis using both Catalan and Castilian/Spanish and Garcia-Ramon (2003) outlines that language is more than a means of communication, it is a cultural way of thinking and acting in expressing our experiences. Despite living in a globalised world often, unless work is produced in English, your international audience is restricted at both conferences and publication level with many journals on the academic citation index publishing only in English. There is, Garcia-Ramon (2003) states, in light of the EHEA, an argument for banning mono-lingualism in geography, as academics should be able to at least read in more than one language leading to the expansion of knowledge.

Looking at language from the British perspective, in a survey of students reported by The Association of Graduate Recruiters (AGR) (2002) UK students were less likely to speak a foreign language and unlikely to work abroad. Overall, British students felt they did not have the right skills to work abroad with only 36 per cent thinking they had. This showed a lack of confidence compared to other countries in Europe, where for example students in Germany, Spain and Italy said they spoke English as their second language and would consider taking their first job from graduation abroad. This situation, the AGR (2002) felt, left British students at a disadvantage when employers are seeking cross border recruitment. In addition, students would miss out on top European jobs due to their lack of language skills and inability to apply a European outlook.

Having considered the issues raised by the Bologna Process and the concerns of both students and academic staff with regard to these changes and the language debate, it is clear that not all accept the Bologna Process as beneficial. With regard to higher education geography in Europe, it is possible that time usually allocated to fieldwork will be lost in some countries as the courses become shorter (Vodenska 2000; Dumbraveanu and Dumitrache, 2007). Furthermore, fieldwork will not be the only casualty, as teaching moves to a more structured modular system. This will result in a turning away from the Humboldtian tradition, of reflection and contemplation, still existing in some European countries. Time will become a key factor ultimately changing the learning and teaching in many European universities, and eventually, the student experience. Whether such a situation could be prevented is linked to the overall strength of European higher education geography as a whole.

2.4 Higher Education Geography across Europe

Conforming to the Bologna Process has been a lengthy and difficult path for many European countries, with the proposed cycle needing to fit into many different subject areas and in some cases has led to the loss of one or more subjects in universities (Marshall-Paris, 2005). The multidisciplinary nature of geography as a subject in higher education has created additional problems leading to a complicated and intricate process of evaluation in aligning the diversity of the subject to the structure of Bologna. The complexity of the courses on offer to geography students in Europe has been highlighted (Dimitrov and Popov, 2005), particularly in areas such as GIS, under which also lies cartography, geodesy, photogrammetry (Brandt *et al.*, 2006), creating confusion as to which aspects of GIS are represented and to what technical level within the degree courses on offer. In order to succeed in this alignment, commonalities must be found with other educational institutions. The following sections outline some of these contexts as a means of framing the understanding of the complexities and issues involved.

In measuring the health of geography as a discipline around the world, comparative studies are essential in highlighting differences across cultures and economies (Gerber, 2001). Statement documents prepared by the International Geographical Union – Committee on Geographical Education (IGU-CGE) (1992) and the

International Geographical Union (IGU) (2000) headed by senior world geographical educators led the way in improvement of educational practices in geography. In particular the International Charter on Geographical Education (IGU-CGE, 1992) increasingly influences the development of educational policy in many countries. This document has been translated into several languages and covers areas of advice such as geography's contribution, content and its concepts to education together with implementation strategies (Gerber, 2001). In providing an insight into the state of world geography, the Chair of the Commission on Geographical Education (Professor Hartwig Haubrich) published a report in 1996 in which 20 European countries were surveyed (Table 2.5). This report by Haubrich (1996) has set the stage for subsequent studies on the state of geography including a study by Gerber (2001) who surveyed 32 countries around the world including 15 countries in Europe (Table 2.5). This survey considered the place of geography within the education curricula at the different levels of education; at school (primary and secondary), colleges of further education (largely tertiary) and university (higher) and the teaching methods used. Results from this survey highlighted the variety of geographical education and teaching methods world-wide, in particular the differences between primary and secondary schools when compared to tertiary and higher education.

Table 2.5: Countries Surveyed by Haubrich (1996)* and Gerber (2000)+

* +	Belgium	*	Luxemburg
*	Czech Republic	* +	Netherlands
* +	Denmark	* +	Norway
* +	Finland	* +	Portugal
* +	France	*	Slovak Republic
* +	Germany	* +	Slovenia
* +	Greece	* +	Spain
* +	Hungary	* +	Sweden
* +	Italy	*	Switzerland
*	Lithuania	* +	United Kingdom

Following the Second World War the world was divided into two opposing political and economic spheres of influence, the USA: a system of democratic 'first world' capitalism and the Soviet Union: state run 'second world' socialism – which included the East Central European nations (Agnew, 2001). Resulting from this, Horvath and Probald (2003) state that education was dramatically changed with resultant impacts

on the aims and the content of geographical education. Soviet imposed curricula were so constrictive as to list in minute detail the geographical terms to be acquired by pupils in individual lessons. Horvath and Probal (2003) outline that political control on what teachers taught relaxed in the final stages of socialism and differences became apparent with, for example, Poland and Hungary taking a softer approach compared to the harder dictatorships of the Germany Democratic Republic, Czechoslovakia and Romania whose systems remained in place until their political collapse. The teaching guide for Hungarian educators issued in 1951 is quoted by Horvath and Probal (2003) to illustrate the difficulties:

“Geography will be an outstanding ideological subject, a powerful weapon of socialist education.” (Horvath and Probal, 2003:144).

The dramatic political changes in 1989 left areas of Europe in a period of transition and a chaotic educational system ensued. During this time Horvath and Probal (2003) state that geography education faced new challenges with particular reference to countries where, despite having a long tradition of geography, the name of the subject was changed to a new ‘fashionable’ name or introduced as environmental studies, nature, social studies or science. Although in some countries where geography does appear as an option within the school curriculum, for example in Lithuania it is no longer a stand-alone subject (Salna, 2000), there is a danger it could disappear.

2.5 Bologna and Geography Fieldwork

The creation of a European Higher Education Area resulting from the implementation of the Bologna Declaration means that higher education has seen many changes in the past ten years. The aims of the Bologna Process are to create mobility and enhance employability whilst maintaining and respecting the fundamental principles of individual institutions, i.e. their diversity and autonomy (European Commission, 2000). To this end the EHEA will allow for compatibility and comparability within degree courses, which will result in structural changes to geography degrees courses. It will allow students registered for a degree at one

European university to select modules of study at different universities, in different countries and undertake fieldwork within differing cultural contexts (Wall and Donert, 2004). Therefore, despite the content of the degree courses being comparable, for a student living and studying in a different country, the fieldwork and cultural differences experienced during such an exchange will not be the same.

In 1986 Stoddart stated that 'real' geographical knowledge is gained through the experience of fieldwork as a result of the physical, mental and emotional interaction. However, in more recent times students have highlighted many issues in undertaking fieldwork, e.g. fitness, health, finances and family commitments (Maguire, 1998). Some students, therefore, do not see fieldwork as a positive educational experience due to these issues (Nairn *et al.*, 2000). The implementation of the Bologna Declaration across European universities is an added factor, in some cases placing additional strain on fieldwork. European higher education is changing significantly as it conforms to the Bologna Process and the standardisation of degrees (Wall and Donert, 2004). Where universities once had a four year undergraduate degree this is now changed to three years to conform to Bologna providing uniformity across Europe. However, in the case of geography this can have an effect on the amount of time available for fieldwork as four years of study are condensed into three.

From a personal standpoint, Mendoza (2001), states that geography fieldwork has provided meaning and a fresh dimension to learning. Following the demise of Franco's dictatorship in the early 1970s and the passing of the General Education Law there was an increase in universities and students in Spain. Geography and particularly fieldwork in geography, has been a major subject in Spain since the 1880s, for example Mendoza (2001) cites Rafael Torres Campos' presentation to the Madrid Geography Society in 1882 where Torres Campos talks of sterile classroom teaching and moving geography outdoors through fieldwork:

"For the teaching of geography to be about things, not words and terms repeated without understanding them, the student must be able to see the types and forms these terms refer to, the teacher must explain in situ" (Torres Campos, 1882 cited by Mendoza, 2001:361)

Cuts in funding to universities in Bulgaria have according to Vodenska (2000), resulted in lack of investment in new technologies with staff having to concentrate on 'out-dated' teaching methods with little time for independent student work. Additionally, where fieldwork was once accepted as an important and central feature of geography, this has seen significant cuts with merely occasional trips within the area of the university town rather than study tours of the country (Vodenska, 2000). This lack of investment in higher education has also created low salaries and lack of research funds and Vodenska (2000; 2004) maintains that international projects are the only way of taking part in both research and conferences. Unfortunately, lack of time also impacts on such participation (Vodenska, 2004).

In Romania teaching hours and student contact time have been cut by half, impacting on fieldwork and work experience which is considered unacceptable, although it could be argued this provides extra time for lecturers and students to study independently (Dumbraveanu and Dumitrache, 2007). Dumbraveanu and Dumitrache (2007) point out that the extra time can also be used for training with new technologies and in light of the reduced time for fieldwork could provide computer-based, theoretical virtual fieldwork opportunities. In addition to providing students with effective use of their time and fieldwork experience, incorporating new technologies also allows student to gain the transferrable technical skills required today by employers.

Slovak geography, on the other hand, gained extra teaching time as Slovakia moved towards European Union membership; therefore, this should create more time for fieldwork and Tolmaci and Tolmaciova (2003) comment that Slovak geographical education increasingly contains teaching of the European dimension, globalisation and environmental issues as a result. This too is the case in Slovenia where Lipovsek (2003) points out that most importantly, fieldwork has become part of all geographical curricula and whilst geography is an optional subject in schools, it is also the most popular optional subject.

Bologna is considered to have impacted on geography fieldwork in higher education in many European countries, with concerns being raised about the decreased time for student contact, teaching and fieldwork (Dumbraveanu and Dumitrache, 2007) as

students are forced to cram their study into shorter periods in order to fit the new degree cycles. Overall, there appears to be a lack of investment in geography fieldwork (Vodenska 2000), not only at a financial level but in terms of time. Whilst the Bologna Process aims to enhance employability, geography – and in particular geography fieldwork – provides many of the practical generic skills linked to this.

2.6 Challenges in Conforming to the Bologna Process

In some European countries, there have been high increases in public spending on education as more students enter systems where first degree courses can last anywhere between five and seven years (Caie, 2003). For these countries a three year bachelor's would help dramatically, as unlike the UK, many students are provided with full funding for five year programmes. Despite funding being limited to five years, most students take longer as they are not under any pressure to complete their degree to a schedule, often taking examinations when they feel ready. An example of this provided by Caie (2003) is the University of Copenhagen who offer the 'cand. Phil.' (candidata Philosophia – MA equivalent) degree where in the cohort for 1991-1996 only 31 per cent finished their degree at the end of five years; the rest went on to finish at their own pace with some graduating after nine years.

There is fear across European universities, that degree programmes will be diluted in order to save money and that such short degrees can offer nothing of any meaning educationally (Caie, 2003; Bleiklie, 2005). Taking the example from Denmark of the University of Copenhagen, the new three year bachelor degree which has been implemented is in fact the first three years of the cand. Phil. degree. Educators therefore consider this to only be an introductory course leading to the more specialised degree where topics are covered in more depth and a dissertation written. Students are therefore encouraged not to leave after the three year bachelor degree as it is not felt to be sufficient training for a career. This is also backed by employers and, for example, a bachelor level degree is unacceptable for those wishing to train as secondary school teachers.

A further area of concern is outlined by Caie (2003), in that there is a fear that creating uniformity across degree programmes may lead to a closure of universities

due to the similarity of courses on offer. The Bologna Declaration, however, only outlines uniformity of levels not of content, so whilst similar universities can offer 180 ECTS, the programme of study could be vastly different, despite efforts to bring teaching and learning into line through the method of TUNING.

In a study undertaken by Dimitrov and Popov (2005) into Geographical Information Systems (GIS) education, the implementation of courses across Europe was considered. This revealed that undertaking one or two courses in GIS is not sufficient for clear understanding, contending that courses should be designed in several stages each closely connected to the academic discipline of geography. Good education in GIS should place emphasis on the skills gained rather than the keyboard commands. The key stages are described as basic concepts of GIS, spatial modelling, computer skills in addition to skills such as problem-based learning and practice in the field solving real-world problems. Dimitrov and Popov (2005) conclude that to gain this level of understanding and skills the student would have to study at more than one university, therefore placing greater pressure on universities to prepare courses at the appropriate levels. It was felt that Bologna was a greater challenge to universities than merely implementing the 3+2+3 structure for degrees, as it would necessitate extensive modification and introduction of suitable study programmes.

2.7 Disparities in European Geography Higher Education

Despite the Bologna Process being seen as a European-wide initiative leading to greater cooperation and understanding between higher education institutions (European Commission, 2009), not all countries have found the transition to the EHEA a straightforward task. Disparities exist between Member States mainly as a result of political change and financial issues (Angelescu, 2007; Deutsche Welle, 2008), which at a basic level can be split between western and eastern Europe, with some countries having many more problems than aligning to the Bologna Process. Geography education in Eastern European countries is dominated by under-investment with poor levels of pay for academics and lack of funds for research (Vasutova, 1999; Salna 2000; Vodenska 2000, 2004). Major overhauls of the education systems in many countries following 1989 have taken place, with varying

levels of success, and Romania, Czech Republic, Hungary and Poland are key examples of this.

2.7.1 'Western' European Geography Education

Despite the Anglo-Saxon slant to the Bologna Process (Brock-Utne, 2002) and in particular the three years bachelor's degree being based on the UK system of education, many UK universities seem to consider the 3+2+3 system proposed does not apply to them, and Caie (2003) stresses that this is not the case. In other European countries taking on the shorter UK style courses whilst providing for mobility, flexibility and comparability is not easy and it is a misapprehension that there is one UK system. Caie (2003) comments that in Scotland, students are offered both three and four year first degrees (sometimes referred to as the MA). Universities are, Caie (2003) claims, proud of the degrees they offer and there is in fact a list of titles in addition to the standard degree specifications for example, BLitt, MLitt, DRes, MPhil, DPhil, etc. in addition to the four year Scottish MA(Hons.) which would not fit into the template provided by the Bologna Declaration. With regard to employability, Caie (2003) also states that in the past UK graduates have been refused work in countries which have five or more years to their degrees because they only hold a three year degree. Harmonisation of the degree system should therefore improve the situation for UK students seeking mobility in Europe.

Bologna calls for degrees relevant to the employment market and Caie (2003) contends that in this respect the UK is ahead of the rest of Europe with regard to transferrable skills which are backed by subject benchmark statements. Other education departments in Europe show great interest in these statements and are looking at the UK as an example of innovation, although many of the ideas are actually contested within the universities. One example of this is outlined by Tapiador *et al.* (2007) in the recent 'White Book for the Studies of Geography and Regional Planning' (as a compulsory exercise for all higher education geography departments in order to adapt geography in Spain to the EHEA by 2010) which goes some way in outlining the reality of the discipline and includes frank statements from former students on the usefulness of their degrees. It is aimed to inform policy makers and outlines what academics think of the discipline compared to what they

feel it needs to be in a competitive market. This document, which most Spanish universities have endorsed provides the 'State of the Art' and clearly outlines the position of geography in HE across Spain.

Similarly in Sweden, Brandt *et al.* (2006) outline that the system of three years bachelor's, one year master's and four year PhD will need to change in line with the Bologna system of 3+2+3. An additional issue here is the confusion with current course titles and Brandt *et al.* (2006) provide the example of GIS/GIT (geographical information systems/geographical information technology). Some universities split courses into cartography, geodesy, photogrammetry etc. where others will label the course GIS and include all of these subjects. Such confusion does not assist overseas students in making choices, particularly where it is not clear what prerequisites there are to undertaking the courses on offer. Currently, Brandt *et al.* (2006) state, students with a bachelor's degree in physical geography can easily transfer to a master's in the same area, but are unsure of the educational requirements if they wish to study a related subject at master's level, say for example geodesy.

Such issues have also been raised in France, where subjects have been cut (Marshall-Paris, 2005) in order to fit into the Bologna framework. Traditionally, French geography at University has, according to Gerber (2001), progressed in a similar way to the UK having been driven in particular by the influences of the IGU-CGE International Charter on Geographical Education (IGU-CGE, 1992).

In a paper presented at the IGU conference by Schembri and Attard (2007) it was stated that Malta had recently conformed to the 3+2+3 system outlined by Bologna and that changing from a four year course has impacted on the variety of topics normally covered. As the four years have needed to be condensed into a three year course, it was decided to provide students with greater opportunity to gain credits through fieldwork allowing students to gain valuable employability skills. The need for skills directly linked to the employability of students is considered to be crucial in the Netherlands, however Oost and Kannevorff (2000) discuss the pressure on school geography, with many schools reducing the hours taught, which in turn impacts on higher education. Within the Dutch school system, geography is not a compulsory subject, and as a result it is not valued by pupils or parents. This

ultimately impacts on its importance as a higher education subject (Oost and Kanneworff (2000). Furthermore, Swaan and Wijnsteekers (1999) contend that Dutch teachers look to the UK geography education system with envy as very few are able to integrate fieldwork into their teaching. Implementing fieldwork in the Dutch system is slow, and Swaan and Wijnsteekers (1999) consider the main reasons for this are that educators are overburdened by their workload. Added to this is the aging population of geography teachers (the average teacher being 50 years old) who have not undertaken fieldwork in their own teacher training as this is not a compulsory part of their studies: therefore, students are missing out on the transferrable skills provided through fieldwork.

2.7.2 'Eastern' European Geography Education

In the Baltic States of Estonia, Latvia and Lithuania undertaking higher education is considered to be an entry point to the modern and highly technological European countries (Liiber, 2000). Furthermore, geography education is considered to be a traditional higher education subject within Bulgaria and Vodenska (2004) comments that some of their most highly recognised scientists were in fact geographers. Geography is therefore regarded highly by society due to its broad content knowledge and Vodenska (2004) further outlines that many older academic geographers have a wide variety of interests beyond geography with publications providing information also on history, economics, transport, ethnography, communications and population. This has led to geographers being considered by society as amongst the best-educated in the country, resulting in many students opting to study this discipline at university.

Unemployment and financial upheaval is a recurring problem for higher education institutions in Eastern Europe. The Baltic States are suffering from unemployment and changes in education, similarly in Bulgaria (Gurova and Dermendjieva, 1998) and Hungary (Fodor, 2003; Mezosi *et al.*, 2001). Under Russian rule geography was taught to specific text books and comprised of a detailed, restrictive, curriculum, often used politically as a means of propaganda. Salna (2000) outlines that academics studying geography during this period only had access to Russian text books leaving a vast knowledge gap following independence. Restrictions, on the

educational resources used, added to the difficulties in geography education and Liiber (2000) discussed the fact that maps were not available. All maps were created in Russia and importing maps strictly forbidden. Many geographers were trained during this period and Liiber (2002) contends that subconsciously they continue in this tradition; unable to plan their own teaching but rather following text books or instructions, further impeding the development of modern education. Whilst the demand for education has now increased, often the demand cannot be met by the State and its investment in training competent teachers is compromised. Although educational systems from other countries have become popular in recent years, Salna (2000) states that Lithuania as an economy is often too weak to adopt them. Implementation of these modern systems, particularly of social and human geography, is slow as teachers lack knowledge in these areas. After 1990 Salna (2000) records that many opportunities opened up for Lithuania and a broad review of geography education courses was undertaken, particularly those concentrating on the geography of Lithuania and Europe. In Lithuanian schools geography is integrated into many subject areas including "nature-man-society-economy-culture and analysis" (Salna, 2000:257). Whilst originally a 'natural science', geography is now considered to be a 'social science' with close connections to the other natural sciences or chemistry, physics and biology. This close integration has, Salna (2000) comments, come to education in Lithuania from Western Europe and the USA. Changes in the education system have been slow due to the lack of specialists, of experienced educators and of resources. This lack of specialists and experience has been caused by the situation following independence, where education was not valued: as an example of this, teachers' salaries were amongst the lowest of the State paid workers. During the communist regime in Romania all graduate teachers were placed by the Ministry of Education and Soos (2003) outlines that failure to take the given post resulted in the imposition of full tuition fees on graduates in addition to having to abandon their professional careers.

Discussing the changes taking place in higher education, in transition to a democratic society in Bulgaria, Gurova and Dermendjieva (1998) comment that students are moving away from academic specialties that do not offer them an opportunity for immediate employment. Students in Bulgaria are, Gurova and Dermendjieva (1998) outline, opting for new more modern specialties which will enable them to move into

business whilst opening up opportunities to work abroad. Unemployment has become an increasing factor in transition and one negative impact on this in higher education, Gurova and Dermendjieva (1998) contend, is increased student withdrawal due to economic difficulties, for example parents out of work are unable to help financially. In Bulgaria the level of unemployment has changed higher education significantly and Gurova and Dermendjieva (1998) discuss the fact that students no longer need to take an entrance examination nor work in a field directly linked to their degree specialism. As a result, students now come from a wide range of backgrounds and changes in the economic circumstances for many in Bulgaria have led to the mere payment of fees as sufficient qualification leading to failure by less academic students. The biggest challenges to Bulgarian higher education geography, Vodenska (2000) contends, are the economic and demographic changes. The birth rate is dropping and therefore the number of children attending school is dropping annually, resulting in teacher redundancies with few able to sustain a career in geography only. As a result of this, new higher education programmes have been designed to provide combined degrees with graduates studying a second subject, such as history or biology, to specialism level.

In Romania the education system changed dramatically in the 1990s which was, according to Soos (2003), badly thought out, resulting in many text books becoming available with little standardisation across the curriculum. The resulting amendments to policy provided greater freedom of teaching with teachers preparing optional courses in topics such as tourism. One negative outcome of this, Soos (2003) states, is that once students reach the 8th grade (age 13) geography becomes optional and a choice has to be made between geography and history. Dumbraveanu and Dumitrache (2007) outline that since the 1990s Romanian school and higher education has undergone many changes and that reforms have not been rapid or well-planned compared to other Eastern European countries. It has taken some time for schools to reach a satisfactory level: however, despite being better placed for reform; higher education has undergone dramatic changes in recent years with further changes to come due to Bologna rulings.

An additional problem with the Romanian system is that in the 1990s the Romanian government accepted the idea of private higher education as an alternative to

publicly funded education as outlined by Soos (2003) which was not easily accepted by educational experts and the media. Private higher education does have the benefits of providing for those students who fail the state university entrance examinations. The negativities of such a system are that many private higher education students fail their final examinations and public opinion still considers public universities to have more rigour, particularly in the selection of suitable students (Dima, 1998; Soos, 2003). One major issue with funding is the fact that whilst tuition fees are the main source of finance for private education they are also eligible to apply for sponsorship and government grants on the same terms as public higher education creating a level of competition between the two for research funding (Dima, 1998).

Factual learning by rote has been for many years a dominant feature of Czech geography and, Hynek (2000) states that university geographers, by the beginning of 2000, became increasingly influenced by European Union countries and the geography standards of the USA. This situation has led to national changes to standards in Czech geography education. The Czech Republic has also undergone major changes to their education system post-1989. Attempts have been made, as outlined by Reznikova (2003), to strengthen autonomy within schools thereby providing a new freedom as to the content, and moving away from the traditional encyclopaedic teaching. Reznikova (2003) cites the annual report of the inspection of schools 1997-2003 which compliments teachers on enriching geography lessons with field trips and outlines that one-third of schools and their geography teachers use team-teaching to promote learning. The reason for this, Reznikova (2003) contends, is the lack of qualified geography teachers; this being particularly true at primary school level and in out-lying regions of the country.

Scholarly development within higher education in the Czech Republic, according to Vasutova (1999), has supported international research programmes (i.e. Tempus and SOCRATES) providing the opportunity for joint research and development projects with foreign partners whilst also providing for international mobility and study opportunities abroad. Such development, however, is time consuming and adds to existing problems facing academics in higher education such as the lack of funding, heavy teaching loads and lack of additional financial reward. These issues, Vasutova

(1999), states have led to the creation of a vicious circle in Czech higher education. Society expects graduates who are highly qualified (having studied their specialisms to a high scholarly and scientific level) meaning that the academics teaching them would need to be constantly involved in research and projects in order to improve their own scholarship. Despite the needs of society, university teachers are not provided with sufficient funding and working conditions to meet the requirement necessary. With further regard to the academic profession and scholarship in the Czech Republic, research carried out by Vasutova (1999) found that academics generally placed more importance on research and publications than on teaching. They viewed teaching as being supplementary to their profession with no importance placed on the scholarship of teaching at all. Students, on the other hand, judge the quality of the academics on their relationships with them and the quality of their teaching. They view the academic profession as a structured balance between subject specialism, teaching and personal qualities (Vasutova, 1999).

In order to meet the increasing challenges and workforce requirements within Hungary major curriculum changes took place in the 1990s as the need increased for 'professional' geographers who were well-equipped and skilled to work in government and business (Mezosi, 2001). To enable this, employers were questioned on their needs and this information provided feedback to universities enabling the improvement and modernisation of the curriculum to produce employable and skilled graduates. Research carried out by Uto-Visi (2001) regarding students' perspectives on the relevance of their geographical knowledge to everyday life found that, despite its gradual loss within the Hungarian National Curriculum, students still thought geography to be vital, providing students with skills linked to everyday life in addition to enhancing the study of other subjects. In particular students felt it important to learn about other countries, cultures and traditions in relation to travel, foreign languages and history. The increasing need for transferrable skills and knowledge, with the State, employers, parents and students requiring practical skills that are measurable and reasonable upon graduation is also outlined by Lipovsek (2003) in relation to recent changes in geographical education in Slovenia.

Poland is conforming to Bologna but in addition to the necessary dramatic changes at higher education level the whole school curricula was changed, following the political upheaval of 1989, in order to meet social expectations and Pirog and Tracz (2003) explain that this was necessary to enable the curriculum to become student friendly and allow for the development of individuality. Major changes in the school system came in the reform of 1999 when education to age 16 became compulsory and the terms of education were overhauled, shortening years at primary level and splitting secondary into two levels. Within the new system Pirog and Tracz (2003) outline that geography at primary level is no longer an independent subject but now combined with history, man and society and nature – it is no longer called ‘geography’ at this level. However, in lower secondary school, geography is an independent subject receiving similar teaching hours to the subjects of biology, chemistry, physics and astronomy. Teachers are allowed freedom in interpreting the National Curriculum programme but one-third must be devoted to the geography of Poland. Geography is placed within science belonging to the ‘Social Sciences’ which is to its advantage as the Polish education system gives priority to Social Sciences and Arts rather than Natural Sciences. Therefore, Pirog and Tracz (2003) contend that, despite the dual nature of geography, being placed as a Social Science is beneficial to the discipline as a whole.

2.8 Conclusion

Changes in line with the Bologna Process have varied: in Western Europe the UK have made few changes and there is remaining confusion over the many titles given to degree qualifications. Whilst the UK is considered to be ahead with regard to providing students with transferrable skills, thereby increasing employability, other countries are still very much working towards this, for example Spain. Confusion also exists between course titles and educational requirements which can make choosing to undertake study in another country not so straightforward for the students, impacting on mobility. Some countries see the shorter degree courses as detrimental to study whereas others, such as Malta, have taken this as an opportunity to provide students with greater opportunity to gain credits through fieldwork (Schembri and Attard, 2007). Again this is led by employability skills and the need for such skills is considered of great importance in Dutch education (Swann and

Wijnsteekers, 1999) where there are problems integrating fieldwork into the curriculum. Dominated by financial issues, unemployment and transitional changes in education, Eastern European countries have had much to contend with in addition to the implementation of the Bologna Process. Students are increasingly driven towards subjects that will provide employment in an increasingly technologically driven Europe (Gurova and Dermendjieva, 1998). However, in Hungary, there is a need for geographers for work in business and government (Mezosi *et al.*, 2001; Lipovsek, 2003) as they are considered to have the sound transferrable skills so valued by employers.

The rapidly changing nature of geography and geography fieldwork within contexts of contemporary European transition (in its widest sense and within higher education) provides the background to this research. The following chapter presents the methodologies and approaches used in this research study to explore how, in reality, European geography academics and students perceive the value of fieldwork.

Chapter 3 Literature Review: Fieldwork in Geography

3.1 Introduction

This review of literature encompasses the academic works in relation to fieldwork and European higher education and the chapter will provide insights into the importance of fieldwork to the discipline of geography and the perspectives of academics and students. From both the learning and teaching perspectives it will investigate how fieldwork is taught and what the benefits are thought to be. Issues regarding fieldwork and its provision as central to geography (Panalli & Welch, 2005; Herrick, 2010) will be outlined and in particular constraints with regard to financing and time. The future of fieldwork will be discussed within the context of new technologies emerging in geography education, the need for increased interdisciplinarity and the problems associated with school geography as a core subject and those who teach it. Finally, a brief outline of geography education in Europe will be provided.

The majority of writing on the value of fieldwork to higher education geography is Anglo-centric, especially since the mid to late 1990s and early 2000s. This situation could be attributed to the planning and introduction of the benchmark statement in UK higher education around this time and subsequent debates and discussions highlighted through the Geography, Earth and Environmental Sciences subject centre leading to increased publications in journals such as the *Journal of Geography in Higher Education*.

3.2 Importance of Fieldwork to Geography

Much is written by academics about the essential nature of geography fieldwork in learning and teaching (Kent *et al.*, 1997; Nairn, 2005; Hope, 2009). This section therefore reviews the attitudes of both academics and students toward fieldwork learning and teaching; how fieldwork is taught and where teaching fits within current educational theory and the benefits attributed to it.

3.2.1 Importance Placed on Fieldwork by Academics and Students

“...the principal training of the geographer should come, wherever possible, by doing fieldwork...excursions and field courses are the best apprenticeship.”

(Sauer, 1956:296)

The Quality Assurance Agency (QAA) for Higher Education is an independent body founded in 1997 to define UK academic standards and quality for higher education degree courses. In its benchmark statement for geography education it sees geography as occupying:

“...a distinctive place in the world of learning, offering an integrated study of the complex reciprocal relationships between human societies and the physical components of the Earth. The geographer’s canvas is coloured by place, space and time: recognising the great differences and dynamics in cultures, political systems, economies, landscapes and environments across the world, and the links between them.” (QAA 2007:1).

With regard to the development of geographical understanding it stresses the importance of fieldwork:

“Geographers develop their geographical understanding through fieldwork and other forms of experiential learning, which helps to promote curiosity about the social and physical environments, discerning observation and an understanding of scale.” (QAA 2007:2).

It is therefore seen as essential in UK Higher Education to undertake fieldwork in order to enhance geographical knowledge and understanding (Kent *et al.* 1997). Indeed Hovorka & Wolf (2009:9) see fieldwork as “the signature pedagogy of geography”.

At an international level, fieldwork is recognised as essential within undergraduate geographical education with many academics considering this to be an effective and enjoyable form of both teaching and learning (Kent *et al.* 1997). Teaching and

learning through fieldwork is felt by many to be essential in higher education geography (Lonergan & Andresen, 1988; Gold, 1991; McEwen, 1996; Clarke, 1996; Kent *et al.*, 1997; Cottingham *et al.*, 2002; Nairn, 2005; Fuller *et al.*, 2006; Hope, 2009; Fuller, 2011). Kent *et al.* (1997) argue that it allows educators to bring together many different theoretical concepts in a practical environment and is therefore essential to students becoming qualified geographers. Despite this, Stokes *et al.* (2011) comment that there is no specification within the higher education curriculum of the type or duration of geography fieldwork. Conversely, the Geological Society of London prescribes the minimum number of fieldworks to be undertaken within each specific topic (Geological Society of London, 2009) and in addition states:

“...it is expected that accredited degrees will give students the opportunity to acquire skills relevant to all the major employment sectors.” (Geological Society of London, 2009: 2)

However, although fieldwork is considered to be a positive experience for students, educationally its usefulness is subjective with little clear objective evidence of how or why it works (Nundy, 1999; Stokes *et al.*, 2011). Whilst Kent *et al.* (1997) note that fieldwork is essential to a geography degree, they too comment that any evaluation of this style of learning is subjective as there has been little sound research into the effectiveness of fieldwork in student learning. As a method of education, Dykes *et al.* (1999) consider that fieldwork is unique, allowing students an opportunity to learn about the real world through direct experience, offering a learning experience outside the classroom describing it as being a multidisciplinary exercise which has an important role in many subjects including geography. Undertaking research with students in New Zealand, Nairn (2005) states that fieldwork reinforces the students' misconceptions of people and places rather than enhancing their understanding. The value of fieldwork as a method of learning is, according to Hope (2009), a means of allowing students to deepen their understanding of the world and their place in it.

In its review of higher education fieldwork, Her Majesty's Inspectorate (HMI, 1992) comment that “Fieldwork enhances students' geographical understanding, and allows them to develop important specific and general skills” (HMI, 1992:i). This review

also found that in some cases the cost of fieldwork was an influencing factor in students' choice of field courses as it was common for them to make some contribution towards their fieldwork costs. However, the importance of fieldwork in the degree course was found to be essential as:

“It provides students' with first-hand experience of geographical phenomena and places, and an appreciation of their characteristics, scale and complexity”
(HMI, 1992:1)

One exceptional feature of fieldwork, the Inspectorate outline, is the development of personal skills such as leadership, teamwork, collaborative work and organisation - all of which are of high vocational value. At the same time fieldwork plays a central role in creating good student and staff relationships and in creating socially cohesive groups. Group dynamics should, however, be considered by fieldwork organisers and Nairn *et al.* (2000) state that fieldwork acting as a means of positive social interaction is implicit and despite emphasis on group-based work some students can feel alienated and insecure particularly where the trip is international.

Nowicki (1999) considers fieldwork to be one of the main reasons students decide to study the discipline and with regard to the training of future teachers, considers it to be one of the most satisfying parts of teaching the subject of geography. Nairn *et al.* (2000) also ask whether fieldwork programmes are valuable student experiences as on the whole the literature assumes that it is. They observe that the benefits of fieldwork are assumed and that the students' perspectives on fieldwork depend solely on the way in which the staff perceive and present the field to them.

The promotion of active rather than passive learning in undertaking fieldwork is discussed by many, including Haigh, (1996); Kent *et al.*, (1997); Healey & Jenkins (2000); Foskett (2004) and Hope (2009). Actively learning through fieldwork, according to Foskett (2004), enhances the learning experience and develops thinking skills. Fieldwork reinforces learning from the classroom as by experiencing first-hand the physical environment it reinforces cognitive learning. Although fieldwork is not unique to geography, Foskett (2004) contends that geographers are more than

qualified to comment on the benefits of such learning within the wider curriculum, particularly in its role of providing generic skills such as teamwork and enquiry.

Furthermore, Foskett (2004) states that fieldwork is the one element that distinguishes the discipline of geography at higher education and is often a key factor in students wishing to study the subject. Within the marketing of university courses, senior managers, according to HMI (1992), see fieldwork as a positive aspect to geography with many prospectuses showing photographs of students undertaking their fieldwork.

Geographical knowledge, as Sauer (1956) suggests, is gained by observation, through reflection and re-inspection of the field and that from this together with experience comes comparison and synthesis. Fieldwork should be taken slowly, allowing time to stop at vantage points and question the landscape. Supporting this, Gade (2001) contends that through field teaching an eye for the country is developed. It is the ground that is the primary 'document', not the map and the essence of field training comes from the comparison of the ground with the map. In addition, Wooldridge and East (1970) stress the importance of geographers being able to gain the skill of 'reading' the area under study also stating that the skill of comparing the field area and map should be the starting point for any geographical investigation. The observations geographers make should supplement the information provided by the map.

Cosgrove and Daniels (1989) state that geography fieldwork emphasises intellectual observation and cite John Ruskin's opinion of field observation as "the argument of the eye" (Cosgrove and Daniels, 1989:170). In discussing the importance of observation in human geography as a method of research, Fyfe (1992) outlines that geography teaching in the 1980s and 1990s underwent a quantitative 'revolution' with research methods courses being dominated by statistics, however, the qualitative research of human geography was needed to be taught alongside these statistical techniques. The challenge, Fyfe (1992) states is to teach students to understand the complexity of observation; particularly the intellectual meaning gained through this method of work.

Modern fieldwork, according to Fuller (2011), is now filled with appropriate learning outcomes for students and is aimed at fulfilling the needs of an increasingly consumer-driven, fee paying, student body demanding value for money from their courses. Increasing financial pressures to provide such fieldwork together with a higher level of perceived risk and fear of litigation are now seen to be threatening traditional fieldwork. However, despite all of these issues, fieldwork remains central to the geography degree:

“I would argue that there is overwhelming evidence that taking students outdoors to learn in high places, be these literal or intrinsic geographic value, is the very heartbeat of teaching and learning in physical geography.” (Fuller, 2011: 7)

On the other hand, Hovorka & Wolf (2009) suggest the use of classroom-based field courses, particularly in light of issues such as finances, student numbers, the diversity of the student body and strains on staffing, which all impact on the structure and survival of fieldwork. Traditional or residential models of fieldwork are considered to be untenable, with many changes needed. Delivery of teaching therefore needs to be re-evaluated and the skills agenda re-addressed. Additionally, Hovorka and Wolf (2009) argue that fieldwork can be drawn from every-day life and take place in the classroom through reflection on experiences and observations thereby creating knowledge. However, they also note that whilst this method of teaching cannot substitute for all the experiences of traditional out-door fieldwork, it could go some way to address the issues currently faced by many departments.

Academic writing also includes the topic of embodiment through fieldwork. Lee and Ingold (2006) outline that embodied fieldwork is achieved when all senses come to the fore creating great awareness between the body and environment and where observation and participation become one. The idea of embodied fieldwork is nothing new to geography; indeed Davis (1920) commented that whilst observation is an important medium for learning it is recognised that the fullest understanding of geographical phenomena comes from fully-embodied experiences where fieldwork stimulates all the senses. The origin of knowing is assumed to be observation (Nairn 2005). However, Berry (1997), Robson (2002) and Elwood (2004) all contend that

fieldwork also provides the student with understanding and experience of 'the other' and that fieldwork affords direct experiences both changing and challenging the students' perceptions of 'other'. Our bodies enhance the field, drawing in difference of culture, surroundings and place (Nast, 1998). In addition, Hope (2009) discussing the importance of fieldwork in human geography states that it can change perceptions, helping students understand the reality of others, confirming their place in the wider world. This is why Hope (2009) claims fieldwork remains an indispensable method of learning for geography students.

Fieldwork is the key aspect of geography education that allows student to think and act as geographers and Nairn (1996 and 1999) proposes that thinking and acting as a geographer - using all relevant skills and knowledge, applying all the senses to the experience of the field - is the definition of embodied fieldwork. In addition, Nairn (1999) considers residential fieldwork as the best example of this. Here students, eat, drink, walk and sleep as a geographer, with the whole body, as well as the mind, working:

“Embodied fieldwork is part of every waking moment on a residential field-trip and constitutes ways in which we/our bodies come to understand (consciously and unconsciously) what it means to think like a geographer, act like a geographer, eat and drink like a geographer, and so on” (Nairn, 1996: 91).

Furthermore, whilst students may consider their observations through fieldwork to be disembodied, these may in fact become embodied experiences in unpredicted ways, e.g. by remembering being tired, energised, hot, cold, etc. as they viewed the landscape thereby aiding memory of their learning experience.

Students often think qualitative techniques are 'easy' compared to statistical analysis; they are considered unscientific methods telling us little of any meaning. This attitude toward observational and qualitative research as unscientific and lacking in objectivity can be overcome in stressing the intellectual and complex methodology necessary to become a skilled observer (Evans, 2008). It is necessary to understand the value of observation in gaining knowledge of social aspects, a knowledge which

Fyfe (1992) states can be inaccessible to those researchers using only scientific spatial techniques. In relation to this, research carried out by Fyfe (1992), found that students undertaking observational/qualitative research methods had mixed opinions of the methods used; some found it practical making them think through the content of their research, whilst others found the method to be time-consuming and a technique they would not find useful in dissertation work.

Several key studies covering the perspectives of both students and academics with regard to fieldwork have been undertaken and results from these studies are now considered. In a study of fieldwork teaching, Orion and Hofstein (1994) found that although in recent years there has been a move towards non-subject specific skills and benefits gained through fieldwork, teachers are more interested in the pedagogy and technical skills provided by fieldwork rather than students' opinions and feelings thereby affecting student learning and willingness to take part in other trips.

Discussing the differences, and indeed the divide, between UK secondary education and higher education, Dalton (2001) contends that the one thing that both levels of education have in common is field study. However, students in transition to higher education will, despite having had some field training, enter university with different levels of field skills on which to build their educational foundation. A study undertaken by Dalton (2001) questioned first year undergraduates about the type and frequency of their school fieldwork. The development of geographical awareness as a result of fieldwork, Dalton (2001) states, is unquantifiable, however the study did allow for some insight into students' attitudes. The students in this survey perceived fieldwork to be anywhere outside the classroom. They had been involved in preparation and feedback sessions but the field study itself was usually teacher directed with no opportunity for students to research their own questions. Despite this, the students clearly understood the relationship between the theory taught in class and the fieldwork undertaken. It was noted that although some students had forgotten where exactly the field study area was they all recalled the type of skills used and data collected. Dalton (2001) concluded that issues with the level of fieldwork at school could be due to pressures of the GCSE and Advanced level curriculum. Whilst it is interesting to note the perspective of school fieldwork by first year undergraduates, it is clear that students have a very varied background in

fieldwork. Higher education therefore should attempt to identify those students with little fieldwork experience in order for them to work equally with those peers who are more experienced. The outcome of the study by Dalton (2001) stated that it would be of benefit to higher education institutions to understand more fully the knowledge of first year undergraduates, this being particularly true of non-traditional entrants to university. Fieldwork should therefore have a high element of tutor led study in first year, moving on to more self-directed field study as the course progresses, (Dalton, 2001; Fuller 2011).

With regard to mature students, Higgitt (1996) states that adult learners appear to benefit from active learning situations, learning best in hands-on situations. Fuller *et al.* (2000) believe that if this is the case then in undertaking fieldwork they learn in a way that will help them to achieve their fullest potential, with fieldwork developing students' analytical skills through the intensive use of field techniques (Fuller *et al.*, 2000). In this study they noted that although students thought the gathering of large volumes of data was monotonous they felt it had provided them with insights into 'real' research. Students also felt that the group work carried out during field studies was a 'strength' as it allowed them to develop personal skills, in getting to know other students and learning to cooperate and work collaboratively (Fuller *et al.*, 2000).

A study was undertaken by Kern & Carpenter (1984) of students on an Earth Science laboratory course, following students' comments that their research should be outdoors not in a laboratory. The study split students into two groups, one following the traditional course format of indoor laboratory work followed by a week of fieldwork at the end of the course. The other groups worked in the field 70% of the time with 30% spent in the laboratory. The results from this study support the field approach as being extremely positive; students enjoyed their work and were more engaged than those in the traditional laboratory group. Some 83% of the students felt they were participants rather than observers whereas of the traditional group only 33% thought themselves to be participants. Furthermore, the students who followed the field course stated they would recommend the course to others, (Kern & Carpenter, 1984).

During the United Kingdom's outbreak of Foot and Mouth Disease in 2001 Fuller *et al.* (2003) were able to test university students' perceptions of fieldwork as access to the countryside, and therefore fieldwork, was limited due to restrictions on movements. Their study questioned 300 final year students from five universities in the UK all with prior fieldwork experience. Students found the withdrawal of fieldwork to be negative and Fuller *et al.* (2003) concluded that this was due to the overall value of fieldwork attached to geography education. Experiential learning, they outline, is well documented as an excellent learning experience which fosters deep learning enhanced by developing key skills such as analytical, observation, personal and autonomy. Additionally, students felt the lack of fieldwork impacted on their educational progression, suggesting that fieldwork did not merely provide them with more knowledge but enhanced the whole learning experience throughout their undergraduate course (Fuller *et al.*, 2003).

In an exploration of the views of university students about group learning and its management, Kempa and Orion (1996) contend that fieldwork is an ideal situation to study group work as it is open-ended and less 'teacher-directed' than class or laboratory based work. All students interviewed in this study concluded that working in groups during fieldwork contributed highly to success in their learning tasks; additionally, input from peers within the groups aided in the learning experience. Students felt that through teamwork they could combine their individual skills and knowledge to the tasks in order to solve problems more effectively. Kempa and Orion (1996) note that this opinion was in relation to field tasks only and would not apply equally to class or laboratory work. A further study by Kneale (1996) outlines the organisation of student-centred fieldwork where students were given the opportunity in groups to study the state of a river and its tributaries. For the task the student had to manage their own time in order to complete the survey and select the areas of study for their group. The aim of the field trip was to allow students to build upon their geographical and transferrable skills. Overall, Kneale (1996) found that allowing students the space to make their own decisions created enthusiasm within the groups leading to serious application to the study and raised final results. The embedding of transferrable skills and enterprise within the course was felt to have benefited the students tremendously giving more meaning to their work.

Through discussing staff perspectives Nairn *et al.* (2000) contend that fieldwork, in particularly residential international fieldwork, places high demands on staff time for which there is no reward or recognition. Despite this it is noted that the same geographers would fight to defend fieldwork and its continuance within higher education geography programmes. Sharing the issues of organising international fieldwork could, Nairn *et al.* (2000) feel, be the answer, citing the use of bilateral agreements between universities from different countries as a possible solution. Furthermore, Walters (2003) outlining the development of a working relationship with European partners in order to create opportunities for overseas fieldwork, comments that bilateral agreements help in funding staff and student exchanges and are therefore effective in enhancing field courses and the student experience. One additional advantage is the expertise of local staff and students on exchange field visits as their knowledge of their local area is often invaluable (Walters, 2003). Rauhvargers and Rusakova, (2010) also acknowledge that bilateral agreements provide opportunities to improve cross-university connections, within the European Higher Education Area, thereby enhancing working relationships between academics.

In a study of school teachers' perceptions regarding the value of fieldwork provision in the UK, Cook *et al.* (2006) conclude that it was the individual teacher's perception of the importance of fieldwork to geography that ultimately influences their decisions. The value and importance was weighed against the risks involved, the behaviour of pupils and the red tape surrounding such school trips. Many of those surveyed for this research thought the risks too great to continue fieldwork, their main concerns being student behaviour with two schools in the survey actively barring poorly behaved students from fieldwork participation, which Cook *et al.* (2006) state, is clearly outside the confines of the promotion of all inclusive fieldwork. The study contests that it is a difficult task to reassure such teachers and that in reality they should be concentrating on their own re-evaluation of the importance of fieldwork in order to re-engage and provide suitable fieldwork for their pupils. From a higher education standpoint the findings of Cook *et al.* (2006) are of concern as more students will enter higher education geography with both limited fieldwork experience and skills in addition to poor perception of the

importance of fieldwork, the experience having been stifled by their school teachers. Comparing attitudes of others with regard to fieldwork, Gardiner (1996) outlined the alternative views of fieldwork within a system (Table 3.1).

Table 3.1: Fieldwork – Alternative Viewpoints
Source: Adapted from Gardiner (1996:429)

The Teacher	Organised and resourced by the department with the aim that students receive instruction from teaching staff to increase field skills, and to be assessed on these skills.
The Student	Organised by lecturers costing students money and providing students with an opportunity for fun and late nights, <u>or</u> Organised by lecturers to give the opportunity to get away from the pressures of the rest of the course, see interesting geography which is explained by the lecturers and to meet other students.
The Public	Organised by universities with money from public taxes which is spent on students having a good time and the university teachers getting a cheap holiday, <u>or</u> Organised by universities to let students see geography in different places, guided by staff, so they learn about places in the world better.
The University Management	Organised by geographers in a mysterious way, consuming large amounts of the faculty budget with processes difficult to understand and the benefits difficult to measure.

In a survey of academics in UK geography departments by Scott *et al.* (2006) it was found that whilst educators considered fieldwork to be a vital tool in teaching and learning, they no longer considered it in practice to be central to the discipline. Staff found increasing pressures due to the fairness of fieldwork, particularly as a means of assessment, as it may be open to disability or gender discrimination. Despite this, a personal reflection by Price (2001) stated that it was travel and fieldwork that made her a geographer. Fieldwork, Price (2001:143) states, is “the life blood of my academic career”, being able to go out into the field helps put the rest of the academic year into context which, Price (2001) contends, many geographers would agree with. The value of the fieldwork experience is discussed by Jenkins (1994)

who outlines that values are changing. Research undertaken showed that most academics enjoyed fieldwork and those that did not tended to avoid the trips. Staff complained of having to repeat fieldwork and dealing with large numbers of students, although staff also thought being away from the classroom allowed them to relax and get to know students better. From the student viewpoint Jenkins (1994) highlights the social aspects; how students enjoyed fieldwork and socialising with peers and staff members. On the other hand, students also felt the costs difficult to bear with limited funds.

There is a gap, Foskett (2004) contends, between the writings on the importance of fieldwork to geography education and the reality within the curriculum. Whilst in most countries where geography is a higher education discipline fieldwork exists, very little is compulsory in nature. Fieldwork is often seen as a part of the geography curriculum that constantly needs to be fitted into departmental constraints; politics, resources and costs. Foskett (2004) considers there to be four limiting factors of fieldwork; time, accountability, safety and teaching standards, and these are expanded upon in Table 3.2.

Gerber (2000) suggests that fieldwork should not be underestimated as “one of life’s experiences” (Gerber, 2000:197). It is fieldwork, Stevens (2001) contends, that expands knowledge, providing the student with opportunity for learning through exploration. Additionally, Ling (2008) outlines that it has never been so important that geography students understand “their increasingly fragmented world” (Ling, 2008:33) and its social and cultural differences. Arguing in favour of fieldwork, Stevens (2001:1) states that fieldwork allows us first-hand experience and discoveries which no amount of texts, maps or theories can reveal. Geography is merely second- hand reporting without fieldwork:

“...losing much of its involvement with the world, its original insight, its authority, its contributions for addressing local and global issues, and its reason for being.” Smith (1987:212)

This, therefore, places fieldwork firmly within outdoor education with Smith (1987) further stating that such direct experience is a style of learning in itself, where “the

importance of *how* things are learned, is as important as *what* is learned” Smith (1987:212).

Table 3.2: Four Key Factors in the Argument for Limiting Fieldwork
Source: Adapted from Foskett (2004): 182-129

1	Time: those designing the curriculum are pressurised to fit a large body of knowledge into short teaching time.
2	Accountability: focusing on achievement and standards impacts particularly at school level. Additionally, fieldwork can clash with cross-curricular teaching time and can be seen as a negative rather than positive by colleagues and students.
3	Safety: Increasingly safety is an issue and risk assessments can lead to more ‘conservative’ investigations being undertaken.
4	Teaching Standards: In order to plan sufficiently and ensure fieldwork is suitably placed within the curriculum and safe for students, teachers should be effective fieldwork managers with expertise in all areas of planning. Quality teaching and leadership is required to ensure students are provided with the highest possible learning opportunity.

In outlining the reasons why fieldwork is essential to learning, Hendrix (1978) states that fieldwork leads to a level of self-confidence only achieved by applying knowledge to a ‘real’ problem. When students are encouraged to integrate their knowledge and think independently then their confidence and maturity soar. The study by Hendrix (1978) found that most academics and industrial geologists surveyed, thought that the uniqueness of fieldwork related overall to the opportunity for students to integrate and synthesise their classroom learning.

Discussing economic geography fieldwork, Jones (2006) argues that it is one of the greatest learning opportunities for undergraduates and that, despite pressures from a risk-averse society to marginalise fieldwork in geography teaching, educators should embed fieldwork into their curriculum as something to be nurtured. Harvey (2001)

discusses an over emphasis by educators on student understanding, which neglects to give credence to the student experience and therefore effective student learning:

“...fieldwork is further damaged by poor teaching and learning practices. Time spent in the field is often squandered, particularly on residential field courses.” (Haigh and Gold, 1993: 21).

The gaining of ‘real’ geographical knowledge, according to Stoddart (1986), takes place through the fieldwork experience resulting from physical, mental and emotional interaction, being as much about the physical challenge. There are many issues for students when undertaking fieldwork and Maguire (1998) lists fitness, health, finances and family. In discussing the assumption that students need to be fit to take part in fieldwork or geography in general, Nairn *et al.* (2000) argue that there are students who will not see fieldwork as a positive experience due to gender, age, physical ability or socio-economic reasons. In observing degree students at Northumbria University in the UK, Fuller *et al.* (2000) also make the point that some students face difficulty in undertaking physical geography fieldwork. They noted apprehension in students and a general lack of interest in physical geography fieldwork, this together with a lack of basic understanding and lack of enthusiasm led to students feeling the work to be too difficult which ultimately reflected on their achievement at assessment. In the UK, Fuller *et al.* (2000) argue, that this situation is often due to the decline of physical geography at secondary school level. Changes in the curriculum have resulted in increased attention being paid to human geography and environmental issues, teaching physical geography only as backdrop to human response. Additionally, Fuller *et al.* (2000) state that some school teachers perceive physical geography to be too difficult and this trepidation is passed on to their students.

One issue discussed by Fuller *et al.* (2003) is that of course modularisation. Providing students an option to choose a module without fieldwork was seen to be a concern, and the reasons why students choose this option could be many, including family commitment and disability. They state that particular attention in designing fieldwork should be given to inclusion in line the United Kingdom’s Special Educational Needs and Disability Act (SENDA) 2001 thereby ensuring disabled

students do not receive a lesser learning experience. Interestingly, this study by Fuller *et al.* (2003) also addressed the negativities students felt related to fieldwork. Overall, students felt fieldwork to be time intensive, believing this time could be spent better elsewhere, particularly where fieldwork clashed with other timetabled taught sessions (Fuller *et al.* (2003). As fieldwork meant more effort was required by students they also felt their workload was greater. The cost of fieldwork is often seen as a negative; however, their research found this was not considered by many to be an issue, (Fuller *et al.*, 2003). A further issue, Boyle *et al.* (2007) outline, is an issue with funding being directed towards new technology leaving fieldwork underfunded. This is leading to concern that there will be a move away fieldwork to more classroom based technological alternatives such as GIS, remote sensing data and virtual field work, which Haigh and Gold (1993) consider to be is no substitute for field experience.

Further problems leading to a decline in fieldwork are outlined by Boyle *et al.* (2007) and Hovorka and Wolf (2009) as: larger student numbers but declining departmental budgets, leading to students bearing more of the cost towards their fieldwork; staff time with fieldwork taking valuable research hours without allowances; SENDA legislation introduced in the UK requires education to be 'inclusive' leaving traditional expedition-style fieldwork more difficult; and finally, growing concerns with safety and subsequent litigation. Gardner (2004) discusses the Royal Geographical Society's link to the Field Studies Council's 'Real World Learning' (RWL) aimed to highlight fieldwork and outdoor learning in UK schools in an increasing risk-aware society. RWL is working with unions and teacher training institutions in order to ensure geography teachers have the training and skills in addition to the confidence to provide fieldwork and outdoor learning in schools. The RWL campaign also calls for outdoor learning to become part of the school inspection system (OFSTED). Commenting on the campaign for RWL, Lambert (2005) states that it would be unthinkable to have geography without fieldwork as the main point of the subject is to 'make sense of the world' and that doing this through only books or multimedia is pointless; at some stage it needs to take place in the 'real' world.

The need to ensure student safety through the implementation of Health and Safety regulations requiring UK students to provide 'informed consent' and sign a code of conduct with regard to 'reasonable behaviour' in light of any identified risks, together with the need to provide value for money and long-haul fieldwork is, according to Herrick (2010), changing the status of fieldwork within UK institutions:

“...their [fieldtrips] potential demise is being cast as a fundamental assault on geography’s founding identity and pedagogical traditions.” (Herrick, 2010: 108).

May (1999) describes many changes in fieldwork during the 1990s, primarily the decline of residential, 'traditional', fieldwork leading to an increase in more specialised or thematic work carried out locally.

A study by Giles *et al.* (2008) questioned students on their opinions of problem-based fieldwork with each student being asked to keep a log about their daily fieldwork experience including what they enjoyed and did not enjoy, and how they would improve the field day if they were in charge of running the course. Overall opinions were very positive with only a few suggestions of how to improve their fieldwork, the main issue being more detailed preparation in class beforehand. Problem-based fieldwork, students felt, allowed them to take responsibility for their own learning closely linked to the elements of teamwork and 'real' world problems and were seen as an enjoyable experience (Giles *et al.*, 2008).

3.2.2 How Fieldwork is Taught and its Benefits

“Geographers learn ‘through the soles of their feet’; fieldwork is ‘what geographers have always done!’” (McEwen, 1996:379)

In stating that fieldwork is different internationally, McEwen (1996) cites as an example North American degree programmes where extended fieldwork is not the norm when compared to European countries such as the United Kingdom, Netherlands and Germany. The nature of fieldwork within undergraduate geographical education is discussed by Kent *et al.* (1997) who suggest that fieldwork

is internationally recognised as essential, with many lecturers considering this to be an effective and enjoyable form of both teaching and learning. It is in the tradition of exploration, Stoddart (1986) states, that the hunger for geography is best nourished and this is supported by Clarke (1996) who further stresses that fieldwork is fundamental to becoming a geographer and that knowledge should be acquired through observation, investigation and enquiry. Observation can be easily dismissed as 'unimportant', however it forms the basis of scientific enquiry and explanation, through observation in the field, students are able to begin the processes of modelling and hypothesising, leading to interpretation and a clear understanding of the environment being studied (Clarke, 1996).

A discipline's contents are, as outlined by Johnston (1984), a reflection of the demands placed upon it by society. Disciplines which society sees as profitable will therefore most likely be promoted whereas those that society disapproves of will be ignored.

“Geographers make their own discipline, but they do not make it just as they please; they do not make it in circumstances chosen by themselves, but under circumstances directly found, given and transmitted from the past”
(Johnston, 1984:12)

Europe is still a fragmented state, in our policies, cultures, economies and societies (Ashworth and Larkham, 1994), and Johnston (1984) contends that although our countries differ in politics, culture, economy and society, academia and its disciplines are firmly based within this fragmentation. Therefore, when looking at geography as a discipline within European countries, there is no one geography but rather 'many' geographies, indicative of our differing societies and traditions (Johnston, 1984).

In the UK school curriculum, as outlined by Dalton (2001), GCSE and advance level courses contain an element of fieldwork. This has ensured fieldwork remains central in geography education. Course syllabuses emphasise the role of the personal investigative/research based element and key to this are the skills of data collection and interpretation (Dalton, 2001). Discussing changes to fieldwork, Dalton (2001)

states that traditional staff-led fieldwork has been replaced by the student centred problem-solving excursion with a strong focus on data collection and that more recently a combination of both these styles has been the norm. However, fieldwork is often dependent upon the constraints of finance and time, thus influencing the location, delivery and duration of the fieldwork offered to students (Dalton, 2001). Fieldwork involves leaving your 'home' and Clifford (1997) outlines that exploring an area of the unknown through a research topic allows us to move between settings and observe differences. Defining the field itself Lonergan & Andresen (1988:64) state this to be "where supervised learning can take place via first-hand experience, outside the constraints of the four walls classroom setting".

3.2.3 Learning Theory and Justification of Fieldwork

3.2.3.1 Learning Theory

Education and psychology are inextricably linked (Illeris, 2004). Illeris, (2004) states that fundamentally, learning theory encompasses two type of process: external interaction between learners and their social and cultural environment and, internal psychological process or acquisition and elaboration through which impulses are connected to the results gained from prior learning (Illeris, 2004).

The twentieth century saw a change in UK education, from the more formal style to one that is experience based (Lewis & Williams, 1994) with John Dewey (1938) emphasising the idea that there should be a relationship between experience and education. Geography education, through fieldwork, centres its learning strategies on investigating and solving problems and Flick (1993) states that such experiences improve logical thinking and spatial intelligences, drawing on the constructivist philosophies of Dewey (1938), Piaget (1954) and Bruner (1960), with regard to knowledge and learning. The student is, therefore, allowed to construct their own meaning of the world through experiences gained (Saunders, 1992).

Generally, Surgenor (2010), outlines that, there are considered to be three main philosophical frameworks, within which learning theories belong: behaviourism (acquiring new behaviour through conditioning), cognitivism (how the human

memory works in promoting learning) and constructivism (emphasising active involvement in learning) (Table 3.3).

Geography fieldwork with its high element of experiential learning and skill attainment could, therefore, be seen to fit into the theory of constructivism. There is, however, another salient theory which could apply to this type of learning and that is transformative. The model of transformative theory fits within the paradigm of constructivism (Cranton, 1994; Moore, 2005) as described in Table 3.3. Whilst, implying that knowledge is socially constructed by a group of individuals, Moore (2005), considers that transformative theory takes into account two other aspects; the individual and social construction of meaning. Learning through this method means that individuals change their frames of reference through the critical reflection of their assumptions and beliefs (Moore, 2005). This in turn provides new ways to define their worlds in analytical and rational ways (Illeris, 2004).

Table 3.3: Three Main Philosophical Theories
Source: Adapted from Merriam and Caffarella (1991) and Surgenor (2010)

Philosophy	Theory
<i>Behaviourism</i> (Skinner, 1948)	Learning is acquiring new behaviour through conditioning. Educators will create a suitable environment to gain the correct responses using behavioural objectives, competency-based and skill development education.
<i>Cognitivism</i> (Bode, 1905; Wertheimer, 1924; Kohler, 1947; Koffka, 1963;)	Looks beyond behaviour in explaining learning. It considers how the human memory works in promoting learning. Educators therefore consider learning as an internal mental process. In order to develop capacity for learning and skills teaching is structured by learning activities that focus on developing intelligence and building cognitive and meta-cognitive development.
<i>Constructivism</i> (Dewey, 1938; Piaget, 1955; Bruner, 1960; Kolb, 1984)	Places emphasis on the active involvement of learning in the construction of their knowledge – starting with complex problems and learning basic skills whilst solving them. Learners actively construct new ideas based on their knowledge and experiences. Educators act as facilitators encouraging students to make theory own discoveries, constructing their knowledge from working on real problems.

Illeris, (2004) contends that learning always incorporates three dimensions, all of which are rooted in the context of society (Figure 3.1). These are; the cognitive (knowledge/skills), the emotional (feelings/motivation) and the social (communication/cooperation).

How experiences are understood in this world also takes into account habits of thinking and points of view (Moore, 2005). Moore (2005) asserts that transformative learning alters, through critical reflection, both our habits of thinking and points of view. Through the critical reflection of biases and assumptions, greater understanding can be found, leading to a change in outlook.

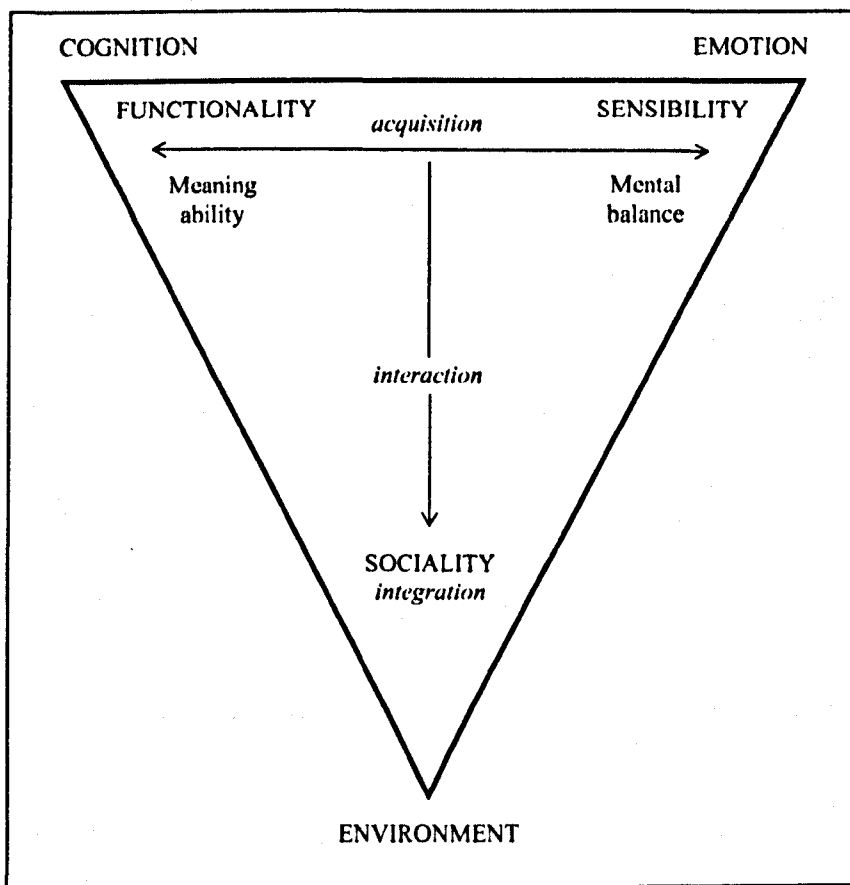


Figure 3.1: Learning Processes and Dimensions
 Source: Adapted from Illeris, (2004):82

In his theory of experiential learning, Kolb (1984) describes learning as an on-going cycle where the student calls upon and reflects on their experiences to plan and

execute a task, thereby creating further experience. This is described in Kolb's model, Figure 3.2. It is well documented that adult learners in particular benefit greatly from experiential learning situations or active learning, (Kolb, 1984; Kern and Carpenter, 1984; Clarke, 1996; Cantor, 1997; Kolb and Kolb, 2005). Fieldwork is the 'doing' aspect of geography and Clarke (1996) stresses that effective fieldwork should contain the four stages of Kolb's (1984) model with a clear link to theory in order to maximise the learning potential.

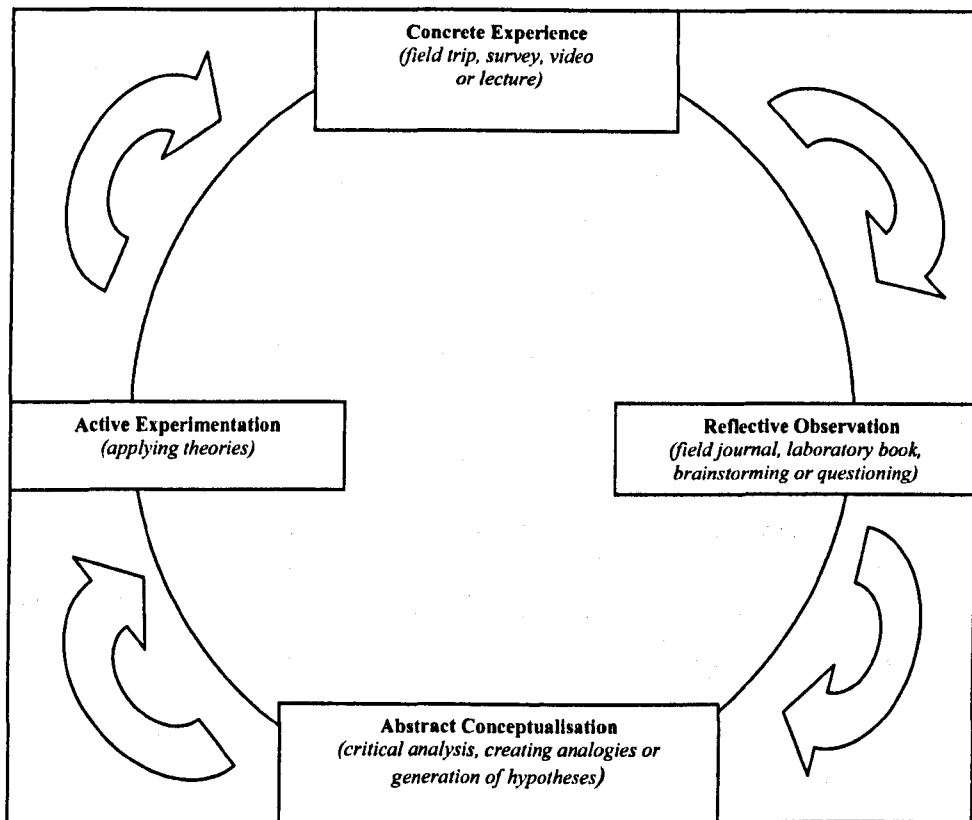


Figure 3.2: Cycle of Experiential Learning Showing Learning Opportunities
Source: Adapted from Kolb (1984)

Kolb, (1984) states that through experiential learning a base is provided for lifelong learning founded on the intellectual traditions of social and cognitive psychology and philosophy. Experiential learning is highlighted by Beaudin (2002), as being grounded in pragmatism; the philosophy primarily linked to the role of personal experience. Pragmatic methods were first applied to education by Dewey (1964) who considered that they placed 'action' in-between 'thought' and 'application' (Dewey, 1964:5).

Not all academics agree with Kolb's theory of experiential learning, and Kelly (1997) provides the example of Rogers, (1996) who outlines that the process of learning also includes intentions, goals, decision-making and choice and that it is not obvious where these components fit into the learning cycle.

Kayes (2002), summaries criticism of Kolb's (1984) experiential learning model which largely emerged in the 1990s, and focused on its theoretical limitations. Generally, these criticisms argued that experiential learning changes the context of learning, and provides an incomplete account of the many influences that affect it (Kayes, 2002). These criticisms are based on the suggestion that emphasising individual experience detracts from the psychodynamic (Vince, 1998), social (Holman et al., 1997) and institutional (Reynold 1999) characteristics of learning (Table 3.4).

Table 3.4: Criticisms of Experiential Learning and Solutions
Source: Kayes (2002: 143)

Detracts From	Criticism	Solution
<i>Social</i> (Holman <i>et al.</i> , 1997)	Limited account of social processes.	Reconceptualise based on constructivist theory
<i>Psychodynamic</i> (Vince, 1998; Reynolds, 1999)	Lacks historical context and recognition of barriers to learning.	Place greater emphasis on reflexivity; eliminate defensive barriers
<i>Institutional</i> (Freemmann & Stumpf, 1980; Hopkins, 1993; Miettinen; 1998)	Does not fit neatly into a single institutional paradigm.	Discontinue use; integrate with other theories; purify theory.

Furthermore, Fenwick (2001) believes that problems arise in disentangling formal education (i.e. class work, reading, analysis and reflection) from personal life experiences, thus making this style of learning difficult for educators to manage.

Despite such criticisms, the contribution Kolb has made to learning should not be underestimated. Although there may be limitations, this model has refocused education from the educator to the learner (Kelly, 1997). Fieldwork education is ultimately 'learning by doing', whereby students enhance their knowledge through

practice in the real world. Experiential learning could, therefore, be considered as a key conceptual context for underpinning fieldwork.

3.2.3.2 Justification for Fieldwork

The justification for fieldwork by educators is discussed by Lonergan and Andresen (1988) who suggest that fieldwork is usually justified by its multi purposes; its aims characterised by the diversity of its educational goals. In addition to aiding students in their consolidation of class-based learning and the acquisition of a variety of practical skills, it also helps in developing environmental attitudes and personal/social development. However, “effective learning cannot be expected just because we take students into the field” (Lonergan & Andresen, 1988:70). Fieldwork according to Lonergan and Andresen (1988) demystifies student learning allowing them to apply theory to practice and bring together knowledge and experiences from past learning and courses. Furthermore, Lai (1999) outlines the theory of experiential learning commenting that learning through experience is not merely consigned to the students’ cognitive learning but also linked to their feelings and moods in addition to their past experiences. It is through linking these aspects that the whole experience is constructed. This, Lai (1999) states, means that there should be the same emphasis given to how we learn as to what we learn. Although in recent years, Stevens (2001) argues that the emphasis on learning through fieldwork has changed to a more non-subject-specific standpoint, in reality its benefits are being overlooked by many teachers. Teachers are less concerned with the emotions and feeling of their students and prefer to centre work on the cognitive and technical aspects. This lack of understanding has in many cases led to students’ learning being affected and indeed influenced their willingness to take part in other field trips.

Discussing Kolb’s (1984) theory of learning, Dummer et al. (2008), state that although it has only recently become explicit in geography education, the theory itself has been implicit in much of geography teaching, particularly with regard to fieldwork. In the field students experience learning by doing and link their thinking to their actions. In assessing the work undertaken during fieldwork Dummer et al. (2008) argue that fieldwork is often driven by assessment and not conducive to deep

learning. The traditional fieldwork diary rarely goes beyond the collection of facts or observations, therefore Dummer et al. (2008) suggest the use of 'reflective' diaries as a means of assessment, thereby encouraging deep learning through analysing and synthesising observations and allowing for a critique of the overall experience.

There has been much written about the comparison between deep and surface learning and both Gibbs (1992) and Biggs (1999) outline that the learning environment is critical in determining whether students gain surface or deep learning as students can switch easily between the two modes of learning. Arguing the case for problem based learning (PBL) in fieldwork, Bradbeer and Livingstone (1996) contend that poor fieldwork preparation, for example pre-fieldwork lectures where notes are taken by students but not extended as far as the field itself, ultimately leads to poor student learning in the field and encourages surface learning. Fieldwork based on PBL, however, encourages the use of previously gained knowledge whilst providing opportunities to make linkages and recognise patterns. Students are actively involved in all stages of the fieldwork including preparation and in the example given by Bradbeer and Livingstone (1996) a field area was thoroughly researched and reported upon and in group sessions problems, such as knowledge gaps, were identified. This led to students arriving in the field with a clear understanding of the area being visited together with an outline of their expectations and questions. Furthermore, Bradbeer and Livingstone (1996) contend that in order that students continue to be engaged in the learning experience they should be involved in active learning, providing the opportunity to be autonomous and to gain deep learning. They describe deep learning as students searching for meaning and understanding in relation to previous knowledge and experience; shallow learning consisting of students trying to learn by merely memorising facts for use later. PBL, Bradbeer and Livingstone (1996) argue, provides student with deep learning as they work through real problems critically analysing the situation and solving the problems arising. This method of learning allows them to compare the situation to previous knowledge and experience and solve problems accordingly, helping to enhance the students' abilities in the acquisition and application of knowledge in line with Kolb's (1984) model of experiential learning. Biggs (1999) prescribes PBL building on what is already known and allowing the student to learn from misconceptions and mistakes, as a way to provide the student with deep learning.

Similar to geography, the discipline of geology holds fieldwork as central to learning. In a survey undertaken by Hendrix (1978) the main benefits of fieldwork were outlined as providing students with self-confidence within their field of study, the point being that one day they would become geologists and no longer be geology students; they therefore needed to gain confidence in their skills and abilities. This was, Hendrix (1978) argued, gained through solving real life problems, fieldwork being considered unique in providing a way to incorporate theory into practice. Clarke (1996) provides the following classification of skills that students may develop through fieldwork:

“intellectual: to develop the student’s understanding of geography;
personal: emphasising the importance of vocational and transferrable skills;
technical: competence at research methods, using equipment etc.; *inter alia*
skills: those skills that are acquired simply by virtue of being in the field”

(Clarke, 1996:395)

3.2.4 Skills and Development

Discussing the objectives of fieldwork and the skills gained, Kent *et al.* (1997) outline these as being grouped in three categories: subject-specific objectives, transferrable/enterprise skills and socialisation and person development (the ‘hidden agenda’ of fieldwork), Table 3.5. However, Clarke (1996), does state that there can be no ‘definitive’ list of skills due to the unquantifiable aspect of interpretation, observation and feel for the landscape which is something that cannot be added to a list of learning outcomes. Discussing fieldwork undertaken in Venice and its region, Cosgrove and Daniels (1989) state that their aim in this fieldwork was to allow students to understand “the interplay of the familiar and the unfamiliar of ‘foreign’” (Cosgrove and Daniels, 1989:171) developing the traditional skill of observation. Outlining the changes in the skills sets of geography, environment and earth science graduates expected on employment by the UK’s Environment Agency, Thomas (2008) states that those most recently employed did not have the skills normally associated with such graduates. This skills deficit is costing the Environment Agency in the region of £1.5 annually in hiring consultants to fill this gap. Reasons for this, as discussed by Thomas (2008), are outlined in Table 3.6, most notably

being the lack of fieldwork undertaken at university. In concluding, Thomas (2008) felt that more discussion between employers and universities was needed with increased flexibility on both sides in the development of role awareness and work experience opportunities.

In a study of the understanding of geography and geology students as to the reason for fieldwork, Stokes *et al.*, (2011) noted that although the fieldwork differs between disciplines, their perspectives were very similar. Qualitative responses from geography and geology academics and students were analysed and provide six categories relating to the purpose of fieldwork:

- “To gain experience;
- To enhance learning/improve knowledge and understanding;
- To learn in a particular way or in a particular environment;
- To learn or apply a particular approach, method or skills;
- To understand or make sense of the work;
- To enhance personal development or to prepare for the future.”

(Stokes *et al.*, 2011:127)

A comparison of students and academics carried out by Stokes *et al.* (2011) indicated that academics conceived a relationship between the curriculum and fieldwork but that student perspectives were more fragmented. In this study, the learning outcomes given to students highlighted skill acquisition. In turn, the students clearly understood that skills are developed through fieldwork. Given the importance placed on employability and transferrable skills, this aspect came out low in the academics' responses. Overall, Stokes *et al.*, (2011) outlined that academics described fieldwork as a means of putting theory taught into context and of gaining subject-specific skills. Stokes *et al.*, (2011) therefore considered that the outcomes of fieldwork should be more explicit in order that students fully understand its purpose.

Table 3.5: Objectives of Fieldwork
Source: Kent et al. (1997: 320)

Subject-Specific Objectives:

- Teaching of specialist field techniques and research methods
- Use of experimental data to solve specific problems and thus illuminate areas of theory and practice
- The integration of the subject, from theory to practice
- Fostering awareness of other places and cultures ('spirit of place')
- Exposing students to a variety of approaches to the discipline
- Providing a basis for independent research by students
- Exposure of students to 'real' research
- Provision of 'real' materials and context for a laboratory-based practical course ('live' problems)
- Enhancement of analytical and interpretive skills
- Training students in observation, measurement and recording
- Teaching students to use experimental design
- Learning to 'filter' observations and discriminate valuable data from 'noise'
- Development of interpretive abilities from both landscape observation and results of problem-orientated fieldwork.

Transferrable/Enterprise Skills:

- To provoke students to ask questions and identify problems
- Stimulation of independent thinking
- Development of the motivation and skills to learn autonomously
- The enhancement of communication and presentation skills
- Development of group-work skills
- Development of leadership skills
- The improvement of organisational skills such as time/human resource management
- Appreciation of the importance of safety in fieldwork
- Realisation of the parallels between skills involved in carrying out fieldwork and those in employment in the 'real' world.

Socialisation and Personal Development (the 'hidden agenda' of fieldwork)

- Stimulation and enhancement of enthusiasm for study
- Development of a respect for the environment
- Encouraging and developing social integration of the student cohort
- Enhancement of staff-student relations
- Getting to know colleagues
- Helping to market the course
- Becoming involved in staff research.

Table 3.6: Environment Agency Issues with Graduate Skills
Source: Thomas (2008:22)

- Lack of ability to apply theory in practical situations – possibly due to less field work at university.
- Lack of basic maths skills – e.g. manipulating equations, changing units from litres to cubic metres.
- Lack of ability to think in 3D – e.g. developing a conceptual model from information provided on maps and site investigations and the potential impact on the environment.
- Lack of ability/confidence to interpret data from risk assessments in the real world – rigidly sticking to exact results from even simple numerical risk assessment calculations.
- Lack of ability/confidence to take risk-based decisions.

With regard to making outcomes more explicit, a study undertaken by Rydant *et al.* (2010) suggested that little attention has been paid to identifying how fieldwork aids the development of subject specific and generic skills. Field research should increase students' motivation and responsibility and provide them with crucial work experience, which is increasingly highlighted as important by employers (Rydant *et al.*, 2010). Arguing that appropriate fieldwork planning can provide a skills-centred experience for students, Rydant *et al.*, (2010) suggest that, whilst field sites may vary considerably, such an approach can provide students with similar skills sets. By creating a list of required skills as part of a field trip guide, it allows staff to clearly endorse the acquisition of skills rather than waiting for them to emerge (Rydant *et al.*, 2010).

In linking the higher education curriculum to skills attainment, the European Commission (2003) outlined a process for the 'Tuning' of academic subjects in providing an opportunity to compare and contrast the opinions on, and outcomes of, undergraduate study across Europe - as the Bologna Process encourages systems to become standardised. To this end, Wall and Donert (2004) outline that the HERODOT Network for Geography in European Higher Education engaged its partners in the process of tuning Geography. Their survey of academics and students was aimed at enhancing the image of geography and employability of students, with the survey also enabling European Geography departments to become more aware of

the needs of their graduates in the workplace and the relevance of key skills to employers (Van Ernst *et al.*, 2001) resulting in the preparation of relevant curriculum change in an enlarging Europe. Tuning of Geography entailed a complete analysis of the competences in Geography higher education courses in Europe using the 'Tuning' methodology originally designed by Gonzalez and Wagenaar (2003) involving universities across Europe. Initial research was undertaken by 15 academics from 9 countries and a list of generic and subject specific skills that geographers should have attained on graduation was drawn up; these skills are listed in Tables 3.7 and 3.8. In the final survey the opinions of academics and employers were obtained in order to gauge the importance placed on the list of generic skills and the level to which they felt these were developed by university geography degrees and, with regard to subject specific skills, their importance to undergraduate study and to further (post graduate) study.

As technological advances and globalisation impacts on the labour market, Hennemann and Liefner (2010) discuss the situation of geography graduates in Germany. Although geography graduates had a multi-faceted education and could expect to fit into a wide range of roles, a study of 257 geography graduates from Justus Liebig University in Germany showed that the traditional curriculum taught left them unprepared for the workforce. Whilst acquiring high levels of knowledge they did not have the transferrable skills demanded by the employment sector (Hennemann and Liefner, 2010).

Discussing a survey of students, their expectations of the value of their degree and their experiences post-graduation, Gedye *et al.* (2004) argue that in an increasingly globalised world and knowledge driven society it is necessary to develop a highly educated workforce. Geography graduates with their qualities of flexibility and adaptability, gained through studying a diverse discipline, are ideally suited to contemporary employment needs. One of the key aspects in undertaking a degree in geography is to increase career prospects and although, Gedye *et al.* (2004) point out that the UK QAA benchmark statement for geography is clear in providing students with transferrable skills for future employment, it is however unclear whether the students surveyed understood this link. Whilst most students felt having a degree improved their employability they did not necessarily think it enabled them to gain a

job that met their expectations. Indeed Gedye *et al.* (2004) comment that 70% of UK geography graduates decide to obtain a further post-graduate qualification specialising in an area which will provide a route to a specific career.

Table 3.7: TUNING Survey - Subject Specific Competences
Source: Wall and Donert (2004:21)

- Comprehend the reciprocal relationships between physical and human environments
- Comprehend the significance of spatial relationships at various scales
- Understand and explain the diversity and interdependence of regions, places and locations
- Draw knowledge, understanding and diversity of approaches from other disciplines and apply them in a geographical context
- Apply an understanding of geographical concepts
- Interpret landscapes
- Collect, compare, analyse and present geographical information
- Appropriately use geographical terminology
- Communicate geographical ideas, principles and theories effectively and fluently by written, oral and visual means
- Use diverse, specialised techniques and approaches in Geography
- Comprehend the nature of change
- Appreciate representations of geographical space and different geographical representations.

Table 3.8: TUNING Survey - Generic Competences
Source: Wall and Donert (2004:21)

- Capacity for analysis and synthesis
- Capacity for applying knowledge in practice
- Planning and time management
- General knowledge in the field of study
- Knowledge of the profession in practice
- Oral and written communication in the national language(s)
- Knowledge of other languages
- Use of information and communications technology
- Research skills
- Information management skills (ability to retrieve and analyse information from different sources)
- Critical and self-critical abilities
- Capacity to adapt to new situations
- Capacity for generating new ideas (creativity)
- Problem solving
- Decision-making
- Teamwork
- Interpersonal skills
- Leadership
- Ability to work in an interdisciplinary team
- Ability to communicate effectively with non-experts (in the field)
- Appreciation of diversity and multiculturalism
- Ability to work in an international context
- Ability to work on their own
- Ability to work on own initiative
- Project design and management
- Concern for quality
- Responsibility
- An entrepreneurial spirit
- Commitment to work related ethics
- A systematic approach to accuracy and precision
- Dealing with uncertainty.

3.2.5 Teaching Fieldwork

In a guide to teaching fieldwork in higher education, Gold *et al.* (1991) categorise the five most common forms of fieldwork types with examples, Table 3.9. With regard to how fieldwork is taught, Kent *et al.* (1997) contend that there have been major changes since the 1950s, an outline of these covering the period 1950 to 1997 are shown as Figure 3.3. In relation to the benefits of teaching fieldwork Kent *et al.*

(1997) state that on the whole these are anecdotal with little deep evaluation of the effectiveness of fieldwork in learning.

Table 3.9: Most Common Fieldwork Types
Source: Adapted from Gold *et al.* (1991:3)

Fieldwork Types	Examples
Limited travel in limited time	Short field excursions
Limited activity plus extended travel	Cook's tour
Extended travel and time	Residential course
Multi-location activity	Study tour
Learner-practitioner and participant observation	Project work

Work by Stoddard (1986) reaffirms the tradition of fieldwork based on exploration and observation; a tradition to which many educators in geography subscribe (Cosgrove and Daniels, 1989). Regionalism and geographical imaginations closely linked to exploration and tourism are the key foci with the emphasis of learning being on observation rather than scientific recording. Geographers, Stoddard (1986) contends, should base their learning on the real world; experiencing the landscape as explorers in order to truly understand its physical and human elements.

Taking a different standpoint, Clifford (1997) outlines the importance in the early 19th century for earth scientists to be in the field in order to collect scientific data, the interpretation of this being totally grounded by theory. This method of fieldwork was, Clifford (1997) proposes, the true indicator of a professional. Sauer's (1956) paper for the *Annals of the Association of the American Geographers* 'The Education of a Geographer' is celebrated by many academic geographers in relation to fieldwork in that Sauer's view point was that a geographer's principal training should be through fieldwork. Fieldwork should, Sauer (1956) stated, be at all levels of education within the discipline, from schools to higher education.

Changing Approaches to Geography Fieldwork

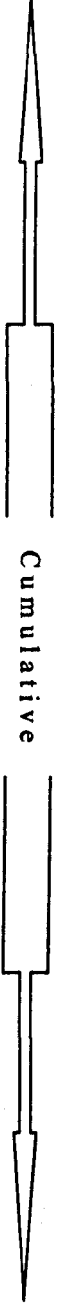
Date	Approach to Fieldwork	
1950	<p>Traditional 'look-see' or 'Cook's tour' field courses</p> <ul style="list-style-type: none"> • observational and descriptive 	
1960	<ul style="list-style-type: none"> • 'landscape' – based or centred on 'sight-seeing' visits to specific sites of interest in geography • passive student participation 	
1970	<p>'New' Geography – 1960s 'revolution'</p> <p>Problem-orientated, project-based fieldwork</p> <ul style="list-style-type: none"> • inductive and deductive approaches (positivist) hypotheses generation and testing, data collection and statistical analysis, interpretation and report writing 	
1980	<ul style="list-style-type: none"> • detailed studies, often carried out in a small area • active student participation although often staff-led 	
1985	<p>Enterprise in Higher Education – Transferrable skills</p> <p>Problem-orientated fieldwork still dominant but introduction of transferrable skills element</p> <ul style="list-style-type: none"> • project design skills • organisational skills • leadership skills • group skills • active student participation but emphasis switches from staff-led to student-led projects <p>Thematic and guided trails</p> <ul style="list-style-type: none"> • individual student initiative • group initiatives • feedback on completion 	
1990	<p>Massive growth in student numbers – teaching large classes</p> <ul style="list-style-type: none"> • field courses incorporate elements of all previous modes of fieldwork • may commence with 'look-see' perhaps combined with thematic guided walks/trails • followed by staff-directed, problem-orientated projects • then student-initiated problem-centred work with added dimension of transferrable skills 	
1997	<p>Serious problems of cost of fieldwork to both Departments and students combined with even larger classes</p> <ul style="list-style-type: none"> • the future? • 'virtual reality' to assist with field courses • but will 'virtual reality' be any cheaper or ever be as satisfactory? 	

Figure 3.3: 1950-1997 - The Changing Approaches to Geography Fieldwork
 Source: Kent *et al.* (1997:316)

Within the UK higher education system Clarke (1996) states that traditional fieldwork is now under threat as a modern curriculum takes its place. Educators

within higher education are now encouraged to become 'qualified' teachers by taking a Post Graduate Certificate in Learning and Teaching in Higher Education. This qualification leads to fellowship of the Higher Education Academy. Increasingly educators, within the agenda of quality university teaching, need to ensure that fieldwork is designed in line with current educational theory as outlined by Biggs, (1996) including clear learning objectives and outcomes linked to effective assessment strategies. Indeed Clarke (1996) contends that traditional fieldwork is unsustainable due to changing higher education criteria. By re-addressing the role of the teacher, and differing learning styles and skills to be gained, programmes can be more effective than old style fieldwork, in addition to meeting the new higher education agenda (Clarke, 1996). Traditional staff-led fieldwork has, according to Dalton (2001), been replaced by the student centred problem-solving excursion with a strong focus on data collection further emphasising that more recently a combination of both these styles has been the norm. However, fieldwork is often dependent upon the constraints of finance and time; thus influencing the location, delivery and duration of the fieldwork offered to students (Dalton, 2001).

Also addressing fieldwork in UK higher education, Higgitt (1996) states that in many ways traditional fieldwork is becoming unsustainable and that this is due to the changing pressures on academics' time and the increasingly optional aspects of fieldwork. As outlined in Table 3.10, Higgitt (1996) cites HMI's Survey of Geography Fieldwork in Degree Courses which has brought forward some 'habitual' and new criticisms of the practice of fieldwork. With particular regard to cultural geography, Duncan & Duncan (2001) state that there is a long tradition of reading the landscape and the mapping of observation and it is fieldwork that brings together knowledge from reading and observational experiences to present a whole picture. Historically, geography and fieldwork have been inseparable and, for example, Honeybone and Parrack's (1955) 'A Geographer's Reference Book' considers geography to be a practical subject, in which it is necessary for students to be trained in the making of accurate observations, drawing valid conclusions as to the nature of and relationships between these observations. Where real people are undertaking real activities in relation to real surroundings, fieldwork allows realities to be observed and conclusions made.

Table 3.10: Criticism of Fieldwork Practice in HMI's (1992) Survey
Source: Higgitt (1996:392)

Habitual problems:

- Few departments have written statements of objectives
- Some overall programmes are not sufficiently well co-ordinated
- Coherence of fieldwork with the rest of the course frequently needs more attention
- Staff pay too little attention to students' prior field experiences
- Most assessment is based on written work and does not address a broader range of skills
- Some students receive too little feedback on their fieldwork
- Not all departments have adequate safety codes.

New problems:

- In recent years, financial constraints have led to reductions in some field programmes
- In a combined subject and modular course, it is often difficult to schedule fieldwork
- Not all departments have given sufficient consideration to how fieldwork can best be offered to increased student numbers.

3.2.6 Learning from Fieldwork

There has been a paradigm shift in education from teaching to learning, (Donnelly, 2004). Barr and Tagg (1995), discuss universities moving away from an 'instruction paradigm' (where educators provided for the activity of 'teaching' – primarily via lectures, i.e. delivering instruction) to a 'learning paradigm':

“...we now see that our mission is not instruction but rather that of producing *learning* with every student by *whatever* means work best.” (Barr and Tagg, 1995: 13).

A further paradigm shift in higher education is discussed by Warren (2002) as the move to provide graduates with the skills and knowledge needed by society, so equipping them for the world of work, the so called 'skills agenda' (Warren, 2002:94). The inclusion of this skills agenda in curriculum design means that

outcomes need to be emphasised whilst paying specific attention to processing of learning and teaching, particularly skills transfer and providing the student with the ability to recognise themselves as 'self-learners' (Warren, 2002:94). In addition, May (1999) states that fieldwork is believed to further the development of a wide range of transferrable skills including leadership, communication, presentation and group work. It stimulates independent learning whilst allowing for the development of personal skills. Fieldwork can boost a student's confidence in their own ability whilst cementing social integration with staff and peers. As a result of the current emphasis on widening participation, Warren (2002) outlines that students are from a wide variety of educational and social backgrounds, each with different learning needs to be met. Experiential learning is key, Cantor (1997) contends, to the success of students entering higher education from non-traditional backgrounds. Allowing these students to succeed by providing them with the means of understanding their learning and explicitly acquiring practical skills can, Warren (2002) states, lead to deeper learning and improved student retention.

Improved quality in both teaching and learning can be a positive way forward and, for example, at Liverpool Hope University staff training via the Post Graduate Certificate in Learning and Teaching in Higher Education is seen as a way of addressing the issue. However, it is also important to focus on the skills that students take from their course and the relevance of what they are being taught in the light of the employment market, whilst providing students with deep rather than surface learning (Biggs, 1999).

In its broadest sense, therefore, fieldwork offers the opportunity to gain transferrable skills and Clarke (1996) states this is particularly true when students are working in groups and studying in unfamiliar situations, allowing students to gain many social benefits including leadership, organisation and team spirit. A study by Kern and Carpenter (1986) in the USA concluded that students who took part in fieldwork showed higher levels of understanding, stating:

"The greater ability to comprehend, apply, analyse and synthesize demonstrated by the field orientated class could logically be explained as the

culmination of this interaction between the affective domain and student motivation.” (Kern and Carpenter, 1986:182)

This clearly suggests that comprehension of their subject is enhanced through field-based learning. In an exploration of the views of students with regard to group learning and its management, Kempa and Orion (1996) state that fieldwork is an ideal situation for group work as it is open ended and less teacher-directed than class or laboratory based work. All students interviewed in this study concluded that working in groups during fieldwork contributed highly to success in their learning tasks, in addition input from peers within the groups aided in the learning experience.

Investigating training in the physical sciences in relation to engineering, Bot, *et al.* (2005) highlighting the importance of experimentation and experience in the real world. They considered this to be particularly true of a generation of students being taught via virtual reconstruction. This they argue blurs the intricacy of representation in the real world and prevents them nurturing their own relationships within the physical environment and their own social experiences. This lack of real work experience, Bot, *et al.* (2005) also contend, challenges autonomous learning – which is something that should be encouraged in order to allow freedom to discover values and creativity, whilst linking to the scientific dimensions of the subject studied. Learning in the field therefore develops the skills required by employers such as autonomy, self-learning, creativity and innovation and is therefore ‘added value’ to the training offered (Bot, *et al.*, 2005).

Although recognising that much has been written on the value of fieldwork in the gaining of geographical knowledge and attainment of skills, Panelli and Welch (2005) argue that giving fieldwork such a high status in undergraduate geography has limited the practice of actual geographical field skills and techniques. Too much emphasis has, Panelli and Welch (2005) state, been given to observation with little attention being given to preparation, i.e. skills and research methods prior to fieldwork. Furthermore, they argue that whilst fieldwork is now considered central to becoming a geographer there is little consensus as to the form the student experience should take. More rigour, therefore, within fieldwork is needed and Panelli and Welch (2005) state this can be achieved through thorough preparation in

the form of research methods claiming that “fieldwork should be embedded in research methodology teaching” (Panelli and Welch 2005:256). In addition to this, debriefing, according to Kent *et al.* (1997), can be overlooked as part of the fieldwork experience. This being, on the whole, due to the limited time available and the complexity of the field study; both of which can lead to insufficient student time being spent relating their experience to theory.

3.3 Issues with Fieldwork: Financial versus Academic

There is a strong financial pressure associated with modern day field studies and Dewsbury and Naylor (2002) comment that it is available funding that now shapes academic fieldwork. In many cases, funding is targeted at key areas of research considered important by government, and is driven by economic and social concerns, for example climate change and sustainability (Watson, 2004). Discussing the context of fieldwork in the UK, Abbott (2006), argues that this situation gives some areas of study precedence over other less ‘worthy’ topics. As a result of the introduction of quality standards in the UK (Quality Assurance Agency, 2011), quality compliance is a prerequisite of government funding and support (Universities UK, 2010; Science and Technology Facilities Council, 2011). A large rise in student numbers leading to changes in the staff-student ratio has also put pressure on universities to offer quality fieldwork within pre-existing budgets. This constant need to generate funding remains the driving force in the courses made available and the fieldwork subsequently linked to them (Abbott, 2006). Furthermore, Gold *et al.* (1991) state that fieldwork is one of the most resource-intensive methods of teaching particularly with regard to staff time and departmental budgets.

Long-haul fieldtrips are especially tiring and hard work for staff and students alike (McGuinness and Simm, 2005) and can take many months of planning and preparation. In spite of this, McGuinness and Simm (2005) and Fuller (2011) discuss growing expectations among students necessitating fieldwork to afford value for money and long-haul travel. Furthermore, Fuller (2011) argues that within the modern undergraduate geography degree the fieldwork offered has changed. The speed of modern life means that fieldwork is increasingly expected, by consumerist fee paying students, to be action packed and interesting. In addition, McGuinness

and Simm (2005) contend that the globalised students of today, with their prior travel experiences, have greater expectations suggesting that local fieldwork does not hold the appeal it once did and this leads to raised competition between universities for students.

Discussing globalisation and the reduced role of the State in education, Brock-Utne (2002) outlines the example of the United States of America (USA) which has experienced more fully, when compared to Europe, the reduction in government funding and the growth of cost-sharing. Through cost-sharing students have experienced higher tuition fees, commenting that in order to attain a 'good' job in the USA, *where* you studied is more important than *what* you studied to some employers. The tuition fees of the best universities being so high that often only the wealthy, and those able enough to gain a scholarship or sponsorship, can afford to study there. A further implication, according to Brock-Utne (2002) is that businesses move into education and the example of the University of California, Berkeley is outlined. Where once this university was funded by the State, it has now attracted major sponsorship; whilst enabling the endowment of faculty positions company logos are emblazoned in a variety of forms across the university.

Alber *et al.* (1992) contend that geographers are, however, set aside from other educators and if under threat it should be remembered that:

“The diagnostic experience is that most typically geographical exercise – a field trip. Regardless of specialty, nothing reminds geographers of how much they share – and how much geographers differ from colleagues in other disciplines – than a multidisciplinary transect through almost any landscape in the world. Historians, sociologists and political scientists will cluster in the back of the bus where they will chat in a desultory manner or sleep, Geologists may be roused into observational action by road cuts but will see little between them. Meteorologists will be helpless without their computers and models. Only the geographers – again regardless of specialty – will incessantly rubber-neck, gawk, point, explain, speculate, and argue about what they are seeing, more or less, without regard to whether it is urban or rural, physical or anthropogenic, beautiful or hideous. In real places, much of

what seems to separate geographers evaporates, and what unites them becomes vividly obvious.” (Abler *et al.*, 1992:2)

3.3.1 Staff Time and Student Numbers

In their review of higher education fieldwork, HMI (1992) outlines that, of the universities they surveyed, only one third allowed staff remission for time spent on fieldwork and in a quarter of departments there were no official arrangements to recognise the time spent on fieldwork and that where allowances were made they were much less than the actual time spent. In a study by Gray (1993) a survey of fieldwork funding in UK higher education for the years 1990-1991 was undertaken. This study highlighted that one-third of all fieldwork costs were met by the students, and two-thirds by the university or department, with students contributing an average of £54 towards their fieldwork each year and departments covering £107 per student. Academics in this survey thought that over the following 5 years their funding for fieldwork would decrease (Gray, 1993).

There has been a significant increase in student numbers in many European universities for a variety of reasons. One of the driving factors in the increase of UK higher education student numbers in the late 1980s through to the early 1990s is outlined by the Higher Education Funding Council for England (HEFCE) (2001) as being the 1988 education reforms at GCSE level. These changes led to a rapid increase in school pupils opting to stay on at college to A level and eventually move into higher education (Aston, 2004). In addition to this, the employment sector was increasingly demanding highly skilled people and the system lacked suitably qualified applicants (HEFCE, 2001). Furthermore in 1989 the UK government lifted the cap on student numbers with a target of 50% of people under 30 having had some form of higher education. This would be achieved through widening participation and providing opportunities for students from poorer background and with non-traditional entrance qualifications. The Times Higher Education (2001) states that student numbers doubled between 1989 and 2001.

Whilst similar situations with regard to the labour market and skills existed in many European countries (Aston, 2004), there were other controlling factors apparent in

'Eastern' European states following the 1989 political changes across Europe. Hungary and Romania are clear examples of the problems existing in such countries. Abadi-Nagy (2004) outlines the rapidly shifting social environment in Hungary whereby socio-economic changes lead to academics leaving education and seeking higher paid work in the private sector. At the same time student numbers were rising significantly - in one university numbers rose from 6,354 in 1989 to 25,904 in 2003 (Abadi-Nagy, 2004:8). This resulted in a problematic staff:student ratio with fewer qualified staff and larger student groups, whilst salaries remained low for academics leading to lack of recruitment. Romania also experienced similar problems and Horobet and Chiritoiu (2002) discuss the increase in student numbers following 1989, in part due to the introduction of a higher education private sector, with the student population doubling over an eight year period. There was a decrease in the state preferred subjects within technical disciplines as students opted to study the humanities and social sciences, in which student numbers quadrupled. This adjustment in social science degrees has resulted from a demand in the labour market, with employers seeming to valuing these degrees highly.

Also in light of the change in the staff:student ratio, departments are increasingly faced with larger classes and more students and Jenkins (1994) contends that for geographers this creates the issues of providing quality fieldwork, which is considered value for money for students and legislators. Gray (1993) and Jenkins (1994) discussing rising student numbers state that the traditional week long residential field visits, undertaken by many UK universities, were becoming untenable due to the higher student-staff ratios and decreasing funding. Some institutions, Jenkins (1994) reported, ran more than one residential field visit in order to improve the student-staff ratio and the learning experience. This, however, had the 'knock on' effect of creating greater strain elsewhere in the curriculum, in addition to taking research time from the academics. It is also noted by Haigh and Gold (1993) that fieldwork has been left on the fringes of the curriculum due to increasing costs, its high demands on resources and a history of poor teaching approaches. This, Haigh and Gold (1993) state, is a result of declining resources due to an increase in student intakes leading to severe budgetary restraints. Managers involved in departmental finances and budgets, particularly where their disciplines do not involve fieldwork, often use fieldwork as a starting point for cost

cutting leaving geography departments constantly battling to ensure the levels of funding for fieldwork remain in place.

These comments are reflected more generally at higher education level where many European countries have no (or small) tuition fees and students are assisted by their parents or via bank loan schemes and part-time work; they pay for their own books and subsistence (Brock-Utne, 2002). In some countries tuition fees are low or non-existent, e.g. Germany, where in many areas of the country university education is free from tuition fees, foreign students pay the same as home students, meaning they too are not charged for their tuition (Coughlan, 2011). Despite high tuition fees being non-existent in many countries, their governments have still reduced funding to universities and Brock-Utne (2002) states that universities need to respond to changes, for example, in Norway positions have been frozen and staffing reduced. Difficulties are growing with some departments finding operational issues extremely difficult. Purchasing text books and journals, academics attending conferences and reduced teaching in favour of research, are but a few issues (Pers. Comm. PA4:4; PA4:6). These issues are now forcing income generation, creating additional loss of time with academics becoming even more over-worked. Indeed, Brock-Utne (2002) gives the case of academics in the USA who feel they are under pressure to attract funds and are being judged by the university administration on their ability to do so. Whereas once it was sufficient to publish their work, grant gaining is becoming a criterion and proof of success as an academic.

Reduced government funding, according to Brock-Utne (2002), leads to larger class sizes meaning universities need tuition fees to continue; whilst student numbers rise no extra pay is afforded to the academics as their workload is again increased (Pers. Comm. PA4:14). However, the rise of a wealthier society is leading to more private institutions in higher education. One example provided by Brock-Utne (2002) is from a college in Norway which has some 20,000 students who pay high fees. In return they can be assured of smaller classes and one-to-one tutoring; furthermore the higher fees provide additional funds for academics who are rewarded for refereed publications.

3.3.2 *Fieldwork and Risk*

With regard to why students are attracted to geography courses, Ternan *et al.* (1999) state that this is because of the interesting fieldwork on offer and that often universities market their courses to include long-haul trips in order to attract students. The current climate of cheap flights and package holidays has enabled fieldwork in other countries where once it was prohibitively expensive. Additionally, Abbott (2006) outlines that long-haul field study, although of benefit to students and universities does ignore the questions of race, gender, poverty etc. focusing on the practicalities of such fieldwork rather than the issues arising from it.

In the UK, overseas geography fieldwork planning is currently governed by British Standard BS8848:2007+A1:2009 'Specification for the provision of visits, fieldwork, expeditions and adventure activities outside the United Kingdom'. This legislation is used to ensure organisers apply good management within their planning, ensuring that levels of risk are reasonable and acceptable. In addition, it provides guidance on the recognition of risks associated with the trip, and the behaviour required by participants, to ensure that risk remains at an acceptable level (British Standards Institute, 2009).

Whilst fieldwork is considered to be an essential element of degree courses in the UK, Abbott (2006), comments that the need for risk assessment and insurance on overseas field excursions means that in order to maximise safety and minimise litigation the excursions become more of a tourist trip than geography fieldwork and that any fieldwork could be clouded by the 'tourist gaze'. Abbott (2006) also contends that an obsession with doing fieldwork safely and cheaply is at loggerheads with the historical roots of the UK's geographical tradition based on exploration and discovery.

3.3.3 *Changing Needs of Staff and Students*

The benefits gained from fieldwork are, as Pawson & Teather (2002) contend, a method of arguing the case for the distinctiveness and on-going maintenance of geography as a whole. However, in order to demand a level of higher funding the

discipline must show a clear purpose for fieldwork within the curriculum, a purpose that must be re-designed in line with staff and student changes and needs. Lifestyle changes experienced by current day students are leading to off-season and lengthy residential field courses becoming less appealing and Pawson & Teather (2002) further outline that with many UK students working in order to pay for their studies, students consider taking time out for fieldwork inconvenient. This is also considered to be the case with mature students who are juggling study with their families, raising issues such as child care costs etc. These issues can outweigh the benefits of fieldwork to a student who has added outside pressures to consider. Additionally, there is an extra pressure on students with limited study time, in that fieldtrips often take place in term time, meaning lectures are missed (Pawson & Teather, 2002).

Within the UK it is normal for students to be asked to pay towards the cost of their fieldwork and Chalkley (1998) states that the fear with the introduction of student tuition fees was that the students would see fieldwork as unaffordable. Arguably, students could use their student loans to finance fieldwork; however with departments continually under pressure from budget cuts, and in the light of changes, some are being forced to make a review of the affordability and feasibility of the fieldwork offered. Despite geography having a good employment record offering the breadth of skills required by employers, the fear still remains that students will opt for more vocational degree courses due to increasing financial demands and student debt. This issue of students' finances is also raised by Jenkins (1994) who expresses the concern that traditional fieldwork will attract limited funds leaving the students having to pay either all costs, or a higher percentage of fieldwork costs, at a time when students are feeling more financial strain than ever before. Additionally, students from non-traditional educational backgrounds are more common in UK universities - leading to an increase in 'mature' students. These students bring with them additional problems and may not, due to family circumstances, be able to take part in compulsory residential fieldwork.

Also discussing the financial problems facing students and departments in designing fieldwork, Kent *et al.* (1997) state that more and more students are asked to increase the proportion they pay towards their field visits. Student finances and increasing levels of debt have made universities look again at the type of fieldwork on offer and

now include day trips and local fieldwork allowing those with less money to take part. However, Kent *et al.* (1997) argue that overall this system is unfair with wealthier students travelling to exotic locations for fieldwork and others having to make do with shorter, local trips. McGuinness and Simm (2005:251) outline a concern that long-haul fieldwork is “elitist” with only the wealthiest students being able to afford it and could be seen as discouraging other elements of the study body, i.e. by gender, race, class or disability. Ethically, there are also concerns with the type of fieldwork and field sites offered, particularly with regard to the so-called “‘privileged’ looking at the ‘underprivileged’” (McGuinness and Simm, 2004:251). Such views on financial inequality are echoed by Dorling (2010) who, discussing levels of debt in the UK, outlines that 75% of UK students took out loans in 2000 whereas only 25% had loans in 1990, concluding that there are many poorer students in the education system that cannot rely on the financial support of their parents:

“Students tend disproportionately to be the children of the rich, but many are poorer and cannot rely on their parents to help them out” (Dorling, 2010: 404).

A poll carried out in the UK is reported by Williams and Vasagar (2010) which concludes that an increase in tuition fees to £5,000 per year would deter more than half of students from poorer backgrounds and if fees were to rise to £6,000 this figure would discourage 75% from taking up studies due to the fear of incurring the amount of debt associated with them. It is also noted that a further study revealed that levels of debt are forcing more final year students to take on part-time work or longer working hours during term-time. Two thirds of those surveyed were working to avoid or reduce debt (Williams and Vasagar (2010). Levels of debt could, propose Williams and Vasagar (2010), lead to lower grade expectations, lack of involvement in extra-curricular activities and a higher level of dissatisfaction with courses. Currently, students entering higher education in the UK, pay the existing annual tuition fee of £3,290 per academic year. This figure will increase with effect from 2012/13 leaving students paying up to £9,000 per year (Loveys, 2011). Morgan (2012) reported statistics issued by the UK Universities and Colleges Clearing Service (UCAS) which indicated that only 6,000 students deferred a firm offer of a university place in 2011/12 compared to 20,000 the previous year which Loveys

(2011) outlines was to keep student debt to the minimum. Lovey (2011) further contends that students starting university in September 2011 will face an average of £27,000 of debt on graduation, compared with around £56,000 if they started their studies in September 2012.

A further point made by Kent *et al.* (1997) is that students' paying more for their fieldwork leads them to expect greater value for money from the trips and that the area of value for money versus the fieldwork experience could be researched further.

In the late 1990s the UK literature sees a move towards fieldwork becoming more 'inclusive' and Maguire (1998), for example, says that by 1996 at Liverpool Hope University, students had the choice of international or national residential fieldwork in addition to non-residential local fieldwork in order to meet the needs of the increasing numbers of mature (25 years plus) students and those with financial constraints. In a study undertaken by Maguire (1998) looking at students' reasons for choosing their locations for fieldwork it was apparent that the main reason for students' choice of fieldwork, was their wish to visit a specific location; with the costs of fieldwork being the second most important element. The study also found a gender difference in that 35 per cent of males thought the costs of low importance compared to only 14 per cent of females. Those mature students with families gave their home responsibilities as a deciding factor when choosing their fieldwork location. Of the students with children, half undertook residential fieldwork to get away from their family responsibilities and socialise, whereas those selecting the non-residential courses cited such reasons as their lack of childcare or their family not being able to cope while they were away. Interestingly, on the whole, students thought that in choosing a geography degree students should be prepared to undertake compulsory fieldwork whilst recognising non-residential field trips did resolve issues for some students.

Although fieldwork is believed by teachers of field studies to be an activity which needs to be 'experienced', Ford (1998) contends that UK HE funding bodies do not agree. Whilst quality of education is still of importance, costs are becoming a concern. To this end, several projects have been funded aimed at replacing some fieldwork with computer based resources, arguing that the quality of study can be

enhanced whilst overall costs are reduced. Virtual experiences, including photographs of sites, three-dimensional digital models of the study area and most recently innovations in augmented virtual reality (Cooper *et al.*, 2002) can provide an alternative to fieldwork in situations where students are, for example, ill or disabled. However, Ford (1998) argues that cost savings in these instances would be negligible as many institutions have already reduced the amount of time and money spent on fieldwork to the minimum acceptable for degree level.

3.3.4 Justification of Fieldwork

As with any provision within an academic programme, McEwen (1996) argues that, geography fieldwork needs to be viewed within the wider context of the current academic climate. The UK has seen changes in higher education geography throughout the 1990s as a result of both external and internal factors, including a move to modularisation of degree courses, higher staff to student ratios and competition from the variety of attractive courses available. Frequently, fieldwork takes a large amount of the departmental budget and in order to maintain the status of fieldwork as integral to geography its value from an educational viewpoint must be justified. Therefore, McEwen (1996) contends that geography academics in the UK need to be able to put forward both the benefits and limitations of different styles of fieldwork. These should encompass different viewpoints; the academic, educational and in particular the employability skills gained, in order to secure adequate funding for the continuation of fieldwork within their programmes. Fieldwork can no longer continue to be unjustified and to this end McEwen (1996) states that its so called 'added value' needs to be made known to students in addition to staff and budget holders. Additionally, this means that within the changing higher education environment geography academics are challenged to match quality fieldwork to the finite resources available.

3.3.5 Issues with Geography School Teachers and Links to Higher Education

Traditional geography fieldwork is changing dramatically with the influx of readily available remote sensing data. This according to Butler (2000), combined with a lack of financial support for field research, is leading to a generation of geographers

who, having undertaken little fieldwork in their own studies, lack the grounding necessary to teach the future generations. The education provided to future geography teachers is also commented upon by Fredriksson (2004) who considers that their education is such that it cannot convey all the skills and knowledge they will need for their future profession. This is suggested by Kolnik (2010) to be a problem in Slovenia where Bologna is changing the undergraduate degree. To become a teacher in Slovenia the course has been reduced from four to three years plus one year dissertation to three years plus a two years' master's degree in order to fit the Bologna model.

In relation to this increased use of technology, Haigh and Gold (1993), state that the use of aids such as slides, textbooks and computerised virtual reality is felt by many professional geographers to be no substitute for field experience. One further impact according to Gregg and Leinhardt (1994) is that geography education has hit a major problem as the subject in schools is often now taught by non-geographers. As a consequence, they argue that pupils are failing in a basic spatial understanding of the world. One reason given for this opinion is that unlike other subjects geography struggles to determine clearly the topics that students should be taught in order to "reason with and about geography" (Gregg and Leinhardt, 1994:312). Indeed, despite the fact that geographers work on topics of great importance and relevance to society as a whole, Murphy *et al.* (2005) contend that, geography as a subject, is often reduced to the memorisation of place names, rather than the breadth of knowledge the discipline actually encompasses. Although, Murphy *et al.* (2005) contend geographers are able to comment on topics as diverse as climate change, homelessness, racism and political changes following war - in the media they are grossly underrepresented. Furthermore, Bulman and Rice (2004) argue that for geography teacher trainees the lack of overseas fieldwork or teaching experience impacts significantly upon them – leading to decreased understanding of ethnicity and a use of negative stereotypes within their teaching. Overseas fieldwork is seen as a way of creating greater international understanding and empathy whilst encouraging interest in global issues and providing an opportunity for students to question previously held beliefs.

How school students perceive the choices they make with regard to their curriculum subjects at GCSE and A-level in UK schools is outlined by Trend (2009). The selection of their courses is not based on merely enjoyment as this is seen as an inadequate reason: Trend (2009) states that selection is based on wider issues including the relevance of the subject to future careers which is often considered as a deciding factor. This study further maintains that there is a gap between schools and higher education geography, particularly with regard to the perceptions of students and their expectations of higher education, which Trend (2009) states, widened with the introduction of the UK National Curriculum in 1990. Similar concerns were raised by Clifford (2002) who also considered that university geography would decline as schools merged geography into environmental and humanities studies, thus diluting the subject. In discussing the 'divide' between school geography and higher education, Castree *et al.* (2007) state that school geography has lost its connection to higher education geography. They contend that most academic geographers know nothing of the school curriculum, complaining of its lack of focus on current issues and relevance to a contemporary world. Adding to this divide, teachers and those responsible for setting the syllabus are not provided the time nor the opportunity to engage with academic geographers. Castree *et al.* (2007) argue that this divide does not matter provided there are school pupils willing to study geography to university level - university has three years or more to educate the students in a more contemporary and relevant geography, the type valued by both academics and society.

Worryingly, Castree *et al.* (2007) also state that there are schools in England and Wales that no longer offer GCSE geography and that since 2000 some 20% less school pupils are opting for geography at this level. This too is true for A level and it is evident that a reduction in school examination candidates will impact significantly on higher education. There is no doubt, in the current UK education system, that pupils need to be made aware of a wide range of issues and taught to think on a global scale of climate change, economic globalisation, migration and intercultural understanding. These issues will still need to be taught in schools but not necessarily by a geographer, nor within the subject itself. A warning should be taken from countries such as the USA and Australia, Castree *et al.* (2007) contend,

where school geography is no longer a central subject and in some cases has in fact merged with other subjects.

The promotion of links between universities and schools is discussed in a paper by Edmondson *et al.* (2009). Their paper outlines the involvement of Liverpool Hope University's Geography Department with several local schools whose A-level students accompany undergraduates on international fieldwork excursions. Contacts have flourished as university students trained at Liverpool Hope University through the Postgraduate Certificate in Education (PGCE) entering the teaching profession requested the possibility of a collaborate fieldwork trip for their A-level students. Overall, the study produced much positive feedback from undergraduates. They enjoyed passing on their knowledge to school students and the A-level students enjoyed the international experience in addition to seeing what a university degree course could offer them. This collaboration is seen by Edmondson *et al.* (2009) as a means of bridging the gap between school and university education.

3.4 Students as Customers

Increasingly, there is a school of thought that regards higher education students as 'clients' or 'customers'. This topic is raised in light of increasing tuition fees, particularly in the UK. In a study by Lomas (2007) of the perceptions of academic staff toward such a change in higher education, it was considered that the increase in participation rates and changing socio-economic and cultural backgrounds in Europe was making universities think carefully about their roles and the provisions made for their students. Students paying high tuition fees are, of course, nothing new in the USA, and Alberts *et al.* (2010) cite a modern upbringing with lenient school discipline and students used to instant gratification as reasons for creating a body of customers rather than scholars. A survey of German and UK students is outlined by Jones (2010), in which those from the UK were seen as 'materialistic' expecting their degree courses to provide them with the necessary attributes for the work place in addition to unrealistic expectations of future salaries. Students are now more likely to complain if their course fails to provide value for money and with parents more commonly supporting them through university they too are beginning to play a part in their child's higher education experience.

According to Buckton (2008), higher education institutions now need to show clear responses to student feedback from an increasingly demanding study body. This has the effect of increasing staff work load as it is necessary for staff to be trained to deal with complaints and resolutions. This situation has been seen as a threat to higher education's academic mission and Ramsden (2008) implies that it is now necessary for universities to find a balance between the demands of students and the intellectual ethos of higher education as a whole.

Many universities are now marketing themselves so as to compete in the global higher education market. Such marketing, however, clashes with the educational values of many academics (Lomas, 2007) and Sharrock (2000) argues that education is not 'consumed' but rather the university and lecturers present ideas to students in order to actively engage them in their education. However, students are increasingly thinking of themselves as the 'customer' (Alberts *et al.*, 2010) with the consumerist attitude that 'the customer is always right' and Furedi (2003) contends that, within the setting of higher education, academics should aim to not give students what they 'want' but what they 'need' - even if their methods are unpopular with students in the short-term. Effectively, students are now transferring the responsibility for their education to the university (Eagle & Brennan, 2007), rather than taking on this responsibility for themselves. By adopting this consumerist attitude students are coming to expect high grades, regardless of the amount of effort or the quality of their work, seeking out the 'easiest' courses with soft assessments (Clayson and Haley, 2005; Alberts *et al.*, 2010). Additionally, Eagle and Brennan (2007) outline that the UK Quality Assurance Agency recommends student evaluations, as a means to understanding the needs of higher education students; however, this method is increasing being used by students to:

“...punish academically demanding staff through critical feedback. This may have a detrimental impact on future staff promotion prospects.” (Eagle & Brennan, 2007:51)

With the increases in UK tuition fees to a maximum of £9,000 per year in 2012, Baker (2010) recounts the Students' Union's view point which includes: students

expecting greater rights and powers; the legal right to challenge and even change universities if they feel they have been misled by their course prospectus; and most importantly, particularly for geography fieldwork, additional charges should be banned outright. Undergraduate fees are less expensive in many European countries and Baker (2010) provides the example of the University of Maastricht where all EU students pay £1,400 per year in addition to which many courses are taught in English. On top of this, in order to tempt the brighter students to study at Maastricht, the top 3% of students are provided with free tuition (Baker, 2010). Furthermore, Jaume (2010) indicates that, being only 3 hours by train from London, Maastricht University considers their courses an ideal option for UK students facing increasing tuition fees and lack of places available at UK universities. Maastricht University are now taking the UK government to court as the Universities and Colleges Admission Service (UCAS) have refused to allow UK students applying to European universities through their system. Studying in Europe provides students with an international element to their education whilst paying considerably less for their tuition, for example France, Germany and Spain all offer degree courses with fees below £1,000 per year (Jaume, 2010).

3.5 The Future of Fieldwork

There are many factors driving change in contemporary fieldwork, including funding, staffing levels and student needs, as outlined in section 3.3. The use of technology in fieldwork is increasing (Wittel, 2000) and the future of fieldwork is seen very much to be technology led with more use of Virtual Fieldwork and Geographical Information Systems (GIS) (Moore, 1997; Ford, 1998; Thurkow *et al.* 2005). Interdisciplinarity is increasing within the sciences as a means of combining expertise in solving research problems and gaining external funding (Schoenberger, 2001). Any decrease in traditional fieldwork has worrying implications for geography fieldwork as a whole, as in some cases newly qualified teachers have had less experience of fieldwork and therefore attach less value to it (Butler, 2000). Finally, how fieldwork is portrayed to prospective students is becoming increasingly important (Robson, 2002) as universities vie for new students.

3.5.1 *Emergence of New Technologies*

Fieldwork has become an integral part of being a geographer (de Blij, 1990) yet Maxfield (1997) suggests that Geography fieldwork which has been at the heart of our discipline is gradually being replaced by computer aided study with less emphasis being placed on the 'real world'. With regard to the introduction of computer technology in geography, Driver (1995) calls for geographers to take heed of the innovations particularly with regard to imagery but stresses that, although computers are a contemporary method, there is a clear history of using technology in geography education and gives the example of using the photographic lantern as a teaching aid. However, Xirgo-Tarres (2009) contends that the speed of technological development in the past ten years makes it difficult for universities to keep up with advances particularly with regard to GIS. Enhanced satellite imagery and GIS used in the creation of digitalised elevation models and improving modelling techniques are, Brierley *et al.* (2006) argue, significantly changing areas of geography, in particular physical geography and applied geomorphology. This new technology is leading to a greater understanding of connectivity within our landscapes giving geographers a unique opportunity to work in areas of environmental management and risk assessment where whole landscape perspectives would be a vital tool. With regard to the use of advanced technology, Moore (1997) puts forward the opinion that this now allows for the expansion and extension of the educational value of fieldwork. In a paper presented to the British Cartographic Society, Moore (1997) outlines that tools available in information technology are rapidly expanding and that fieldwork creates an ideal use for these tools in measuring, analysing, and observing the field. However, Moore (1997) states that virtual reality fieldwork created through the use of information technology in the field should augment field activities and be used in conjunction with traditional field methods in order to provide students with a wide range of skills. It should allow the educational context of fieldwork to expand; whilst traditional fieldwork allows students to experience first-hand use of observational and analytical skills, the use of virtual environments can enhance this overall experience. The field skills necessary for students, i.e. observation, collection, measurement and presentation of results can be incorporated into the virtual environment, allowing students not only to input but to model and access data from the 'real' world via the 'virtual'.

Virtual reality field courses are technologically possible and in light of the increasing costs of fieldwork would be a useful resource as an alternative. Kent *et al.* (1997) acknowledge this technology will have a place in future curriculum content, but stress that this should be in addition to traditional fieldwork not in place of it. In a similar vein, Stainfield *et al.* (2000) acknowledge that virtual field trips could offer the answer to the issues of costs and accessibility; they also appreciate that such courses cannot wholly replace traditional fieldwork work but rather prepare students by introducing them to the aspects of the field, and allowing them to develop basic skills before entering the field. Discussing the move toward cost savings and inclusive education in higher education, Ford (1998) concedes that although traditionally fieldwork is decidedly an outdoor activity, and the opposite of desk based computer work, there is a move toward a more technological approach through virtual fieldwork and use of the internet. In light of this inclusion within HE degree courses, there are some students for whom such methods would be preferable, e.g. disabled or ill. Despite this, Ford (1998) contends that in cases where such work would be preferable it should also be focused on quality of learning and rather than being used as a replacement should in fact be used to enhance the quality of the learning experience.

One of the advantages of virtual reality in field courses, according to Williams *et al.* (1999) is that it provides for more efficient teaching and learning. It allows students immediate access to the field, providing autonomy and an equal opportunity to learn. An additional advantage is given by Qiu and Hubble (2002) who state that virtual field trips are helpful where sites are inaccessible, for example volcanoes/disaster zones.

Providing instantaneous access to data and the ability to share knowledge with other students, on a global scale, such learning environments decrease the time and costs involved in field study and have the added advantage of decreasing environmental pressures on some tradition field sites, for example in environmentally protected areas. The use of information technology in fieldwork preparation is seen by Warburton *et al.* (1997) to provide further value for money for students, as pre-fieldwork activities allow more quality time in the field. Efficiently planned

preparation can cut costs by moving the introduction to field tasks to the classroom cutting the amount of teaching needed in the field; this Warburton *et al.* (1997) state is particularly useful when dealing with large groups.

In discussing the use of web-based virtual fieldwork, McMorrow (2005) found that using this resource prepared students for the field, providing them with acquaintance of the field area whilst reducing geographical and cognitive dimensions. It helped them orientate themselves to the field, adapting quickly to the new situation as the resource had provided students with a clear mental image beforehand. The students interviewed for the research carried out by McMorrow (2005) stated that the resource gave them a good basic understanding of the field area and its geographical themes. Although a useful tool in fieldwork preparation, McMorrow (2005) stated that virtual fieldwork should not replace traditional fieldwork but that they should mutually enhance each other.

A study undertaken by Maskall *et al.* (2007) found that there was a widespread trend toward using technology in preparing students for fieldwork, including web based materials and virtual environments. Use of GPS and mobile technology was growing particularly in the design of mapping projects. Increases in the use of technology are, Maskall *et al.* (2007) state, directly attributable to the affordability and availability of such technology, with increased use in the field of PDAs, tablet PCs, GIS visualisation and MP3 recording technologies; this mirrors similar comments by Stott (2007). With regard to the use of communication and information technology in the teaching of fieldwork, Fletcher *et al.* (2007) state there is a possibility that the use of such technology in field courses will increase particularly as mobile technologies continue to develop. Additionally, it is noted that there are problems and constraints with regard to its use, mainly due to practicalities such as lack of training available to teachers and the amount of time needed to develop materials. There are also financial implications to consider in purchasing such resources from already stretched budgets. Fletcher *et al.* (2007) note that the value of this technology as a pedagogical tool in fieldwork does not have widespread appreciation, having not been adequately explored. However, practitioners who have used it, find it increases enthusiasm, providing greater engagement and deeper learning in addition to saving time for both students and

teachers. Evaluating the use of Personal Digital Assistants (PDAs) for field data collection, Stott (2007) found that decreased costs and improved memory in PDAs offered an opportunity to students for functionality across courses, providing the capacity to store notes and hand-outs in addition to recorded video, audio and lecture presentations. Using this technology during fieldwork benefited students significantly as they were able to backup and share data through the Bluetooth function to a variety of technologies, for example a central PDA storing all results, a laptop, mobile phone or i-pod. The facility to backup data in the field was found to overcome the problems with lost or wet and damaged handwritten field notes. In addition, students were able to share group data and observations which subsequently helped in the preparation of their assessed field reports.

In a further evaluation by Newman and Jones (2008) of rich media in fieldwork it is stated that universities are beginning to realise that technologies such as personal digital assistants (PDAs) can aid student engagement with their study “by tapping into the skills of the ‘multi-media savvy’ generation” (Newman and Jones, 2008:47). Fieldwork is one area where such technology providing rich media direct to students would be extremely useful and Newman and Jones (2008) state that this technology is ideal as it has the ability to provide students with detailed field information in addition to allowing students the function of recording their own observations and notes. In addition, it has the ability to provide field information in multimedia, combining images, video and audio. The project undertaken by Newman and Jones (2008) analysed the use of portable technology and multimedia, in particular the use of iPods and Smartphones - something most students own themselves and therefore are very familiar with. In order to look at the usefulness of such portable technology students were presented with a variety of devices together with traditional paper resources as back up and asked to undertake a field tour of Bath’s centre. The devices provided audio-visual files in addition to images and recorded information. The results of this research by Newman and Jones (2008) were considered to be a success, with students finding no problems with the use of these devices, the students enjoyed being able to test these technologies and commented that the rich media improved their learning experience. Whilst some felt that the on-going tour guide distracted from their own observations and note taking, overall they found it more helpful than the paper worksheets provided. Students did, however, comment that

using the technology made them feel more conspicuous and worried about using it in public due the cost of the equipment. The study showed that overall students enjoy working with this technology although Newman and Jones (2008) note that this is expensive to set up with extra costs attributed to software updates. It is also a challenge to staff in producing materials for fieldwork in addition to ensuring such materials adhere to the disabilities legislation.

Mobile learning is, therefore, increasingly becoming part of geography fieldwork and Jarvis and Dickie (2010) outline that tablet PCs and PDAs are becoming the focus of academics in supporting fieldwork. Lynch *et al.* (2008) highlight the use of smart phones, stating that their capability for image capture, GPS and MP3 recording can be of use in aiding student learning particularly in the field. One addition to this technology is the pod-cast which allows the student to listen or watch a broadcast and Evans (2008) suggests these are extremely useful for revision purposes.

Jarvis and Dickie (2010) present details of a university pod-cast library which includes short videos on key fieldwork skills, for example soil and water sampling, surveying and guidance on the use of mobile technology in the field. In their study Jarvis and Dickie (2010) conclude that students found pod-casts a useful tool and thought being able to see demonstrations by staff in this way was a flexible way of learning.

As technology continues to progress the latest advances in creating virtual reality environments are coming to the forefront and Cooper *et al.* (2002) describe 'Augmented Reality' which allows for several types of media to combine, e.g. digital map information, GIS, GPS, images and text. This allows the real world to be accurately represented in a virtual environment. The environments are controlled by the designer who can decide what is seen and where (Cooper *et al.*, 2002). Whilst virtual fieldwork is ideally suited to this technology it is, despite advances, still not readily available for such use (Cooper *et al.*, 2002, Priestnall, 2009).

Priestnall (2009) outlines geography fieldwork undertaken where first year undergraduates prepared their own three-dimensional (3-D) modelling of the landscape during a field trip. It was aimed to provide students with a clear

comparison between the 'real' and 'virtual' world. PDAs were used in the field to provide images together with the data necessary to compile the 3-D models and the GPS connection displayed the relevant views/images once a location was reached; providing for an augmented reality. Concluding that augmented reality was still relatively complex at the current time, Priestnall (2009) conceded that this technology was costly both in time and money, however, in modelling data it would allow for a clearer visualisation of many computer-generated views.

A list of advantages and disadvantages to virtual field trips (Table 3.11) is presented by Qiu and Hubble (2002). The main disadvantage reported by them is the inability of a virtual field trip (VFT) to provide adequate field skills training, a contention supported by Shroder *et al.* (2002) who states that the computer merely provides an 'abstraction' of the real world and clearly cannot provide the same impact as a visit to the field. Qiu and Hubble (2002) conclude by stating that:

“The greatest disadvantage of VFTs is that they cannot simulate many of the real sensory aspects of fieldwork and consequently should not ever be used to replace real field trips.” (Qiu and Hubble, 2002:78)

With regard to adding value to first year geography degree courses, France and Ribchester (2004) designed a fieldwork module which in addition to providing for the acquisition of field skills, their final assessment differed significantly in that it included a strong element of IT work. The post fieldwork assessments included the creation of a website, allowing students to structure and present their field findings whilst gaining new skills in computing. Overall, France and Ribchester (2004) indicate that this was extremely successful with students; it focused their knowledge whilst providing increased confidence in computers and IT.

Similarly, Dykes *et al.* (1999) outline a study where virtual fieldwork has been used in order to help students visualise and interact with spatial information. Whilst the design and implementation was time consuming, overall the students benefited greatly and Dykes *et al.* (1999) state that the further use of such methods to encompass the preparation and feedback stages would be an added benefit. Considering the recent increase in the use of web-based and e-learning in geography

such as GIS and remote sensing, Thurkow *et al.* (2005), contend that virtual landscapes are an excellent way to relate interdisciplinary knowledge to theory and the 'real' world, in addition to promoting the use of IT and providing knowledge of GIS. However, Thurkow *et al.* (2005) realise there are major issues with cost in addition to the rapid development of software packages which require regular updating and note that these issues have become a challenge in some universities.

Table 3.11: The Features, Advantages and Disadvantages of Virtual Field Trips
Source: Adapted from Qiu and Hubble (2002)

Advantages	Disadvantages
Feature: Uses digital and computer visualisation techniques	
<ul style="list-style-type: none"> • Integrates a diverse source of data which is instantly available • Presents images from different viewpoints and at different scales • Displays non-visual data (information) • Useful in presenting data for inaccessible areas • Is an alternative to fieldwork where time, expense and logistics are issues • Allows the presentation of extensive trips and wide variety of landforms • Enhances the students' experience 	<ul style="list-style-type: none"> • Does not convey true 3-D nature of objects • Does not convey the non-visual i.e., touch, smell, sound etc. • Less beneficial than the field • Lacks ability to teach field skills • Lacks the nature of discovery
Feature: Use of personal computer and the internet	
<ul style="list-style-type: none"> • Flexibility of access - both time and place • Experience is repeatable and can be used to reinforce concepts in the classroom • Simple way to preview or review real field trips. 	<ul style="list-style-type: none"> • Having limited access to technology • No interaction with people
Feature: Variety of ways to access information – i.e. CD-ROM and website	
<ul style="list-style-type: none"> • CD-ROMs are easy to acquire and use • Sources are rich in information 	<ul style="list-style-type: none"> • CD-ROM limited by amount of information • Web sites can be difficult and factors include speed of network, reliability of service etc.
Feature: Wide number and variety available on-line	
<ul style="list-style-type: none"> • Materials and information are abundant • Provides rich resources for learning and teaching 	<ul style="list-style-type: none"> • Students can be distracted by large amount of web sites • Many websites are not permanent
Feature: Quality varies	
<ul style="list-style-type: none"> • Users can be at different levels and have different demands 	<ul style="list-style-type: none"> • Can be difficult to find one suitable for teaching and learning • Websites not quality controlled
Feature: Interactivity, designed in a similar way to computer games	
<ul style="list-style-type: none"> • Attractive to students and interesting experience for users 	<ul style="list-style-type: none"> • Students can obsess over particular sites leading to time management issues

3.5.2 *Increased Interdisciplinarity*

Interdisciplinarity is defined as:

“the capacity to integrate knowledge derived from disciplines which may have very different views as to what ‘counts’ as valid knowledge.” Jones and Merritt (1999:336)

Discussing interdisciplinarity, Schmelzkopf (2002) states that, it allows students to concentrate on the holistic view, the issues and problems rather than the subject, concepts and teachings. Three arguments are cited:

- **Intellectual** – ideas in any field can be enriched by inclusion of theories/concepts from other disciplines
- **Practical** – world problems/issues are not organised by academic discipline.
- **Pedagogical** – integrated curriculum lends itself to advancement of learning.

Increasingly business and funding agents are becoming aware that practical world problems transcend the boundaries of academic disciplines and Schoenberger (2001) contends that universities are pushing interdisciplinary projects to increase their links with possible investors. Discussing the use of interdisciplinarity within the study of environmental questions, Jones and Merritt (1999) state that the integrative skills gained through this method of working enhance both research skills and employability. Interdisciplinarity allows the student to understand the importance of scientific evidence whilst providing an understanding of nature through critical analysis of the social implications.

The nature of ‘shared spaces’ in geography fieldwork is discussed by Dewsbury and Naylor (2002), who suggest that research experts from across the disciplines can come together and resolve issues from a multi-disciplinary standpoint. They outline that fieldwork is similar across the disciplines and that to understand what geography is in relation to other subjects sharing the field would bring to the fore the similarities in our practices. The Times (1990) observes that geography is:

"...the queen of the sciences, parent to chemistry, geology, physics and biology, parent also to history and economics. Without a grounding in the known characteristics of the earth, the physical sciences are mere games playing and the social sciences mere ideology".

Furthermore, discussing participant observation in anthropology, Jackson (1983) argues that geography and anthropology have been long linked specifically by their commitment to fieldwork and first hand observations. Whilst geographers, Jackson (1983) contends, have recognised the value of interdisciplinary for some time, it is suggested that geography and social anthropology should unite to become the "larger science of man" (Jackson, 1983:39). Fieldwork offers a learning experience outside the classroom and is a multidisciplinary exercise which Dykes *et al.* (1999) state plays an important role in many subjects including geography. As, Bot *et al.* (2005), outline modern science is extremely compartmentalised and in order to solve real problems, students should be moved away from this trend; learning how to incorporate skills to work alongside different disciplines. To illustrate this, Powell (2002), in a paper discussing the relationship between human and physical geography, calls for a revival of interdisciplinary dialogue across academic disciplines. Discussing debates in the 1990s referred to as the 'science wars', finding common ground, in an effort to bring unity to the sciences was necessary and geographers were also drawn into a similar debate regarding the growing divide between human and physical geography. Geography, Powell (2002) states, is well placed due to its own diversity to encourage interdisciplinary work and that in the exploration of human-environmental relationships fieldwork should be the catalyst for unity within the discipline. The diversity of geography means that many topics overlap, but lack of recognition of skills and knowledge between disciplines is ultimately, Ashbrook (2004) states, hindering our understanding of the planet. Rather than continue with this somewhat 'tunnel vision' academic disciplines should be acknowledging each other's strengths and weaknesses and working together in gaining further knowledge of the world.

Interdisciplinarity in research is directed at addressing 'real world' problems rather than purely theoretical discipline orientated research and Baerwald (2010) discusses this in relation to geography. Geographers clearly see this benefit as they often need

to explore cross-discipline, given the breadth of geography as a whole, and are therefore well placed and experienced in interdisciplinarity. Baerwald (2010) suggests this is due to the integration of geographical knowledge, using insights from other fields, being central to inquiry in geography. Often, through working collaboratively with researchers from other disciplines, we can gain a greater holistic knowledge. The experience geographers acquire, purely by interacting across our own disciplines and sub-disciplines, can provide greater insight to those teams working on multi-disciplinary projects (Baerwald, 2010).

Schoenberger (2001) states that the best type of interdisciplinarity is initiated by those who realise they need to engage with another discipline and culture, in order to answer their own questions. This is not always so simple or possible, as universities have an increasing need for external funding, and to this end strive to create working relationships with business. As a result it is often businesses, rather than academics, driving interdisciplinarity, according to their specific needs. Schoenberger (2001) also claims that this situation blends the disciplines and ensures that the business needs are met. Geography as a discipline, Schoenberger (2001) contends, should in the first instance work on our own interdisciplinarity, thereby providing a stronger foundation for working with other disciplines. Due to the diversity of our subject, Geography is in a very strong position to move into interdisciplinary fields and bridging the gap between human and physical geography would, Schoenberger (2001), states be the starting point. Therefore, rather than take Geography out into interdisciplinary work where our discipline is undermined and reduced by others in order to serve someone else's needs, Geographers should develop their own projects and take them to others creating our own position of power. Interdisciplinary is considered within and beyond geography by Bracken and Oughton (2009) who states that it is no longer necessary to justify interdisciplinary research as the benefits of this method of working are now recognised widely.

3.5.3 Student Recruitment and Promotion of Fieldwork

In response to the problem of higher recruitment and less funding within the UK higher education system, departments are striving to increase the attractiveness of their courses, and the increase in the use of a modular structure of study has provided

students with more choice (Clarke, 1996). Traditional fieldwork within the boundaries of this new higher education system is therefore becoming untenable, Clarke (1996) and Herrick (2010) contend, despite the fact that it is central to geography education and vital as an aid to student recruitment. This has affected every aspect of fieldwork, from teaching and learning to supervision and organisation. Additionally, within the UK, students are forced to take part-time work to subsidise the cost of their studies, leaving them with less time available for out of hours work such as fieldwork (Clarke, 1996). Both of these issues are impacting on residential fieldwork and particularly overseas trips. However, referring to student recruitment and the value of overseas long haul fieldwork, Robson (2002), McGuinness and Simm (2005) and Fuller (2011) all state that the recruitment of students is extremely competitive and long-haul field trips are used as marketing tools by management to attract students to university courses, highlighting the exoticism of the fieldwork on offer, which can in fact also influence a student's choice of university. This is felt to be particularly valuable where there are increasing pressures from other universities and research undertaken by Robson (2002) showed that student numbers at Keele University in the UK increased as a direct result of fieldwork offered to Kenya. Added to this, the students' clear post-fieldwork enthusiasm provided plenty of quotable comments to add to the prospectus and thereby aid future course recruitment.

Fieldwork as a method of education is unique, argue Dykes *et al.* (1999), in that it allows students an opportunity to learn about the real world through direct experience, the outcome of which, Lai (1996) contends, should include a greater understanding of the discipline, including the development of field investigative techniques. Students should come away with the ability to compare the 'ideal world', text books, academic journals and maps with the 'real world' encountered through fieldwork. Without fieldwork, Stevens (2001), states that geography is merely second-hand analysis and reporting. It is fieldwork that allows us to go beyond current knowledge allowing for exploration and discovery and therefore is the 'heart' of geography.

3.6 Conclusion

This chapter outlines current literature with regard to the status of fieldwork, although not much has been written in Europe beyond the UK. Both academics and students consider fieldwork to be important to higher education geography (Kemper and Orion, 1996; Fuller *et al.*, 2005; Hope, 2009) yet there has been little research providing objective reasons why fieldwork is such a positive learning and teaching experience (Nundy, 1999). Within the UK both Her Majesty's Inspectorate (HMI, 1992) and the Quality Assurance Agency (QAA, 2007) see it taking a central role in the discipline of geography. However, it is noted that many school teachers are no longer opting to provide their pupils with fieldwork in light of increased risk and issues with student behaviour (Cook *et al.*, 2006). This, therefore, means that to reverse this trend students undertaking teaching training should be encouraged to keep fieldwork central to their own teaching.

The skills gained through fieldwork are particularly important in light of the Bologna Declaration and the need for increasing student employability (European Commission, 2003). Seeing theory taught in the classroom transfer into practice is an important aspect of fieldwork which facilitates deep learning (Biggs, 1999; Drummer *et al.*, 2008) - where the "conceptual 'world of books' meets the empiric 'world of things'" (McGuinness and Simm, 2005:245). Experiential learning and the opportunity to acquire transferrable skills are seen to provide students with greater comprehension, increasing their ability to analyse and synthesize (Kern and Carpenter, 1986; Clarke, 1996).

Fieldwork is extremely resource intensive (Gold *et al.* 1991) and there are many financial issues facing geography departments with regard to its provision. There is a constant need to justify fieldwork within ever shrinking budgets (Abbott, 2006). Increased student numbers are already placing a greater workload on academics and are also causing logistical problems with the design and practicalities involved in fieldwork (Jenkins, 1994). Furthermore, students, particularly those paying high tuition fees, are expecting more from their university experiences and becoming extremely consumerist in attitude (Baker, 2010).

Contemporary aspects of geography fieldwork include technology and interdisciplinarity. The use of new technology in geography fieldwork is well documented as GIS and mobile technologies play an increasing role in the subject (Moore, 1997). Virtual fieldwork also has a role to play in the curriculum and whilst useful in many ways geographers agree this should be in addition to 'real world' experiences not as a replacement for fieldwork (McMorrow, 2005). One further aspect that is seen as being useful to geography, and its multi-faceted topics, is that of interdisciplinarity. Geographers are ideally placed to work with other disciplines in order to provide a holistic approach to research studies (Jones and Merritt, 1999). Indeed, geographers are already in a strong position to move into interdisciplinary research work and the employability skills gained by introducing such methods into fieldwork are also considered to be extremely beneficial to students (Bot *et al.*, 2005).

There is a concern that geography fieldwork is becoming untenable (Clarke, 1996; Stoddart and Adams, 2004), increasingly students are forced to work alongside study in order to pay for their tuition and livings costs and paying for fieldwork is an added pressure. Students who have outside commitments are often unable to undertake residential fieldwork or afford to travel to exotic locations to study, leading to two levels of fieldwork, with very different experiences. Despite this, it is the exoticism of the fieldtrips on offer that the universities push in their prospectuses (Robson, 2002) and the feedback from those students who were able to afford to attend that often provides the face of geography.

Having provided an overview of literature with regard to fieldwork in geography, Chapter 4 will now investigate fieldwork in geography in European higher education focusing on the research project itself and the methods used for data collection and analysis.

Chapter 4 Methodology: Investigating Fieldwork in Geography in European Higher Education

4.1 Introduction

This research has been undertaken in order to compare fieldwork throughout Europe, and its importance in the making of a geographer. It has sought to generate an indicative record of the state of geography fieldwork in contemporary Europe and facilitate a critical analysis of its role. With the introduction of new technologies and changes in the structure of university education resulting from the Bologna Declaration, geography education is changing considerably in many European countries. The breadth of the discipline of Geography (DeLyser and Starrs, 2001) is reflected in the content of courses available throughout Europe. As European universities face increasing funding constraints, field studies are often being shaped by financial rather than academic imperatives (Dewsbury and Naylor, 2002).

In order to underpin this research, a critical understanding of the different research philosophies, approaches, research orientations and data gathering techniques are required. This chapter will critically evaluate the various approaches in relation to this study in order to identify, and justify, the choice of methods adopted.

Primary data were generated from questionnaires directed to a sample of geography academics and students at universities across Europe. The questionnaires were designed to allow for a comparison of perspectives, providing both qualitative and quantitative data. Academics were questioned on their teaching and students on their learning. Where practicable, these data were supplemented by focus group discussions in order to draw out the opinion of academics regarding their perception of the role of fieldwork in the context of their own institutions and Europe as a whole. This approach was considered important in order to ensure no underlying issues were missed in the questionnaire process. It facilitated the identification of the academics' views on fieldwork, teaching methods and the position of fieldwork within their institutions and countries. Additional individual questioning on key

points was undertaken by e-mail and this method of triangulation allowed for verification of responses, thereby increasing the reliability and validity of the data.

4.2 Philosophical Rationale

“It is helpful to distinguish initially between methodology as the philosophy or general principles behind research, and methods as the practice of research in terms of strategies and techniques”. (Hall and Hall, 1996:29)

Within the philosophies of knowing and learning many theories have developed, to an extent that it is not always clear what the underlying philosophical roots are (Schuh and Barab, 2008). For the purpose of this research project, the main epistemological and ontological considerations will be outlined, and these form the basis for the philosophical grounding of this thesis. This chapter will consider the philosophical and methodological approaches adopted for this research project, and establishes a rationale of the research methods used. It will highlight a conscious effort to integrate the research methods with the methodology and provide, what Gilbert (1993) describes as the three major considerations of social research:

“The construction of theory, the collection of data, and no less important the design of methods for gathering data. All of them have to be right if the research is to yield interesting results.” (Gilbert, 2005:15)

4.3 Philosophy of Research

It is important to understand the various epistemological and ontological positions in order to identify a clear approach to this study. A summary of these is provided as Table 4.1.

4.3.1 Epistemological Research Orientation

Epistemology can be defined as the philosophy of knowledge, i.e. how we know (Brown and Baker, 2007). It addresses the “origins, nature, methods and limits of human knowledge” (Schuh and Barab, 2008:70) and questions knowledge and its nature.

4.3.1.1 Positivism and Post-Positivism

The philosophy of epistemology explores what is acceptable knowledge of the subject area being studied. It questions whether the social world can be investigated using the same methods as natural sciences (Trochim, 2007). It places importance on the imitation of natural sciences and its links to the epistemological frame of positivism. In turn, positivism is associated with the belief that any phenomena worthy of investigation are always measurable and that any real knowledge worth considering is scientific (Brown and Baker, 2007). Positivism considers using the methods of natural sciences to investigate social reality. In addition, it seeks to incorporate the following principles:

- *Phenomenalism* – knowledge established by the senses can indeed be justified as knowledge
- *Deductivism* – theory should create hypotheses suitable for testing and allow explanations of laws to be considered
- *Inductivism* – collection of facts leads to knowledge forming the basis for laws
- *Objectivism* – research should be conducted impartially

Positivism contends that the aim of knowledge is to describe the phenomena that we experience (Bryman, 2008). In other words, it contextualises work with what we observe and measure, with empiricism at the core of research activities and with anything beyond this being deemed impossible. Positivism concentrates only on positives and negatives in predicting behaviour, everything else in between is considered as irrelevant since it cannot not be measured. This makes no concession to what people think, or to their circumstances (Trochim, 2007). In the mid-20th century science moved to a post-positive stance, rejecting scientific stereotypes and whilst post-positivists still concentrate on measurements, they are more cautious and ensure observations are accurate, consistent and verifiable (Alvesson and Skoldberg, 2009). They believe all observations to be theory-laden and inherently recognise bias in everyone, based on individual cultural experiences (Bryman, 2008).

4.3.1.2 Interpretivism

In contrast to the epistemology of positivism, interpretivism views the theme of the social sciences (i.e. people and the institutions to which they belong) to be profoundly different to that of the natural sciences (Bryman, 2008). It asserts that the study of the social world requires a research approach that highlights the uniqueness of humans compared to the natural order. There is an important difference between humans and natural science in that the reality humans experience has meaning and therefore all social human actions are meaningful; they respond to the meanings attributed to their acts and to the acts of others (Lindlof and Taylor, 2002). Interpretivism is often linked to phenomenology which views the way humans behave as an outcome of how they interpret the world. In order for a phenomenologist to understand an individual's behaviour they would try to "see things from that person's point of view" (Bogdan and Taylor, 1975:13)

4.3.1.3 Realism - Empirical and Critical Realism

Two elements of positivism are shared by realism. Firstly, that natural and social sciences apply the same approaches to data collection and description and secondly that an external reality exists which scientists also investigate. Realism itself is split into the two main areas of empirical realism and critical realism. Empirical realism claims that by using appropriate methods, reality can be fully understood, it does not recognise any other underlying phenomena or events and results are therefore considered to be insignificant and superficial (Bhaskar, 2011). The empirical perspective holds that knowledge is built through experience and more specifically through the senses (Schuh and Barab, 2008). Recognition of the natural order, of events and discourses in the social world, is the assertion of critical realism; i.e. there is a reality which is independent of our thinking that can be studied by science (Brown and Baker, 2007). To this end, Bhaskar (1989) states that it is necessary to the understanding of our social world that the elements that create events and discourses are identified.

4.3.2 *Ontological Considerations*

Ontology is a branch of philosophy that studies the nature of being and reality (metaphysics); ontology defines what is real in the world, whether physical or abstract (Schuh and Barab, 2008). It deals with questions concerning existence or reality and investigates what entities exist or can be said to exist. Furthermore, it considers the similarities and differences of entities and how they are grouped or subdivided (Bryman, 2008). The central question of ontology is whether social entities should be regarded as *objective* entities with a reality external to social actors, or whether they can, and should be, considered social *constructions* created from the perceptions and actions of social actors. These positions are referred to as objectivism and constructionism (Bryman, 2008). Researchers indicate their ontological preferences by identifying what they believe are truths about knowledge and the world (Schuh and Barab, 2008).

4.3.2.1 *Objectivism and Constructivism*

The ontological position of objectivism suggests that social phenomena are considered to be external facts beyond our reach or influence, and that they exist independent of our understanding of them (Lakoff, 1987). The realities of entities are absolute and independent of our feelings or wishes (Ayn Rand Institute, 2011).

However, there is an alternative to objectivism and this is the position of constructivism. It suggests that phenomena and its various categories are created through social interaction and are continually changing (Lakoff, 1987; Creswell, 2003). This notion also considers the social world to be a construction of the researcher where the researcher presents their individual version of social reality, instead of one that could be viewed as absolute (Bryman, 2008). Constructivism also asserts that the categorisation, which people employ to help their understanding of the natural and social world, are also social products (Creswell, 2003).

Social ontology is central in conducting social research as its assumptions and commitments converge with the ways research questions are devised and research ultimately undertaken (Bryman, 2008). For example, a question worded to suggest

that organisations and cultures are objective and act on individuals, will result in the researcher stressing the official stance of organisations or viewpoints and values of members of the culture. However, where a research question is designed to be tenuous to the objective classifications of the organisations and cultures, then it is likely that the emphasis will be placed on the active involvement of people in constructing reality (Bryman, 2008).

4.3.2.2 Pragmatism

Pragmatism requires neither an epistemology nor ontology as pragmatics view truth as “what is good for *us* to believe” (Schuh and Barab, 2008:72) and it can be regarded as an “alternative paradigm” (Feilzer, 2010:8). Pragmatism distances itself from the issues of truth and reality, whilst philosophically accepting there to be many realities open to empirical inquiry and moves towards the solving of ‘real world’ practical problems (Creswell and Plano Clark, 2007; Feilzer, 2010). It asserts that the only way humans learn is through physical experiences; through the five senses: touch, smell, sight, hearing, or taste. Knowledge of the world is continually built as humans continue to experience it and is therefore incomplete and open to error (Schuh and Barab, 2008). Learning is a lifelong activity and absolute truth unconfirmed, as each person experiences different sense impressions and each person has a different understanding of reality (Boyles, 2006). Truth is therefore the mechanism for human beings to solve their problems, and it alters as their knowledge and problems change (Neubert, 2009).

Pragmatism centres on linking theory and practice. It describes a process through which theory is first extracted from practice and then applied back to practice, to form what is called *intelligent practice* (Boyles, 2006). Most inquiries into the nature of truth start with the idea of an insightful or significant element, the truth of whose information, meaning, or significance may be questionable and in need of evaluation. In these cases the researcher is left with the task of judging if those providing the information required are indeed truthful (Neubert, 2009). A central exponent of this theory, particularly with regard to education was John Dewey who described inquiry as:

“... the controlled or directed transformation of an indeterminate situation into one that is so determinate in its constituent distinctions and relations as to convert the elements of the original situation into a unified whole.” (Dewey, 1938:108).

Dewey’s pragmatism could be viewed as a form of post-postmodernism (Hickman, 2007). According to Dewey’s viewpoint, pragmatism (i.e. the truth of an idea) lies in observing its practical consequences rather than the metaphysical. Therefore what works is most likely true, but because reality constantly changes, what works will also change – from this perspective truth is also changeable which means no one can claim to know the ultimate truth (Neubert, 2009).

Its capacity for developing socially focused versions of constructivism has led to pragmatism becoming increasingly recognised as relevant to many contemporary discourses whilst providing perspectives into action and interaction (Shields, 2004).

Pragmatism could be said “to be a commitment to uncertainty” (Feilzer, 2010:14) acknowledging that knowledge created through research is relative and not absolute. In acknowledging that humans are unpredictable, pragmatists are generally considered to be flexible and receptive to the materialisation of unanticipated data.

Furthermore, pragmatists question what difference the truth will make to life, “There can BE no difference any-where that doesn’t MAKE a difference elsewhere...” (James, 2003: 29). Therefore, things are not correct or true because of a theoretical meaning; they must have an application and an impact in the real world.

Table 4.1: Summary of Philosophical Perspectives

Positivism	Anything worthy of investigation is measureable and that the only real knowledge worth considering, is scientific (Trochim, 2007; Brown and Baker, 2007; Bryman 2008).
Post-Positivism	Rejects scientific stereotypes, ensures observations are accurate, consistent and verifiable. All observations are considered theory-laden and bias is recognised in everyone, based on individual cultural experiences (Bryman, 2008; Alvesson and Skoldberg, 2009).
Interpretivism	There is a difference between humans and natural science. The reality humans experience has meaning and therefore all social human actions are meaningful; they respond on the meanings attributed to their acts and to the acts of others (Lindlof and Taylor, 2002; Bryman, 2008).
Empirical Realism	By using appropriate methods reality can be fully understood, underlying phenomena or events are considered to be superficial. The empirical perspective holds that knowledge is built through experience (Schuh and Barab, 2008; Bhaskar, 2011).
Critical Realism	Recognises the natural order, of events and discourses in the social world, asserts a reality is independent of our thinking that can be studied by science (Bhaskar, 1989; Brown and Baker, 2007).
Objectivism	Social phenomena are considered to be external facts beyond reach, existing independent of our understanding of them. The realities of phenomena are absolute, independent of feelings or wishes (Lakoff, 1987; Ayn Rand Institute, 2011).
Constructionism	Phenomena and its categories are created through social interaction and are continually changing. The social world is a construction of the researcher where the researcher presents their individual version of social reality instead of one that could be viewed as absolute (Lakoff, 1987; Creswell 2003).
Pragmatism	We learn is through our physical experiences; through the five senses. Knowledge of the world is built as we experience it and is incomplete and open to error. Learning is a lifelong activity and each person has a different understanding of reality (James, 2003; Creswell and Plano Clarke, 2007; Feilzer, 2010).

4.3.3 Qualitative and Quantitative Research

“Qualitative and quantitative research are often presented as two fundamentally different paradigms through which we study the social world. These paradigms act as lightning conductors to which sets of epistemological assumptions, theoretical approaches and methods are attracted. Each is seen to be incompatible with the other.” Brannen (2005):173.

Combining qualitative and quantitative results can potentially offer insight into areas otherwise overlooked and can be valuable in considering interesting contrasts and assist in the clarification of findings (Bryman, 2007). Such methods of research combine data that are derived through using different methods. They have been cited by academics as a central element in the enhancement of social science and education research (Gorad and Taylor 2004; Brannan, 2005; Bryman 2007). Whilst figures can be seen convincing to policy makers, personal accounts are more easily remembered and repeated in order to illustrate points (Gorad and Taylor 2004).

A traditional approach to qualitative research is argued by Woods (2006) to be a ‘realist’ approach, with the researcher presenting an objective reality “describing, analysing, interpreting and representing” (Woods, 2006:5). However, post-modernist thought contends that there is no one account for anything but instead many truths at varying levels in a state of constant change (Richardson, 2000). Bryman (2008) outlines the philosophical stance of qualitative researchers to be inductive, interpretivist and constructionist (Table 4.2).

Table 4.2: The Philosophies Attributed to a Qualitative Research
Source: Adapted from Bryman, (2008:366)

Philosophies of a Qualitative Researcher	
Inductive View	Where theory is generated by the research
Epistemological Position	Interpretivist – Emphasizes the understanding of the social world through analysis of that world by its participants.
Ontological Position	Constructionist – Where social properties are outcomes of the interactions between individuals rather than phenomena and separate from those involved in this construction.

Despite the importance placed on qualitative research by many social scientists, it is also criticised for being generalised, too subjective and difficult to replicate (Bryman, 2008). Its nature is such that the researcher is:

“...the main instrument of data collection in that what is observed or heard and also what the researcher decides to concentrate upon is very much a product of his or her predilections.” (Bryman, 2008)

There are fundamental differences between qualitative and quantitative research (Table 4.3) and Bryman (2008) outlines these and the contrasting nature of both forms of research (Table 4.4)

Table 4.3: Fundamental Differences between Quantitative and Qualitative Research Strategies
Source: Bryman, 2008:22

	Quantitative	Qualitative
Principal orientation to the role of theory in relation to research	Deductive; testing theory	Inductive; generation of theory
Epistemological orientation	Natural science model in particular positivism	Interpretivism
Ontological orientation	Objectivism	Constructionism

Table 4.4: Some Common Contrasts Between Quantitative and Qualitative Research
Source: Bryman, (2008:393)

Contrasts between Quantitative and Qualitative Research	
<i>Quantitative</i>	<i>Qualitative</i>
Numbers	Words
Point of view of researcher	Points of view of participants
Researcher distance	Researcher close
Theory testing	Theory emergent
Static	Process
Structured	Unstructured
Generalisation	Contextual understanding
Hard, reliable data	Rich, deep data
Macro	Micro
Behaviour	Meaning
Artificial settings	Natural Settings

4.3.4 Using Mixed Methods of Research

Mixed methods research has responded to the many debates, on the strengths and weakness of qualitative and quantitative research, which has been referred to as the 'paradigm wars' (Bergman, 2011; Harrits, 2011; Feilzer, 2010; Creswell and Plano Clark, 2007). The combination of qualitative and quantitative research methods allows the researcher to capitalise on the benefits and strengths of the methods offsetting any weaknesses (Bryman, 2008). Mixed methods research is a term that has been used to describe research that uses, and combines, both qualitative and quantitative methods. In mixing these research methods, the results gained should be "mutually illuminating" (Bryman, 2008:603). The philosophical approach usually linked to mixed methods research is pragmatism (Teddle and Tashakkori, 2009). This provides a world view that is considered as an alternative to positivism, post-positivism and constructivism in that it centres on the "problem to be researched and the consequences of that research" (Feilzer, 2010:7).

Criticism of the use of mixed methods includes arguments that qualitative and quantitative research are different paradigms and, as such, have different epistemological philosophies (Bergman, 2011; Creswell and Plano Clark, 2007; Bryman, 2007). They address different research questions and themes, in addition to requiring alternative methods of interpretation (Berman, 2012). Molina-Azorin (2011) outlines the barriers to undertaking mixed methods research as being time constraints, available resources and the actual effort involved. Creswell and Plano Clark, (2007) contend that publication of research using mixed methods can be a challenge which usually arises from the pre-defined word limit in journals. In addition, researchers themselves need to have a wider set of skills (Molina-Azorin, 2011; Creswell *et al.*, 2003) and all of these needs to be considered before undertaking such a method of research. Academics in fields such as sociology, education and health have called for incorporation of qualitative and quantitative research, citing its benefits as including the value of results and amount of data (O'Cathain, 2009; Creswell and Plano Clark, 2007; O'Cathain *et al.*, 2007; Tashakkori and Teddlie, 2003). Additionally, the many components of qualitative and quantitative research places the researcher central to the research activities

(Bergman, 2011) and suggests that the researcher becomes more knowledgeable and increasingly critical of the research overall.

Two versions of the nature of qualitative and quantitative methods exist each having a bearing on whether the two methods can be integrated (Bryman, 2008). The epistemological version sees each method as belonging to conflicting principles making mixed methods research impossible. However, a technical viewpoint gives importance to the strengths of the data collection and analysis of techniques through which qualitative and quantitative research can be merged. It is recognised that qualitative and quantitative research are linked, with distinctive epistemological and ontological traditions, but they are not considered to be fixed (Bryman, 2008). This means that a research strategy can be transferred from one research method to another. As an example, quantitative data can be formed from qualitative responses through thematic analysis (see section 4.8.4). To this end, qualitative and quantitative methods may be combined to triangulate results (see section 4.3.6), allowing for mutual corroboration and increased validity (Bryman, 2008).

The weaknesses from both methods can be compensated against their strengths, with the combination culminating in stronger results (Molina-Azorin, 2011). This leads to a level of completeness, which provides a fuller account of the research area than using only one method. To this end, triangulation of both sets of results provides enhanced validity (Molina-Azorin, 2011). Results from one method can be cross-checked against other methods within the research strategy (Bryman, 2008). As an example, focus groups can reinforce questionnaire findings.

Green *et al.*, (1989) identify four additional advantages, along with triangulation, arising from mixed methods research (Table 4.5) meaning that this style of research can provide additional insights that would otherwise be overlooked using a single method of inquiry (Molina-Azorin, 2011)

Table 4.5: Four Advantages of Mixed Methods Research.
Source: Adapted from Green *et al.*, (1989)

Advantages of Mixed Methods Research	
Complementarity	Elaborating, illustrating, enhancing and clarifying results taken from one method with the findings of another method.
Development	Using results from one method to develop or inform using an additional method.
Initiation	Discovery of inconsistencies and contradictions leading to the re-framing of research questions.
Expansion	Extending the breadth and range of inquiry by using different methods for different areas of inquiry.

Bryman (2008) asserts that there is increased readiness to use research techniques that are not “encumbered by epistemological and ontological baggage” (Bryman, 2008:624). Indeed, some researchers have appealed for a reassessment of attitudes towards quantitative research. Despite this, qualitative researchers still show concern regarding the reliability of findings particularly with regard to generalisation leading to calls for integration of qualitative and quantitative methods (Schroder, 1999). However, contemporary research is moving away from qualitative versus quantitative methods with an increasing number of projects placed somewhere between the two (Bergman, 2011; Creswell, 2003). The qualitative and quantitative divide is pushed aside by pragmatism thereby ending the so called ‘paradigm war’ by stressing that the more significant question is whether the research undertaken helped “to find out what [the researcher] wanted to know” (Hanson, 2008:109). A pragmatist philosophy is, therefore, not focused on the methods used, but rather whether the methods answer what they wanted to know (Feilzer, 2010).

4.3.5 Deductive and Inductive Methods

Using the method of inductive theory construction, observations are made to discover patterns which may point to universal principles. This method of research allows theories to be developed through analysing research data (Babbie, 2010).

Both deductive and inductive approaches of reasoning were considered within the context of this research (Table 4.6). Deductive reasoning begins with theory, moving

to hypothesis, observation and finally confirmation; this method being appropriate for the testing of hypotheses. However, the data from this research was considered better suited to an inductive method. Through the use of inductive reasoning, working through the specific answers (data) provided by both academics and students, allowed for the identification of patterns within the results. In turn, these patterns provided a means of formulating tentative hypotheses, which could be further explored, eventually leading to the development of conclusions and theories (Trochim, 2006; Babbie, 2010).

Table 4.6: Deductive and Inductive Methods of Reasoning
Source: Adapted from Trochim (2006)

Deductive Thinking	Inductive Thinking
<p style="text-align: center;">Theory ↓ Hypothesis ↓ Observation ↓ Confirmation</p>	<p style="text-align: center;">Theory ↑ Tentative Hypothesis ↑ Pattern ↑ Observation</p>

4.3.6 Triangulation of Results

Triangulation is the research method which brings together evidence produced by different processes and is a common form of combining results. It provides the ability to validate research and enhance the trustworthiness of analysis by generating a rounded account. It reduces bias and can counterbalance any weakness in one research method through the strength of another (Perlesz and Lindsay, 2003). The traditional view is that triangulation offers great validity where qualitative and quantitative research is combined in order to corroborate results. To this end, Bryman (2008), argues that combining qualitative and quantitative questions provides completeness, whereby one set of research questions can include both

methods; implying that a gap in the research left by one method (e.g. qualitative) can be filled with the data gained through the other method (e.g. quantitative). This combination of methods is common within self-completion questionnaires (Oppenheim, 1992; Bryman, 2008).

In this research project, triangulation was achieved using mixed-methods of qualitative and quantitative results gained through questionnaires and further validated through the use of focus/discussion groups and e-mail questioning of specific respondents.

4.3.7 Philosophy of this Thesis

This research project centres on individuals and their perspectives of geography fieldwork in higher education. Overall, this research is firmly placed within the philosophy of pragmatism, as an alternative to post-positivism and constructivism. This philosophy is usually connected to mixed-methods research, associated with projects undertaking both qualitative and quantitative research (Teddlie and Tashakkori, 2009), and centred on the research problem and its consequences (Feilzer, 2010). The philosophical position of pragmatism links theory to practice and recognises the unpredictability of humans, necessitating the researcher to be flexible to outcomes and variations within the research project as a whole.

Methods of both qualitative and quantitative research have been undertaken in the form of questionnaires to academics and students, with qualitative responses playing a major role in the results supported by qualitative figures. Qualitative and quantitative data form two unique methods in the approach to research and they impact on the philosophy and method of analysis (see section 4.3.3). Both methods are different with regard to theory, epistemological and ontological issues. Despite this, current academic writing argues for mixed methods of research in that the two can be combined within a single research project (Gorard and Taylor, 2004; Brown and Baker, 2007; Bryman, 2008).

Additional Influences

In addition to understanding the epistemology, ontology and theory underlying research, Bryman (2008) also includes two further elements of research; values and practical considerations. With regard to 'values', this concerns any bias the researcher may have towards the area under investigation. Whilst ideally, the researcher should be considered to be free from bias and objective, given the many external factors, this is difficult to attain. It is therefore necessary for the researcher to be aware of the issues and ensure that bias is kept in check through self-reflection (Bryman, 2008).

4.4 Defining 'Fieldwork'

In defining the term 'fieldwork', the benchmark statement for geography (QAA, 2007:8) outlines fieldwork as "active engagement with the external world". Similarly, Lonergan and Andresen, 1988:64 define the field as "any area...outside the constraints of the four walls classroom setting, [where] supervised learning can take place via first-hand experience" a definition also adopted by Gold *et al.* (1991). These definitions can just as easily be applied to 'outdoor learning' or 'outdoor education' both of which are highlighted in The Higher Education Academy's 'Resource Guide in Outdoor Education' (2005) as a methods of managing educational goals through experience in the environment, utilizing its resources as learning materials.

Higgins and Loynes (1997:6) provide a three-circle model suggesting outdoor education as the connection between 'outdoor activities', 'environmental education' and 'personal and social development'. This is expanded upon by the Outdoor Connections Advisory Group (2007:5) who define outdoor education to be:

"...a teaching approach which can enhance and integrate a broad range of core experiences across the whole curriculum – a wide variety of activities which connect learners with their environment, their community, their society and themselves. It engages and motivates learners through first-hand experiences which demonstrate the relevance of knowledge, understanding

and skills, and can help to underpin better attainment and achievement across the curriculum.”

The element of experiential learning is considered central to outdoor learning/outdoor education (Priest, 1990; Lund, 2002) which guides the understanding of a definition of fieldwork. Whilst outdoor learning can be placed firmly with the educational paradigm of experiential learning presented by Kolb (1984; 2005), there is one element repeatedly missing from these definitions, which is central in fieldwork, and this is ‘research’. Many UK universities are in agreement with regard to their definitions, for example:

“Practical work carried out by staff or students of the University, for the purposes of research and/or teaching, in locations which are not under the control of the University.” (University of Edinburgh, 2011)

“Field work is, specifically, activities carried out by staff and students as part of their teaching or research.” (University of Leeds, 2011)

“Fieldwork is defined as any practical work carried out by staff or students of the University for the purpose of teaching or research in places which are not under direct supervisory control of the University...” (University of Nottingham, 2011)

The on-line Oxford English Dictionary (2011) defines fieldwork as:

“Practical work conducted by a researcher in the natural environment, rather than in a laboratory or office.”

Although the Benchmark Statement for Geography also outlines fieldwork as “experiential learning” (QAA 2007:8) it is clear in its role as:

“An opportunity to apply theoretical, technical and scientific laboratory methods to the more complex, uncontrolled field environment, and to

appreciate how processes that might be regarded as 'general' are mediated by the social and environmental character of a specific place.

“Prompting students' capacity to identify a problem or research question, and to develop approaches to solving or answering this through hypothesis testing, research design and data collection.” (QAA, 2007:8).

In addition, the QAA (2007:8) see fieldwork as a means of fostering research ethics, providing an understanding of 'place' and 'difference' whilst encouraging 'tolerance' and obtaining transferable skills.

Therefore within this thesis, the term 'fieldwork' is defined in line with UK higher education statements as an activity taking place, on the whole, outside the confines of a classroom with its basis firmly fixed in research, data collection and understanding process. It brings theory into practice whilst providing opportunities to gain and hone skills.

4.5 Questionnaire Design

Geographical scholarly investigation requires communication with participants at some level even when information does not come from direct conversation (Gade 2001), i.e. those people living with or connected to a particular field of investigation. When collecting data, surveys and questionnaires are considered to be the most widely used tool for research in the social sciences (Brewton and Millward, 2006) due to their ease of construction, versatility and capability in collecting large amounts of data in a format easy to process (Zoltan 2003). In addition, they benefit from low cost and low resource requirements and one of the main attractions of using questionnaires is their efficiency with regard to both the researcher's time and effort (Brewton and Millward, 2006). Questionnaires should, Czaja and Blaire, (1996) state, be developed in the context of meeting the aims of the research whilst keeping within the constraints of the resources available. As Zoltan (2003) explains, by providing a questionnaire a large amount of data can be collected at a fraction of the cost and research time, rather than, for example, interviewing the same number of people face-to-face. This is particularly pertinent today where it is becoming

increasing necessary to look at the costs and carbon footprints when researching internationally. Despite the popularity of questionnaires as a method of collecting data, there are also disadvantages which need to be considered. When providing a questionnaire, respondents are asked to take responsibility for the accurate completion of questions, therefore questioning needs to be straightforward and simple enough for the target audience to understand. Simple questions can be said to lack depth, resulting in superficiality of answers (Zoltan, 2003); however, simplification to some extent was necessary for this particular research due to the language and translation issues involved.

As far as possible, it is important to ensure there is no room for bias and to reduce the possibility of untruthful answers. Human nature is such that respondents may, even with factual-based questions (Oppenheim, 1992) lean towards showing themselves in a good light. A further challenge to the validity of questionnaires is the respondent's willingness to answer truthfully, when they are unsure about how to answer the question or alternatively if they are reluctant to give a negative opinion (Zoltan 2003). Results from questionnaires may vary due to unreliability or lack of motivation by respondents. Occasionally, questions can be left unanswered or simply misinterpreted. Misinterpretation is a key aspect in cases where English is not a first language and where translation and to some extent literacy can cause problems for the respondents (Zoltan, 2003).

This research is based upon responses from European academics and students for whom, in most cases, English is not their first language and therefore particular care was taken in the question design. Respondent comprehension and ability to answer the questions were of utmost importance (Czaja and Blaire, 1996), for, as observed by Wittgenstein (1961:15):

“...the limits of one's language set the limits of one's world.”

Gade (2001) comments on the contrast between, for example, areas of France with its lack of tolerance for non-fluent French speakers compared to international conferences where any variation of English is acceptable provided listeners can grasp the content of the speaker's paper. English may be considered to be the one

language which, when stripped down, is a form of communication that can be considered accessible to more people than any other language (Gade, 2001).

Translation into another language of a piloted and well-designed survey should be avoided whenever possible and Oppenheim (1992:48) advised against this, describing it as "...akin to entering a series of minefields". English phrases can mean something completely different in another country and verbatim translation could cause extreme confusion to respondents (Oppenheim, 1992). If the respondent cannot answer a question reliably then the research can fail. The questions must be understood as the researcher intended. In order to achieve this it may be necessary to move away from the research hypotheses/topic and specific academic jargon, towards presenting questions in a language that is clear and easy to respond to (Czaja and Blaire, 1996). With this in mind, in this project, it was considered best to strip down the English questions to a more simple form allowing for ease of understanding.

Zoltan (2003) comments that a well- designed questionnaire will have an orderly layout, with a variety of typefaces and highlighted sections thereby creating a better impression than an unsystematic, chaotic version. Additionally, the hard copy of the questionnaire should also be produced to a high standard thus making it easier to read and more likely to be completed. A well designed and attractive layout can boost the rates of response; poor layout can leave the respondent uninspired to complete the questionnaire despite the amount of time spent on the content (Brewton and Millward, 2006). In designing a questionnaire the main issue should not just be in understanding the format that will produce the best data, but whether the questions are clear enough for respondents to understand the kinds of answers that are required (Foddy, 1996).

4.5.1 Questionnaire Design Issues

Whilst designing both the academic and student questionnaires, serious thought was given to current literature and different styles of questioning. For this research the opinions of academics, together with factual information with regard to the fieldwork undertaken in their individual institutions, was sought. Additionally, the research

required students to comment on how important they felt fieldwork to be, and their understanding of the place of this method of learning in becoming a geographer.

The questionnaires were designed to provide information in the following order/format:

- Background
- Personal experience
- Opinions/perspectives

The background questions for both questionnaires were the identification of country and university. Personal anonymity was maintained as people do not like to comment negatively on their employers and too many personal questions can be off-putting (Oppenheim, 1992). Each questionnaire was kept to one page – giving the impression of a relatively simple job for the respondent to undertake and reduce the potential effects of fatigue. Zoltan (2003) observes that questionnaires should be designed so they are not too long or monotonous to avoid respondents becoming tired and bored and thus leading to inaccuracies in their responses. Brewton and Millward (2006) maintain that a questionnaire of two pages or less might give the respondent the impression that it is unlikely to provide a depth in the research. However, due the unusual combination of language and the respondents' ability to translate and answer adequately in English, it was decided that the questionnaire for this survey be no longer than one side of A4 sized paper for students, in order to encourage completion, and both sides of a single sheet of A4 for academics.

Questions are normally attributed to be 'open' or 'closed' with open questions allowing respondents to explore their attitudes and provide finer detail to their thoughts. Whilst Oppenheim (1992) states that they have the advantage of encouraging replies in the respondents' own language with an element of spontaneity, thereby leading to the exploration of new hypotheses, the respondents to these questionnaires were not replying in their own language. Within this study responses to the questionnaires varied considerably depending upon the respondents' grasp of English and in some cases were quite stilted and formal. Open questions

provided respondents with the opportunity to comment in their own words unlike an extended tick boxes style questionnaire (Foddy, 1996). In contrast, closed questions provided a set of answers for the respondents to choose from (Czaja and Blair, 1996). Although easier to respond to and process (Oppenheim, 1992), they can lead to bias as possible replies are introduced to the respondent which may not have occurred to them previously (Flowerdew and Martin, 2005).

Having considered both open and closed questions, and their positive and negative aspects, it was concluded, as have many methodologists in the past (Foddy, 1996), to create questionnaires with a mixture of both open and closed questions. Therefore, the open qualitative questions would provide the ability to lead to a greater understanding of responses than those of closed quantitative questions. For this reason the survey questions were mostly open-ended. Due to the brevity of the questionnaire it was not felt necessary to design the questionnaire with a specific order with regard to the style and variety of questioning, i.e. open questions towards the end to ensure completion (Oppenheim, 1992).

Unless the researcher is clear about their objectives, respondents may attempt to clarify the research themselves, i.e. if a question is not expressed in a clear manner then the respondent will try to rationalise it (Foddy, 1996). If this happens it can be difficult for the researcher to compare answers (one to another) as in effect the respondent has created a different set of questions answered from their own perspective (Foddy, 1996).

Attitudinal information is recorded using a Likert-type scale represented in the academic questionnaire as a five point attitudinal scale. One negative aspect of the attitudinal scale is the assumption that the respondent actually has an attitude on the topic. In overcoming this issue Brewton and Millward (2006) suggest provision for the respondent to make an additional comment on any questionnaire containing attitudinal elements. The Likert scale is considered to be a reliable method as it allows respondents a reasonably wide range of answers (Oppenheim, 1992). However, there is no guarantee that the respondents will interpret the question in exactly the same way and it is therefore necessary for the researcher to take considerable care in designing the questions (Foddy, 1996).

4.6 Designing the Questionnaires for this Research

Following piloting of the proposed questionnaires (see section 4.7.1), the wording of certain questions was changed (Table 4.10). Two questionnaires were designed – one targeted at academic geographers and the other for geography students. Academic and student questionnaires were designed in order that the perspectives on fieldwork of both groups could be compared, with the academic questionnaire examining teaching and the student questionnaire learning.

The opening questions in both questionnaires are based on background personal information, i.e. university, country, specialism and length of time working as a geographer (in the academics' case) and level and year of study (in the students' case). An overview of fieldwork in the past 12 months was also requested from both types of respondent with academics being asked about the compulsory or optional nature of fieldwork and the students questioned about costs. From this point the students' questions focused on their learning and attitudes to fieldwork, and the academics' on the importance they place on fieldwork within their teaching and to what extent fieldwork is considered valuable. They were also asked to comment on who makes the decisions regarding fieldwork, any constraints they feel exist and whether they have provided more or less fieldwork over the last 10 years.

Questions were relatively simply put, not asking too much personal detail and being non-threatening as suggested by Zoltan (2003). Overall, the design was kept simple with boxes for responses. The questionnaires were designed to be administered by hand, post and electronically by e-mail. Questions were numbered for coding and analysis purposes.

4.6.1 Ethical Considerations

With regard to the ethical considerations of this research project, initially bullet points were drawn up outlining any ethical implications for the collection of data and the approach to individuals. This was kept in mind when designing the questionnaires' covering e-mail/letter and when deciding on how to store all collected responses, particularly with regard to anonymity. In 2009, however, due to

changes in the University's ethics procedures for research projects, a retrospective application was made and a full outline of the research presented to the Liverpool Hope University Research Ethics Committee using their standard Research Ethics Clearance Form. Responses to the Ethics Committee's questions are outlined in Appendix 1 and consist of the original ethics notes made prior to questionnaire design, together with copies of the e-mail text sent. Written consent from participants was not felt necessary as the e-mail sent out explained sufficiently what the questionnaire was for and that any answers would be used in a doctoral thesis. Whilst the data would be held on computer, steps were taken to ensure anonymity thereby protecting the respondents. This included cutting and pasting email text into blank documents, showing only the institution and country, and deleting the original correspondence from the computer. All correspondence and questionnaires were saved to computer, named by country and numbered consecutively. Questionnaires received by hand or post were scanned and saved to computer in the same way. A hard copy of each questionnaire, which showed no personal details, was printed and filed in a folder by country and number for later analysis.

4.6.2 Defining 'Europe'

In undertaking this research it was necessary to define the 'Europe' to be studied. As European Union boundaries are varied and change depending on membership and popular European events promoted through the media, for example the European Football Championships and the Eurovision Song Contest, both of which include countries that are questionable with respect to being European. Additionally, the European Free Trade Association countries of Iceland, Liechtenstein, Norway and Sweden (EFTA, 2012) have links with the European Union. Further discussion and literature is covered in Chapter 2. The generally accepted boundary of Europe stands as running from the Ural Mountains, south to the Ural River, the Caspian Sea, along the Caucasus Mountains to the Black Sea (Royal Geographical Society, 2008) and on this basis the actual number of European countries is 60 (Europa, 2008). For the purpose of this study Europe is defined as all European Union States in 2006, as these countries are currently adopting the changes in Higher Education in light of the Bologna Declaration (European Commission, 2010). However, being merely a European Union State was not an adequate qualification for this study; the countries

chosen were also required to have an active academic geography department. On this basis, in addition to the EU Member States, Iceland, Norway (as EFTA countries) and Turkey (an accession country) were added to the sample being signatories to the Bologna Process. As both Cyprus and Luxembourg do not have academic geography departments they were removed from the research sample.

In creating this sample of European countries it was also necessary to take into account the signatories to the Bologna Process, and the idea of a European Higher Education Area. All of the countries in the survey sample had signed up to the process in 1999 with the exception of Turkey who signed in 2001 (see Table 2.1) In all 28 countries were surveyed (Table 4.7).

Table 4.7: European Countries Surveyed for this Research

Austria	France	Latvia	Romania
Belgium	Germany	Lithuania	Slovakia
Bulgaria	Greece	Malta	Slovenia
Czech Republic	Hungary	Netherlands	Spain
Denmark	Iceland	Norway	Sweden
Estonia	Ireland	Poland	Turkey
Finland	Italy	Portugal	United Kingdom

A list of academics from seventeen European Universities in the defined 'Europe' was drawn up as the sample. These academics were partners in the HERODOT Network and as such many had been involved in the 2003 HERODOT survey (see 4.3.5).

4.6.3 Questionnaire Pilot

Between December 2005 to January 2006 the pilot questionnaire was shown to twenty academics (a mix of English and non-native English speakers) and six students (two with English as a second language) in addition to eight non-geographers (all native English speakers) to ensure that the questions were easy to understand. The reason non-geographers were included was to ensure that the questions were plain and simple to understand and thereby aid non-native English speakers in the understanding of the questions. Additionally, the non-native

speaking academics also provided feedback as to the level of understanding their students would have.

4.6.4 *Selecting a Suitable Sample*

Practical considerations about how research is carried out can be significant. The strategy used in designing the methodology needs to be linked to the area of investigation (Bryman, 2008). Therefore, as this research project was interested in the views of specific target groups, i.e. the views of European geography academics and students, obtaining such a large data set needed to be viewed practically. Research was initially directed at academics engaged in the European Commission funded geography project, *HERODOT: European Network for Geography in Higher Education*. It aimed for, and indeed achieved, a cascade effect as the questionnaire was distributed to other academics and students. In addition, those academics, by nature of being involved within the geography network, already had an interest in higher education learning and teaching and employability skills, both of which were to be investigated. Involving the HERODOT network members in this research was, therefore, a major practical consideration in gaining responses from the large number of academics in the countries under investigation. Their engagement formed a part in obtaining wide-ranging results.

The higher education institutions chosen were based on the researchers existing contacts through HERODOT, many contacts were made during the period of the project (2002 to 2009) and it was considered to be logical to start the research with those academics that were already known.

For this research, importance was placed on distributing questionnaires as widely as possible in order to achieve maximum responses and data from as many European countries as possible. To this end, it was based on a cascade effect whereby academics were asked to forward questionnaires to both colleagues and their students. Each academic questionnaire was accompanied by six student questionnaires. Every opportunity was used to widen the spread of the questionnaire including asking colleagues attending conferences and events to carry copies with them for hand distribution, and a mail shot. This method ensured that eventually at

least one representative from each of the countries canvassed was received. Although it is difficult to ascertain how many questionnaires came from hand distribution and mail shot and how many from electronic mailings, the spread was recorded. Questionnaires were produced in English only. It was necessary that those receiving them could read English but it was stressed that it was not necessary to respond in English. In one case the English was translated into French verbally and the responses written on the questionnaire in English.

Managing the HERODOT Project provided access for the author to the membership data base and allowed meetings and regular correspondence with network members. It was therefore considered to be the best starting point for the distribution of research questionnaires. There were 122 main contacts within HERODOT, each representing their own institution. Of these some were unsuitable, as they were not universities, which left 104 remaining. From this number, a list of those academics the author knew well was drawn up, keeping in mind the countries from which data would be required. This totalled 71 academics in 28 countries and formed the basis of the sample and first mailing list. Initially these 71 academics were e-mailed and asked for the names of people they considered experts in the field and this resulted in a further 43 academics being added to the questionnaire mailing list. In all 114 academics were sent the questionnaires electronically (see Table 4.11). Whilst this was a useful basis for initial data collection, it is recognised that it may be viewed as a largely self-selecting sample. This group was, on the whole, made up of HERODOT members having an inherent interest in learning and teaching issues, which may not be mirrored by the wider geographical academy. In addition, collecting information from HERODOT members known personally could result in incomplete responses (Oppenheim, 1992), as those responding may worry about how their answers are perceived by the researcher.

In addition to the e-mail requests and electronic versions of the questionnaires, two colleagues were supplied with five sets of questionnaires each to distribute during events they were attending. One of these colleagues photocopied 41 student questionnaires to distribute to a group of students on fieldwork. The author distributed 10 copies over two events. A mailshot of 54 academics who had not

responded to the e-mail and electronic questionnaire were followed up with individual hand written notes in May 2006.

With regard to the actual number of questionnaires received, of the 72 academics responding, 20 were handwritten on the original coloured paper which had been used for questionnaires distributed by hand and through the mail shot; 44 had been typed and sent electronically and eight were received hand written on white paper (which would indicate the questionnaire was printed from the electronic version and sent by post). Student responses of 340 questionnaires were broken down with 79 handwritten on cream paper and 81 typed and sent through electronically. Students returned 180 questionnaires handwritten on white paper and of these 20, 27, 38 and 41 were completed by students and distributed to them whilst undertaking fieldwork. It should be noted, however, that the number of questionnaires distributed, and the means used, was not considered to be as important as ensuring a wide dispersal and gaining responses from as many European countries as possible.

4.6.5 Role of the HERODOT Survey 2003

At the outset of the HERODOT project all current members, who wished to attend the inaugural Conference in 2003, were instructed to complete a research questionnaire in return for funding. This questionnaire aimed to produce a 'State of the Art' publication investigating higher education geography across Europe. Data from 28 countries and institutions were represented among the 64 responses to the HERODOT questionnaire. Of those responding, 25 higher education institutions also completed the questionnaire for this research project.

Active learning and fieldwork in particular, were among the many themes explored and the relevant questions are outlined in Table 4.8 and brief results in Table 4.9.

The main professional concerns of the respondents to the HERODOT survey regarding teaching and learning included the lack of development towards individual research activities, particularly in the area of 'real-world' problem solving. It was felt that student-centred methods should be improved upon although there were many

problems with course design due to the restriction of time available to staff for re-evaluation.

Table 4.8: Extracts from the 2003 HERODOT Network Questionnaire
Source: Adapted from HERODOT, (2003)

2. GEOGRAPHY IN YOUR DEPARTMENT (fieldwork questions):

a) Fieldwork. Please comment on the number of days and location of fieldwork that students are able to do.

	Total days of fieldwork/year	Local fieldwork? (yes/no)	Regional, national? (yes/no)	International? (yes/no)
Year 1				
Year 2				
Year 3				
Year 4				
Year 5				

b) Comment below on any issues associated with fieldwork provision, i.e. equipment, location, costs, resources, time etc.

3. YOUR GEOGRAPHY ACTIVITIES (learning and teaching questions):

b) Please indicate (X) the methods of geography teaching **MAINLY** used by YOU.

Large lectures (100+)	<input type="checkbox"/>	Practical sessions	<input type="checkbox"/>
Small lectures	<input type="checkbox"/>	Computer assisted learning	<input type="checkbox"/>
Seminars	<input type="checkbox"/>	Individual tutorials	<input type="checkbox"/>
Group activities	<input type="checkbox"/>	Distance learning	<input type="checkbox"/>
Fieldwork	<input type="checkbox"/>	Online Learning	<input type="checkbox"/>
Others (please describe)			

c) Please indicate (X) the methods of learning **MAINLY** used by YOUR students.

Mainly student-centred work	<input type="checkbox"/>	Teacher organised activities	<input type="checkbox"/>
Working in Groups	<input type="checkbox"/>	Computer assisted learning	<input type="checkbox"/>
Individual study	<input type="checkbox"/>	Individual tutorials	<input type="checkbox"/>
Practical work	<input type="checkbox"/>	Individual research	<input type="checkbox"/>
Others (please describe)			

Table 4.9: Brief Overview of the Results from HERODOT's 2003 Network Questionnaire (Wall – unpublished)

2. GEOGRAPHY IN YOUR DEPARTMENT (fieldwork questions):

Questions a) and b): This survey was undertaken before the transformation of many European degree programmes to the Bachelors-Masters system, therefore several institutions also provided information relating to years 4 and 5 of study. Overall, the questions relating to the amount and location of fieldwork showed that a wide variety of fieldwork courses and field activities were being undertaken, and a wide range of locations were being used. Fieldwork was both optional and obligatory and also depended upon the year of study. Issues were raised with regard to fieldwork provision and these were recorded as follows:

Issues Associated with Provision of Fieldwork:			
Level of Fieldwork Provision	Total %	Issues Affecting Fieldwork	Total %
Good	40	Cost	49
Some	59	Equipment	19
Poor	4	Time	8
None	6	Class Size	4

3. YOUR GEOGRAPHY ACTIVITIES (learning and teaching questions):

Question b): Respondents were invited to identify their main teaching methods :

Methods used	Total %
Small lectures	82
Fieldwork	77
Seminars	74
Group activities	74
Practical sessions	60
Individual tutorials	54
Computer assisted learning	45
Large lectures (100+)	32
Distance learning	12
Online learning	9

Question c): Methods of learning used by students:

Method of Learning	Total %
Individual study	88
Working in groups	78
Practical work	71
Teacher organised activities	68
Mainly student-centred work	55
Computer assisted learning	38
Individual research	38
Individual tutorials	31

There appeared to be a definite divide between institutions with little funding and equipment in geoinformatics and those with major investment in this area. Some institutions felt unable to offer this aspect of geography as their equipment was too out-dated and there were insufficient funds available to upgrade their systems. Of those who taught geoinformatics to their students, some institutions had the problem of increased student intake without further investment in equipment, ultimately leading to a shortage in the computer to student ratio. Additionally, a lack of investment in technical staff, led to greater restraints on the tutors' time. However, high investment in geoinformatics was felt by some to be at the cost of fieldwork (Wall – unpublished).

From the results of the HERODOT survey (Table 4.9) it was found that cost was considered by academics to be the main issue affecting fieldwork provision. However, only 8% of those taking part in the HERODOT survey considered time to be an issue. Bearing in mind criticism of the Bologna Process in countries where courses would be shortened to fit the new model (Brock-Utne, 2002; Mundell, 2009), it was considered interesting to discover if the attitudes to fieldwork would change as the process took hold and compliance began to take effect. It was clear from the HERODOT survey that fieldwork was very much a part of teaching activities with similar importance to small lectures and seminars (Table 4.9). This led to questioning about the amount of fieldwork undertaken, whether this had been changed over time, and how important fieldwork is perceived within learning and teaching.

At the time of the questionnaire in 2003, only 25% of those surveyed recognised Bologna as a recent change in European Higher Education. In terms of any perceived challenges to higher education geography, the Bologna process was only identified to be an issue by academics in seven of the 28 countries surveyed. These were Belgium; Germany; Netherlands; Poland, Portugal; Slovenia and Spain. (Wall, unpublished). It should be borne in mind that, the people who responded to this survey, were members of a geography network which promoted geography in higher education, and as a result, were actively interested in the area of learning and teaching. This, therefore, implied that any impact from Bologna had not yet filtered down to the academics themselves.

It seemed inconceivable at that time, given the involvement of so many senior higher education managers and decision makers, that so few academics recognised Bologna and the affect it would ultimately have on their teaching. From the survey countries also seem to be at different stages in the process despite signing up at the same time.

With regard to the current research project, it was felt that the results from the HERODOT questionnaire were of considerable importance in forming the basis for further research. It provided an opportunity to see if, three years on, academics working on the 'ground' placed any importance on Bologna and whether their teaching had undergone any noticeable changes as a consequence. Amid the current dramatic changes to education as a whole across Europe, there is no comparative review of geography and in particular the feelings of academics towards the provision of geographical education; with fieldwork being central to this. In order to add a real understanding of what is happening in European geography education and how relevant students feel fieldwork to be as they study to become 'geographers', their input and their perspectives were considered extremely important.

For the purpose of this research project a comparison of academic and student perspectives of fieldwork across Europe would be made. Questionnaires would therefore be aimed at academic geographers in each European country and their students.

4.6.6 Questionnaire for Academic Geographers

The aims of the academic questionnaire (Figure 4.3) were to discover the respondents' subject specialisms and experience, the amount of fieldwork they undertake with students in a 12 month period and how important they feel this is. The reply to the subject specialism gives insight into the geographical background of each person. Additionally, open questions were asked to gain their opinions of teaching and how they assess fieldwork in relation to the students' learning experiences. Their attitudes about geographical knowledge are sought as is information about any issues affecting fieldwork in their institutions. The questions were left as open as possible to allow clear discussion in their responses.

Subject specialism (Question 1c) indicates the area of geography each academic works in; the terminology (label) chosen might offer some insight into the areas taught, e.g. physical or human. Geography is such a multi-disciplinary subject that it was felt necessary to differentiate between areas as it could have an impact on the amount and frequency of fieldwork undertaken. Additionally, their experience of teaching in higher education (Question 1d) could show a difference in their values when it comes to fieldwork, for example in traditionalist versus contemporary curriculum design.

Academics are asked to list the field visits that have taken place in their department over the last 12 months (Question 2). This information includes the year of study for the students, area visited, number of days, and whether or not fieldwork was compulsory. From this information, which years of study have the most fieldwork, how far afield their students travel and for how long, could be ascertained. Whether or not it is compulsory could have an impact on the cost to students and also whether they gain a sound background in field skills.

In creating the sections on the importance of fieldwork to both physical and human geography (Questions 3 and 4), rather than using the Likert scale (posing a question and asking the respondent to identify; strongly agree, agree, neither agree nor disagree, disagree, strongly disagree), it was decided to use a numbered semantic differential scale of five, allowing respondents to highlight the number best fitting their opinion. Under the circumstances it was felt this would be easier for those with English as a second, or even third, language to understand. A questionnaire that was too wordy, in addition to being in an unfamiliar language, may have deterred some from attempting the questionnaire. This section will provide information on the attitude of academics towards the two main areas in geography, 'human' and 'physical'. This, when compared to subject specialism (Question 1c), could give an insight into any bias towards the academics' own area of teaching/research.

The importance academics place on the experience in the field can be gauged by the answers to the Question 5: "Are there any areas of geography you feel are impossible to teach by textbooks and class work alone?" Additionally, Question 6, asking about

how fieldwork would be substituted could demonstrate if fieldwork can actually be replaced in their teaching and to what extent.

Whether fieldwork is regarded as a chore or an enjoyable experience by the educator (Questions 7 and 8) might colour their attitude to the usefulness of work in the field while highlighting any issues they have with this method of teaching. Their answers would provide insights into their relationships with students and their role as an educator.

The questionnaire asked for the academics' opinions on why they felt geographical knowledge was important (Question 11), what makes a good geographer (Question 12) and how essential fieldwork was to this process (Question 13). By providing individual information, rather than the perspective of an institution as a whole, academics were able to reflect on their own activities and approach to the subject and thereby consider their own place within Geography. It was considered that the answers from these questions would provide insights into their own positionality with regards to geography, and in particular, the importance of fieldwork to becoming a 'geographer'.

Additionally, the qualitative responses also allowed for reference to transferrable skills. Previous research undertaken, for example the HERODOT questionnaire in 2003 and subsequent discussions with academics that year, had highlighted that the amount of fieldwork undertaken and constraints on this were clearly an issue across European higher education institutions. For this reason it was decided to delve a little deeper into the matter and ask where the decision for the amount of fieldwork lies (Question 14), what constraints there are (Question 15), i.e. financial, political (with the department/faculty), time. When asking academics about the frequency of fieldwork over the last ten years (Question 16) a variation on the Likert scale was used as the wording chosen gives more reply options and therefore, it was felt this would provide a more accurate response. The rise or fall in fieldwork should reflect the constraints and for this reason academics were asked to expand further on this issue.

Figure 4.1: Academic Geographers' Questionnaire

QUESTIONNAIRE: ACADEMIC PERSPECTIVE OF FIELDWORK

Q1

(a) Country:
 (b) University:
 (c) Subject specialism:

(d) How long have you worked in Higher Education as a Geographer?

Q2 In the past 12 months students from my department have been on geography fieldwork to:

Year of study	Place visited	Number of days	Was the trip compulsory (yes/no)

Q3 How important is fieldwork to physical geography studies? (1 = unimportant/ 5 = very important - highlight)

1 2 3 4 5

Q4 How important is fieldwork to human geography studies? (1 = unimportant/ 5 = very important)

1 2 3 4 5

Q5 Are there any areas of geography you feel are impossible to teach by textbooks and classwork alone?

Q6 If fieldwork were impossible, what/how would you try to substitute first hand observation and experience?

Q7 Do you enjoy fieldwork with students? Yes No

Q8 Why?

Q9 Do you evaluate (measure) the effect of fieldwork on students learning?

Q10 How?

Q11 Why is geographical knowledge valuable?

Q12 What makes a good geographer?

Q13 How essential is fieldwork to this process?

Q14 Who decides upon the frequency of fieldwork?

Q15 What constraints are there to fieldwork?

Q16 In your department has there been more or less fieldwork over the last 10 years?

Much less Less Same More Much more

Q17 Why?

Thank you for your time and assistance

4.6.7 Questionnaire for Students

The aims of this questionnaire (Figure 4.4) were to discover what students learn from fieldwork, where they have been, what costs were involved and what benefits they feel they have gained from it. The questionnaire was left as open as possible so as not to project pre-conceptions derived from one particular geographical tradition as this would lead and constrain potentially diverse responses. For the distribution of student questionnaires, each academic contacted was asked to identify six of their students and distribute the questionnaire to them. This largely formed the basis of the initial data collection but was expanded to encompass other opportunities to obtain completed questionnaires from students. This including distribution during field courses and the questionnaire being uploaded to the European Geography Association for Students and Young Geographers' (EGEA) web site.

The student questionnaire opened with a review of their fieldwork, whether this was regional, national or international (Question 2), the amount of fieldwork undertaken in the past 12 months (Question 3) - including the length of the fieldwork and the costs to the student, and finally, whether their university helped towards the costs (Question 4). Fieldwork offered on a degree course and its cost can be an influencing factor when students chose a university (Gedye *et al.*, 2004). In light of this, with regard to the 'yes/no' answer to Question 4, it was felt important to have a definite response here.

Open-ended questions were felt important to this research in order to gain a good understanding of overall opinion. Although questionnaires are not normally suited to qualitative research (Zoltan, 2003) space was restricted by designing a box for the answer thus limiting the length of the answer, whilst allowing the respondent to continue over the page if absolutely necessary. The positive stance was taken in that open-ended questions can allow a greater depth than quantitative data with respondents able to quote illustrations and possibly identify previously unanticipated issues (Zoltan, 2003). Therefore, the questions on the importance of fieldwork to study, how it helps in learning and skills gained are purely open-ended. In designing a questionnaire to be used by others, where English is not a first language, the questions were worded in a simple and natural way, using simple sentences (rather

than complete and compound) with each question only providing one thought (Zoltan, 2003). Despite this students are asked the question “How important is fieldwork to your studies?” followed by “Why?” (Question 5). This was designed to draw the respondents out to think about their answers. In order to gauge students’ perspectives on learning through fieldwork the questions “How does fieldwork help your learning? (Question 6) and “What skills do you gain from fieldwork?” (Question 7) would provide a comparison with academic responses on the importance of fieldwork to learning, with the aim of providing a picture of both academic and student perspectives of teaching and learning. In the case of the question “Do you enjoy fieldwork” (Question 8) it was simple to reply yes or no. The previous yes/no question had caused problems: however, in this case a box was provided beneath the yes/no option asking the question ‘Why’? (Question 9) As a result respondents completed this section correctly.

QUESTIONNAIRE: STUDENT PERSPECTIVE OF FIELDWORK

Q1

(a) Country: _____

(b) University: _____

(c) Level of Study: Bachelors Masters PhD

(d) Year of study: 1 2 3 4 5

Q2 My fieldtrips were: Regional National International

Q3 Fieldwork in the last 12 months:

Place visited	Number of days	Cost

Q4 Does your university help you pay the cost? Yes No

PLEASE THINK ABOUT YOUR FIELDWORK EXPERIENCES:
(Say as much as you can - continue over the page if needed)

Q5 How important is fieldwork to your studies and why?

Q6 How does fieldwork help your learning?

Q7 What skills do you gain from fieldwork?

Q8 Do you enjoy fieldwork? Yes No

Q9 Why?

Thank you for your time and assistance

Figure 4.2: Student Questionnaire

4.7 Conducting the Questionnaire Surveys

Prior to issuing the questionnaires thought was given as to whom the questions should be directed and how best to reach these people to gain adequate responses. As with all research studies ethical considerations must play an important role. To this end, in addition to the plans regarding approach and storage of information made initially, retrospective approval from the University was necessary following changes in their research ethics rules since the project was first begun. Additionally, in planning a study of 'Europe' the area of study was to be defined; this was not as easy as first imagined as differences in the definition of which countries make up 'Europe' exist. It was therefore necessary to provide a clear definition. A plan was drawn up in order to pilot the questionnaire with both geographers and non-geographers in order to ensure that the questions set were as clear as possible, bearing in mind the majority of those questioned will be non-native English speakers.

4.7.1 Piloting the Questionnaires

Piloting is integral to questionnaire design and it allows the researcher to ensure the questions provide the types of information, insights and responses they were designed to give, thereby allowing fine-tuning of the final questionnaire (Zoltan, 2003).

In February 2006 approximately 30 people were asked to be part of the initial pilot group, two academics were asked to spend some time going through the questions and suggesting any changes they felt would benefit the clarity of the design. The others piloting the questionnaire were a mix of geographers and non-geographers from a variety of backgrounds, from those working in higher education and education to those completely outside geography and education. It was felt particularly important to include non-geographers, as although every measure had been taken to move away from jargon, confirmation was needed to ensure it was fully understood by them, thereby giving those with English as a second language a good chance of translation. Those outside the subject area were based in the UK only whereas academics were from Poland, Romania, France, Malta, Germany, Spain, Ireland and the UK.

Students from various countries across Europe were approached at a meeting of the European Geography Association for Students and Young Geographers (EGEA) held in the Netherlands. They were asked to respond to the questions and provide feedback indicating where questions were not clear, or unnecessary, and if they could suggest improvements. Subsequent changes to the questions were discussed with the two UK academics involved in the original design feedback to ensure the clarity of the questions and whether they would meet the aims of the questionnaire. As a result of this system of piloting the questions were shortened on two occasions, making them clearer and easier to understand. Although the questions may seem unsophisticated to English speakers the simplicity was felt to be necessary for questionnaires being sent out across Europe.

Overall, the questionnaires were considered by the pilot sample to be clear. The student questionnaire, however, needed some changes to wording to make questions shorter in order to ease their translations Table 4.10. With regard to the academic Question 9, "Do you evaluate (measure) the effect of fieldwork on students learning?", at the time of piloting this did not seem to be a prominent question, however, in practice this question was problematic. On reflection this would have benefited from further re-wording to make the question clearer (see 5.2.8).

Originally the question was asked "What problems does fieldwork cause for you?" During the pilot survey this was considered to be negative and therefore leading. It was replaced with the questions "Do you enjoy fieldwork? Why?". This change allowed respondents to comment on positive or negative aspects dependent on whether they answered yes or no.

Once the basic questionnaire had been designed it needed to be adapted and developed to its final stage, ensuring that it worked as intended and would produce the required data (Oppenheim, 1992). Particular attention was given to wording; although most geographers, regardless of whether they consider themselves physical or human geographers, have a grasp of the jargon from other specialisms within their discipline, the questionnaires needed to be clear to non-native English speakers.

Table 4.10: Examples of Question Development

<p>Fieldwork experiences – became: I have been on fieldtrips: regional/national/international – finally became: <i>My fieldtrips were: regional/national/international</i></p>
<p>The statement, “Please reflect below on your fieldwork experiences (answer as fully or as briefly as you wish)” – became: <i>Please think about your fieldwork experiences (say as much as you can – continue over the page if needed).</i></p>
<p>Is the cost of your fieldwork subsidised by your institution?: yes/no – became: Do you pay the full cost of your fieldwork?: yes/no – finally became: <i>Does your university help pay the cost? yes/no</i></p>
<p>How does fieldwork support your learning? - became: <i>How does fieldwork help your learning?</i></p>

Czaja and Blaire (1996) suggest that the questionnaire designer should ask themselves if the word would be found in a newspaper, if there is a similar word that conveys the same thing or if the term is ‘specialised language’? This is the reason why non-geographers from non-educational backgrounds were selected to take part to the pilot.

4.7.2 Questionnaire Distribution

A mail questionnaire has the advantage of having no geographical boundary and it is believed that respondents will be more willing to complete a questionnaire when it can be done at their own convenience (Bourque and Fielder, 1995). Bourque and Fielder (1995) warn that a researcher can expect no more than a 20% response rate, for a single mailing of a questionnaire and they recommend a variety of other procedures be used to increase response rates. There is, however, no reason why a survey should not be undertaken using more than one method, (postal, self-administered, telephone or electronic delivery) and a combination of methods may be more appropriate.

Questionnaires for this research were handed by the author to academics at European events. These academics were new to the author having had no contact with them

previously, unlike those in the original sample (see section 4.6.4). In all 15 questionnaires were distributed by the author in this manner. For the purpose of this research the number of questionnaires received back, and countries responding, was considered to be of more significance than those distributed. The aim was to have the widest spread possible. Additionally, three colleagues were issued with a number of sets of questionnaires for distribution by them when they attended events in Europe (see section 4.6.4). These events included, for example, the International Geographical Union (IGU) meeting at the *Home of Geography* in Rome; IGU-HERODOT conference in London; HERODOT conference in Stockholm and several small workshops/meetings in Spain (Barcelona), Malta (Valletta), Bulgaria (Sofia), Poland (Torun) and Romania (Sibiu). In each case instructions were brief, to prevent creating a bias prior to the respondent reading the questions (Oppenheim, 1992) i.e. “I would be grateful if you could help with my research by completing this questionnaire and asking several of your students to do the same.” A cover sheet and self-addressed envelope were also provided. Zoltan (2003) stresses the need for general courtesy; a summary of the research, return addressed envelope, and a final thank you for their co-operation.

The following factors were taken into account when distributing the questionnaire in order to maximise response rates, as recommended by Oppenheim (1992):

- a brief explanation of the research including why they had been chosen to complete the questionnaire;
- a reply envelope for postal/self-administered questionnaires;
- anonymity – there is no place for name only country and university;
- attractive appearance and brevity of questionnaire.

The questionnaire was designed to be handed out to higher education geography academics at events across Europe, to be posted with correspondence to academics in European geography departments, and to be sent as an attachment by e-mail. Each academic questionnaire was accompanied by six student questionnaires with a request that they be distributed amongst their student body. The questionnaire was printed on cream coloured paper taking into account those respondents who may

have special needs. Shades of cream are considered to be a neutral colour for those with dyslexia, for example (Elliot, *et al.*, 2004). As a hard copy this also ensured the questionnaire stood out amongst the reams of white paper normally cluttering desks serving as a reminder to the respondents to complete/post it back. The academic questionnaire was on a slightly darker paper to distinguish between the two. These questionnaires included return information and a self-addressed envelope. Providing a stamp was impossible due to the different postal systems across Europe. An electronic version was mentioned on the cover sheet with a contact e-mail address should the respondent decide this to be more appropriate. The electronic version of the questionnaire was also produced to widen the responses via e-mail. This meant that the original questionnaire needed to be formatted in a slightly different way to enable electronic completion without destroying the basic design of the questionnaire. E-mail requests included a brief explanation of the research. In all, 44 academic questionnaires and 81 student questionnaires were received electronically (see section 4.6.4).

In March 2006 a list of 114 academics was drawn up, as outlined in section 4.6.4 (Table 4.11), along with an e-mail composed explaining the basis of the research and asking for assistance in completing the questionnaires (see Appendix 1). This list was split into three groups; those known contacts (having been met personally); those known through e-mail contact only and those names provided by other academics as 'experts'. The academics who had been met personally received individually addressed, personalised, requests and the other two groups contacted received a generic e-mail request. From table 4.3 it can be seen that questionnaires were not evenly distributed, for example in the Czech Republic, Portugal, Spain and the UK. This was considered to be acceptable as it was more important to get as many questionnaires spread across geography departments in Europe as possible in order to meet the aim of obtaining data from each country within the research area. In addition, and through past experience, the academics canvassed in Czech Republic, Portugal and Spain had been extremely slow in responding to request and e-mails within the HERODOT network. This assumption was borne out in the questionnaires received with the Czech Republic supplying only one questionnaire and Portugal and Spain providing three each (Appendix 3). The academics selected

in the UK were all well known to the author and as a result there were responses from all eight academics contacted.

A table was designed to log all the e-mails sent, responses, promises of questionnaires and returned completed questionnaires. This method of organisation would allow for gaps to become obvious and be followed up. A note was kept of the country, name of academic and the number of academic and student questionnaires received. However, the questionnaires themselves were immediately filed away and remained anonymous. All e-mail responses were replied to as it was felt important to keep relations open and friendly should further information be required at a later date.

Table 4.11: Breakdown of 114 Academics Originally Approached

Country	Number of Contacts	Country	Number of Contacts
Austria	5	Latvia	1
Belgium	5	Lithuania	1
Bulgaria	5	Malta	2
Czech Republic	9	Netherlands	5
Denmark	3	Norway	4
Estonia	2	Poland	4
Finland	5	Portugal	10
France	4	Romania	4
Germany	5	Slovakia	1
Greece	5	Slovenia	3
Hungary	2	Spain	7
Iceland	2	Sweden	4
Ireland	2	Turkey	2
Italy	4	United Kingdom	8

The timing of any questionnaire is important (Bourque and Fielder, 1995) therefore the original questionnaires were sent before the Easter break in March 2006 as many European universities have fieldwork over this period. The follow up reminder e-mails were sent after Easter but before the summer break. The first reminder was sent at the beginning of May. At the end of May 'missing' countries, i.e. those from whom no responses from higher education institutions had been received, were targeted specifically. This was achieved using the hard copy of the questionnaire and took the form of a mail-shot directed to individual academics, from the original

sample of 114 academics, who had previously been e-mailed the questionnaire. Personal handwritten notes to those academics previously met by the author were included in this mailshot. Throughout March to December 2006 the hard copy questionnaires were handed out during business trips and academic events in Slovenia (Bled), Bulgaria (Sofia), Spain (Barcelona), Northern Ireland (Belfast), Malta (Valletta), United Kingdom (London), Italy (Rome), Austria (Salzburg), Netherlands (Amsterdam), Sweden (Stockholm), Poland (Torun) and Romania (Sibiu). In addition to this, these events allowed for individual discussions regarding the research to take place in an informal environment.

Each academic questionnaire was accompanied by a request to ask six students to complete the student questionnaire. Some academics managed to only get between one and five students to complete this, some sent the six requested, whilst others gave copies to whole fieldwork groups. For, this reason it is difficult to say how many questionnaires were passed on to students. Also, as some academics forwarded the questionnaire to other colleagues, the cascade effect cannot be calculated. However, in all, a total of 134 questionnaires were distributed to academics (each with the student questionnaire attached). This included 114 e-mails (and reminders by post to 54 of these academics) ten questionnaires handed out personally and ten questionnaires handed out between two colleagues on the author's behalf. On this basis the response rate is 53.7%. Baruch and Holton (2008), in a study of 1607 research projects (using questionnaires as a research method) published in 17 academic refereed journals, calculated a response rate of 52.7% where individuals are approached and 18.8% where institutions are approached. They outline that response rates to voluntary questionnaire surveys have been dropping over time, suggesting this could be due to over-surveying and quote that 28% of individuals say they are too busy to complete such research questionnaires (Baruch and Holton, 2008).

September to December is always a busy time in the academic calendar, therefore electronic questionnaires were only re-sent to those who had promised responses but not yet sent them. At this stage it was realised that in order to close any gaps in data another method would be needed. In January and February 2007 a list of 'missing' countries was produced from the on-going log and a strategy to fill these gaps

decided upon. From the list, those academics known personally were contacted again, stressing how important their country and data was to this research. Additionally, two colleagues, from Poland and Romania were sent the list and asked to help by naming contacts that may be prepared to complete questionnaires. These colleagues subsequently made several suggestions regarding new contacts. This also resulted in the student questionnaire being placed on the web page (<http://www.egea.eu/>) for the European Geography Association for Students and Young Geographers (EGEA) by the Romanian colleague. The on-line questionnaire only resulted in three student responses, one each from Hungary, Italy and the Netherlands. These were received with a covering e-mail stating they had downloaded the questionnaire the EGEA site.

Initially, a 12 months deadline for data collection had been set. March and April 2007 were spent trying to fill the gaps in data as the beginning of April marked the 12 month anniversary of the first questionnaires being returned. In order to ensure that the data were viable and relevant, a cut-off deadline was felt necessary. This cut-off date was set as 10th April 2007. By this time, however, there were several outstanding promises of completed questionnaires from academics whose students completed their fieldwork during Easter. The deadline was therefore extended until 30th April 2007. Of the 28 countries originally anticipated only seven countries remained without data by the deadline, however during the beginning of May five of these countries had responded, with 3 academics apologising for the delay as they had translated their students' responses into English. Those institutions who had promised data were contacted again resulting in only two countries remaining without data; Latvia and Slovakia. An EGEA event earlier in the year had promised student questionnaires from these countries but they had not arrived by the beginning of May. By 6th June, approximately six weeks after the initial deadline of 10th April, all data collection was closed - with only academics and students from Latvia missing from the data set. This extension was considered to be acceptable as inclusion of the 'missing' countries was decided to be more important to the research than slightly overrunning the deadline.

4.8 Data Input and Analysis

The main issue when considering the analysis of the questionnaires arose from language, where the majority of the respondents were non-native English speakers. A strategy for the input of the collected data was necessary and consideration given to ease of use and methods of input and analysis.

4.8.1 *The Language 'Barrier'*

In the later stage of data collection, because of the low response rates from some countries, it was felt necessary to stress that the language the responses were returned in was not important and that translations would be made once received. This successfully resulted in the gaps from France and Spain being filled. In the case of France, a covering letter of explanation and instructions together with both student and academic questionnaires, were self-administered during a conference attended by academics. A colleague, fluent in French, read the questions and translated the answers into English. Each responding academic took six copies of the student questionnaire away with them to distribute to their students. The questionnaires from Spain arrived with some already in English. However, there were initially 10 questionnaires in Spanish and a translator was found. This took some weeks, despite reminders, and when they were eventually returned it was not clear if the translations were in fact correct; as the English did not wholly relate to the questions set. Additionally, there were sections left blank because the handwriting was claimed to be illegible. Subsequently, a further 15 questionnaires were received from Spanish universities. After some time a translator was found who had considerable experience of translating legal documents. This translator took all the Spanish questionnaires and translated them. As suspected, the first translations were incorrect, nuances of the language were unaccounted for and simple errors had been made. An example of this would be a translation given as 'sometimes' when the actual translation should have been 'at the same time', clearly different things. The new translations gave the full information in addition to sections being re-written in print in order that the Spanish may be quoted later if needed.

There was, however, another interesting perspective - one academic from Slovenia commented, in a covering e-mail attaching their students' completed questionnaires, on how useful the questionnaire had been to them in English. The academic's English was particularly good and it was felt that the questionnaire had highlighted what they considered be a weakness in their students. The English in the student responses had been corrected with the help of this academic.

4.8.2 Data Input

Questionnaire data from both 'respondent academics' and 'respondent students' were filed in alphabetical country order and numbered using the following system (see Table 4.5):

- Academic Questionnaires: RA1, RA2, RA3 etc.
- Student Questionnaires: RS1, RS2, RS3 etc.

Workbooks were created in Microsoft Excel for each of the questionnaires and the data input arranged under the headings of the questions; different sheets were created for each section of questions. Each worksheet was designed to fit onto an A4 page and be clearly legible. This made it possible to print off and study individual questions, or groups of questions, identifying key emerging themes for data analysis (see 4.5.5). It also eliminated the need to scroll along the computer screen, thus making comparisons easier. The method of data input allowed for both qualitative and quantitative analysis to be made. The workbooks were progressively refined and the structures changed as and when problems with data interpretation, or lack of data, were acknowledged. Although this took some time, occasionally having to go back and insert additional information for records already inputted, in the long-term it served to save time in analysis.

Data input was extremely time consuming but encouraged deeper understanding of the issues and provided the opportunity to highlight notable comments. Using Excel allowed responses from each country to be grouped together in alphabetical country order. This was extremely useful when adding late data as it meant new lines could be inserted beneath the appropriate country and all information for each individual

country remained grouped. This also allowed for the inclusion of late data into the spread sheets, without causing additional problems.

4.8.3 Computer versus Traditional Methods

The main advantages of computer assisted analysis of qualitative data (CAQDAS) fall into the following categories:

- Speed – allows the handling of large amounts of data providing time for the researcher to explore the analytical questions.
- Sampling – assists in sampling decisions both in representation and theory development
- Rigour – improves rigour particularly when searching for ‘deviant’ cases.
- Team work – allows for team research and consistency in coding schemes (Seale, 2005).

Whilst these are clearly advantageous when working with a large amount of data, in the case of this study, however, many of the respondents completed electronic questionnaires and their comments were already in Word and Excel format. Therefore, for the purposes of data analysis it was preferable to work with the inputted material in a traditional way using word processing packages, which are capable of appropriate analytical tasks such as data searching and completing statistics and graphical representations (Seale, 2005).

In deciding to use a traditional means of coding and analysis, several issues were considered. Language was an issue to be considered and the fact that English was a second or third language in most cases meant that spelling and grammar were not always clear and whereas an English speaker reading a sentence may well gain an understanding of what the writer intended, a computer would not. It was felt that there was a need to become immersed in the topic, in the feelings of those questioned and the points they wanted to make. Inputting, coding and analysis allowed for the intellectual understanding and linkages to be made and provided a solid grounding in the opinions and perspectives of both academics and students alike. For these

reasons it was considered that using computer programmes such as NVivo could not provide the same level of understanding.

4.8.4 Thematic Analysis

Thematic analysis is a seldom recognised qualitative analytical method (Boyatzis, 1998; Roulston, 2001) and is more frequently found in areas such as psychology research. Rather than being considered a technique in its own right, it is often linked as a methodological tool to other traditional methods of analysis, e.g. grounded theory (Ryan and Bernard, 2000). Boyatzis (1998) characterises it, not as a specific method, but as a tool to use across different methods. Conversely, however, thematic analysis is considered by Braun and Clarke (2006:77) to be a “method in its own right” particularly in light of its flexibility, which can provide a valuable, thorough and complex representation of data (Braun and Clarke, 2006).

The process of thematic analysis begins as data is analysed and patterns are sought out of which themes will emerge. In order to achieve this, an on-going overview of the research data must be undertaken, working backwards and forwards through the data until all qualitative extracts have been coded (Braun & Clarke, 2006). This level of exposure to the data, Tuckett (2005) states, will enrich analysis leading to recognition of the more subtle elements of the data. It is therefore important to engage fully, through constant reading and re-reading of responses, in order to create a high level of familiarity with both the depth and breadth of content (Tuckett, 2005).

This method thereby allows the similarities and differences within the questionnaire responses to be identified (Fereday & Muir-Cochrane, 2006; Woods, 2006). For this research, responses were continually coded and categorised in order to bring forward the underlying themes allowing for interpretation and comparison. The combination of these data driven approaches allowed the thoughts and perspectives of academics and students to direct the research rather than a pre-conceived theory or hypothesis.

In analysing the themes occurring with the questionnaire’s qualitative responses, each response was read individually and relevant themes listed, alongside each theme on this list was recorded the number of times the theme had been mentioned within

the whole group of responses to the particular question. This then provided a list of themes and the number of times each theme was stated by the respondents. The next step was to consider the themes and their similarities, grouping together similar themes in order to produce a succinct list of categorised themes. The responses were read through a second time in order to confirm that the categories and number of times mentioned were correct and reflected the opinions of respondents. This method of coding was used for each qualitative question set on the academic and student questionnaires.

Whereas the questionnaire design had been based on themes considered relevant for this research project, the analysis of the questionnaires was based on those themes identified by the respondents. This provided a situation where the respondents' perspectives were analysed through a data driven system where the themes of the respondents' opinions became the main focus of the research results, providing a clear understanding of the themes most important to academics and students across Europe.

4.8.5 Focus Groups and Discussion Sessions

A series of focus groups and discussions took place during meetings and conferences across Europe (Appendix 2). Focus groups were planned sessions and discussion groups less formal, taking place during breaks in meetings and in the evenings following sessions. Discussions and focus groups took place as follows:

Group 1 – Discussion: Barcelona, Spain – November 2006

9 academics discussed 'Enjoyment of fieldwork'

Group 2 – Discussion: Valletta, Malta – March 2007

7 academics and 3 students discussed 'Importance of fieldwork to becoming a geographer/skills'

Group 3 – Discussion: Stockholm, Sweden – September 2007

9 academics and 2 students discussed 'Importance of fieldwork'

Group 4 – Focus Group 1: Sibiu, Romania – October 2007

17 academics and 3 students discussed ‘Fieldwork issues/saving fieldwork’

Group 5 – Focus Group 2: Liverpool, UK – June 2009

13 students discussed ‘Disadvantages of fieldwork/issues’

Group 6 – Discussions at various academic events 2007-2008

10 academics providing opinion of comparisons between ‘Education in UK/Europe/USA’

Group 7 – Discussion: Heidelberg, Germany – September 2010

1 academic and 8 students discussed ‘Funding the cost of higher education’.

Groups 1, 2 and 3 took place between 2006 and 2007 and supplemented the questionnaire responses. Having already gained knowledge of the emerging fields from the data collected, these sessions helped to focus the research. As Group 4 had the largest number of academics attending; six of these academics had also taken part in previous discussions (four in Group 1 and two in Group 2). However, it should be noted that the topics discussed were different and therefore did not overlap. On the whole different academics and students took part in these focus groups although due to ethical considerations of the questionnaire it was not possible to say which of these had also completed questionnaires.

Focus group 1 (Group 4) took the form of a presentation of research results to-date to a workshop of several European academics meeting to discuss employability, followed by an open discussion which was recorded. Taking part in this group were 17 academics and three students. The following questions were opened for discussion with a small group of academics from several countries in Europe.

- *Do you include an element of career awareness in your teaching?*
- *Is skill acquisition and employability embedded in your fieldwork curriculum? How?*

- *Should fieldwork teaching include an element of work based learning? Is it practical to do this?*
- *Should we be training students for the workplace, is this our role?*
- *If newly qualified teachers place little importance on fieldwork where will it leave our future Geographers?*
- *If students are not recognising what we as teachers want them to gain from fieldwork, what does it say about the overall experience we provide them with?*

To ensure that the transcriptions of recordings are not weakened by a failure to include pauses and overlaps in speech, Silverman (2005) suggests that any recordings would need to be typed up verbatim, tidied up and then coded. However, in Group 4 the discussion lasted over an hour and deviated several times - as the group, in addition to answering the questions set, were working through the issue of creating a benchmark statement for employability. Rather than a full transcription, the recording was listened to and, in conjunction with notes taken during the event, the main areas of interest were noted and quotes recorded where appropriate. These notes were then compared with the notes of a colleague who attended the same meeting to ensure that nothing crucial had been missed and that they were a true representation of our discussions and points raised. In many cases conversations were held in places with considerable background noise (e.g. Group 5 in a canteen during a lunch break), and invariably drifted off-point, they were therefore recorded in note form and the key points and quotes produced in a Microsoft Excel table. These summary notes are provided in Appendix 2.

Group 5 aimed to highlight an area of questioning not considered fully in the student questionnaire. In all 13, students took part in this discussion on the disadvantages students found in undertaking fieldwork and any issues surrounding it. Discussion drew out important information on the attitudes that some students had toward their fieldwork study.

Discussion Group 6 was made up of ten academics who during events held in the period 2007-2008 discussed the similarities or differences in education in the UK, mainland Europe and USA. A comment made during these conversations led to further thought of research on the Anglo-centric nature of academic writing on fieldwork education and whether methods of learning and teaching transferred from the USA, to the UK and then out across the rest of Europe.

The cost of undertaking higher education has become a concern to many students, and has been recently highlighted in the UK with increases to tuition fees (Barford, 2010; Williams and Vasagar, 2010) and overall highlights the changing needs of students (Brock-Utne, 2002). The question as to what drives students to work in addition to study was considered to be relevant as whilst in some countries students work to pay their way through university they also aspire to a higher lifestyle; including up-to-the-minute technology and fashion items (Barford, 2010). Therefore Group 7 consisted of one academic and nine students who discussed funding the cost of higher education. These students were chosen as they were studying at PhD level, had therefore experienced studying at bachelor's and master's levels and in addition had studied in more than one European country.

In order to analyse the qualitative responses to the academic and student questionnaires/discussions, a system of coding was created (Crabtree and Miller, 1999) which would enable any quotations used to be linked back to the original data collection. When using quotations it was also relevant to include the country of origin of the respondents and in some cases additional relevant information, for example the length of time academics had worked in higher education. As both questionnaires, focus groups and general discussions formed the basis of the data collected it was decided to split the coding into 'respondents' and 'participants', further indicating whether they were academics or students and then each numbered in sequence (Table 4.12).

Adhering to the research ethics for this project, where face-to-face focus groups or informal discussions took place, all were advised verbally of the reasons behind the questions and informed that any responses would be anonymous. In order to achieve this, once the notes were taken, they were typed into a table with just the name of the

country represented by each participant and the original notes shredded. As the questionnaires were also anonymous there was no way of comparing whether those interviewed during discussions also submitted questionnaires; however, the level of anonymity was considered necessary in light of some of the questions and issues raised.

Table 4.12: Explanation and Examples of Coding used for Responses

Coding Explanation		Examples
Academics:		
Questionnaire	Respondent Academic (followed by number)	RA1, RA2, etc.
Discussion	Participant Academic (followed by number)	PA1, PA2, etc.
Students:		
Questionnaire	Respondent Student (followed by number)	RS1, RS2, etc.
Discussion	Participant Student (followed by number)	PS1, PS2, etc.

4.8.6 Methods of Analysis

Data were analysed by pulling out responses for each question from both the academic and student questionnaires individually and categorised as outlined in section 4.5.5. Data from the Excel sheet was manipulated to create tables of responses in addition to graphs where necessary. These tables were used for analysis and comparison. Where the questions were qualitative in nature, key words and phrases were drawn upon in order to create a table of perspectives/opinions. Comparisons were made between academic and student responses in order to meet the aims of the questionnaire and research as a whole

4.9 Additional Data Collection and Information

The questionnaire data were supplemented by further e-mail enquiries aimed at a specific area of the research, as and when this was felt necessary. This was one of the main benefits of having an extensive list of known geography academics across Europe. In addition, travelling to events throughout Europe provided the opportunity to discuss research and opinions in an informal setting with both students and

academics alike, where respondents were fully aware of the research being undertaken and of the reasoning behind the discussions. Quotes from e-mails and general conversations are represented here by the country of the person commenting followed by Pers. Comm.

4.9.1 Finding Suitable Academics

A total of 114 academics were selected across Europe as outlined in section 4.3.3. Using this sample, the academic(s) considered the most helpful to-date from each of the countries in the study, were selected for further questioning. This produced an e-mail list of 27 academics from 27 countries. As this information was in addition to the main questionnaire and required a 'snap shot' of the situation, rather than any in-depth response, it was not considered necessary to contact the whole 114 academics in the original sample.

In November 2008 the list of 27 academics from 27 countries were contacted and asked for input into the status of geography in their countries:

- 1. Does your country have a national benchmark for geography in which fieldwork is compulsory?*

This was asked in order to find out the nature of compulsory fieldwork – was it compulsory nationally or just within the selected university courses as suggested by academics, where fieldwork was felt intrinsic to the subject.

- 2. Is geography in your country a science or arts subject? Does it affect funding?*

This question was asked to (a) consider how geography was represented in their country and (b) as a result of this label was it better funded (thereby providing much needed cash to fund fieldwork excursions)? Of the 27 academics contacted 21 responded to the questions.

In a similar vein, following a comment made during a discussion group session, in June 2009 the sample of 27 academics were asked to provide information on the names of key fieldwork authors (its role and importance in geography – particularly in higher education). During discussions with academics there was a feeling that the educational ideas initiated in the USA, transferred to the UK and spread from there across Europe:

“...if it is adopted in the UK it will slowly filter across the water to us – just as it filtered to you from the US.” – Ireland (Pers. Comm. PA6:2)

There appeared to be very little written on this subject in English and the literature published on fieldwork education as a whole was seen to be Anglo-centric in nature. Therefore, by asking contacts to provide the names of people active in this area of research, with the aim of having their papers translated, seemed to be a way of overcoming this situation. However, only 10 responses were received through e-mail and although providing names, respondents commented that this was not a strong field of research in their countries and that literature mainly covered the use of technology and problem based learning. Comments from those surveyed included:

“...there is not much research around this area.” – Norway (Pers. Comm. by e-mail)

“Not an area of geography researched.” – Italy (Pers. Comm. by e-mail)

“... mainly research is concerned with problem based learning not fieldwork in particular.” – Spain (Pers. Comm. by e-mail).

Returning to the issues of benchmark statements, in July 2010 an e-mail was sent to 43 key geographical associations and societies across Europe. This sample had been based on a list of 89 geography associations and societies which was provided by EUROGEO (The European Network of Geography Associations). The list was researched further on the internet; small societies linked to individual institutions, associations of teachers and those no longer in existence or with broken links, were

deleted. A total of 43 associations in the 27 countries under investigation were contacted. This e-mail asked the question:

Does your association have a statement on fieldwork, i.e. a document that outlines the benefits of fieldwork and how it should be taught?

In addition to the 15 responses received, the association/society web sites were translated and searched in order to fill any gaps in the information received. The reasoning behind this question was the fact that in the UK such associations actively support fieldwork in the geography curriculum, for example the Royal Geographical Society-Institute of British Geographers (RSG-IBG) and the Geographical Association (GA). Such support highlights the importance of geography to those outside the discipline and in particular to curriculum designers and decision makers, thereby strengthening the case for fieldwork remaining central to geography.

As this research neared completion, it became apparent that some respondents had commented on student behaviour during fieldwork. It was decided to investigate this area further by e-mailing these particular people to see if they would expand. The mailing list of 27 academics in 27 countries was used as a basis with some academics replaced by the ones who had indicated problems. Therefore a total of 27 academics were surveyed and 15 students who had been involved in the questionnaire and for whom e-mail addresses existed. However, it should be noted that five student e-mails were returned as they had most probably graduated. The aim was to discover whether this issue was apparent in other European countries. The e-mail explained and asked:

Have you had or heard of problematic student behaviour during fieldwork within your institution? If so could you give an example of something that has occurred during fieldwork and the impact?

In all 15 academics and five students responded to these questions from 12 countries, with some lengthy academic responses.

4.9.2 Additional Student Input

During collation of the student survey results and subsequent conversations with students connected to the HERODOT project (see section 4.6.5), it became apparent that some students had issues with fieldwork that the questionnaire did not allow them to comment upon in any detail. Therefore, discussions were held with a small group of students at meetings in Malta, Romania, Sweden and the UK resulting in a sample of 37 students being asked the question:

“Are there any disadvantages to taking part in fieldwork?”

This question was designed to draw out any issues students had in taking part in fieldwork, i.e. financial constraints, family commitments etc.

4.9.3 Focus Groups

To understand clearly the issues academics had with regard to fieldwork in their institutions and countries, and to triangulate methodologies, it was felt necessary to talk directly to them within a focus group (see 4.5.6). This was to ensure that no underlying issues were missed that had not been included in the questionnaire process. Therefore the aim was to draw out people’s views and understanding of issues, the outcome of which would be used as a supplementary technique to the questionnaire, producing further qualitative data (Brewton and Millward 2006). Focus and discussion groups took place, in an informal setting, during which fieldwork and teaching methods were discussed with several colleagues from different countries in Europe, including the United Kingdom, Ireland, Spain, Malta, Germany, Netherlands, Romania and Poland.

Whilst focus groups are widely used in human geography in the exploration of qualitative aspects of people’s social worlds, they are sometimes criticised for only providing a shallow insight into the area of study. This is considered particularly true when compared to single one-to-one interviewing, as personal information may be withheld during such discussions and some personalities may take over the discussion to a greater extent. However, in this case it was the interaction between

the members of the groups that was most important rather than the actual number in the group - Morgan, (1997), Hopkins, (2007) and Krueger & Casey, (2008) recommending at least two people and not more than ten. For this research the groups were made up of people who already knew each other, in a social environment, and sharing a common identity (i.e. academic geographers) and both Morgan (1997) and Hopkins (2007) note that the researcher should be aware of the strengths and weakness of using such a group. The consideration of time is extremely important for all researchers but particularly for those undertaking research in addition to holding down a full-time job (Gillham, 2000). Whilst it is true that focus groups can save researcher time (Krueger & Casey, 2008), they are driven solely by the researcher's interests which whilst this is given by some to be a strength (Brewton and Millward 2006; Hopkins, 2007; Krueger & Casey, 2008) it can also be considered a weakness. Focus groups are in essence an unnatural environment constructed by the researcher and therefore participant opinions can be influenced by the researcher directly (Hopkins, 2007).

In developing these research focus groups it was decided to create informal discussions between academics in a social environment. Whilst the academics were fully aware of this research study and the questioning, their answers were often very open and discussions supported the questionnaires responses in more detail. Fieldwork and its provision both within their institutions and across Europe provided the topic for discussions at various events, at an informal level, for academics at meetings in Italy, Spain, Sweden, Malta and Romania. Student representatives from EGEA were also present at such discussions which allowed for interaction between the academics and students.

4.10 Conclusion

The methods used in the initiation of this research project have adhered to the ethical regulations of the University in addition to being informed by current theories on research methods. Questionnaire distribution and responses have benefited from the input of a wide range of European geography academics. Although some issues have become apparent in the analysis of these data collected, in particular language,

solutions have been found to overcome any problems that would detrimentally affect the outcome of the research.

Basing the sample on academics already known was not so straight forward. Although this could be seen to be opportunistic in nature, in reality those to be surveyed had to meet the research criteria, i.e. to be geographers working in higher education in Europe, currently undertaking fieldwork with their students and with knowledge of current key issues such as pedagogical theory, employability skills and Bologna. Members of the HERODOT network were therefore a logical choice as they were like-minded and interested in the progression and promotion of geography as an academic discipline. These academics were seen as a starting point for this research as their engagement and enthusiasm would encourage others to take part in the questionnaire and begin the cascade effect necessary in order for the research to encompass as many European countries as possible.

The questionnaires and focus groups were designed to provide both academic and student perspectives of the value of fieldwork to a European geography degree. In addition, they provided a comparison of attitudes regarding both teaching and learning. Questions were grounded in past research, following the results of the HERODOT research questionnaire in 2003, when areas of further exploration were first identified. Following sampling, piloting and development of the questionnaires, the academic questionnaire was distributed to 114 academics known to the author within the 'defined' Europe of 28 countries. Whilst initially a deadline of 12 months was set for the collection of data, the deadline set of 10th April 2007 overran by six weeks in order to include late submissions from respondents in countries for which no previous data had been submitted.

Language issues arising from some respondents were overcome sufficiently to include these data in the results. A clear method of data input was designed using Microsoft Excel in order to record both qualitative and quantitative data in an easily manipulated format. Although input was time consuming, it was considered that the Excel method used provided benefits when compared to computer aided data analysis software. These benefits included providing a better understanding of responses where the quality of English was poor, and allowing for intellectual

linkages to be made - providing the author with a clear insight into the perspectives of the respondents.

An analysis of the data received for this study is presented in the following Chapter and will highlight all the main results, providing insight into the perspectives of both academic geographers and their students regarding the status of geography fieldwork across Europe.

Chapter 5 Results: Perspectives of the Current State of Geography Fieldwork in Europe

5.1 Introduction

The aims of this research are to generate a record of the state of geography fieldwork in Europe, in light of the implementation of the Bologna Process and the creation of a European Higher Education Area (EHEA), providing a critical analysis of its role in education and its diversity within universities. The EHEA results from the implementation of the Bologna Declaration and the European Commission set the deadline for this as 2010. European education, therefore, has seen many changes in the past ten years and whilst the function of the Bologna Process is to increase mobility and create enhanced employability, the purpose of the EHEA is to provide quality education in a system with qualifications that are comparable across Europe; thereby allowing university students greater choice in their studies and increased opportunities for mobility within Europe (European Commission 1999; European Commission 2000). Such changes in the education system mean that students are allowed to study for a degree at more than one European university; although their degree courses may be considered comparable academically, the fieldwork and cultural encounters experienced will be different.

This chapter presents the results of considerable and extensive data collected through a variety of triangulated research techniques as outlined in Chapter 4. European academics' and students' perspectives on geography fieldwork were gained from 27 of the 28 defined European countries through the completed research questionnaires which are presented separately here and reported question by question. The academics' questionnaire aimed to determine each respondent's subject specialism and experience as a geographer. Some questions were open and included their attitudes towards teaching, assessment and student learning. Academics' views on gaining geographical knowledge were sought, together with opinions on any issues affecting fieldwork within their institutions. Part of the student questionnaire was also left open, and aimed to uncover learning gained through fieldwork in addition to the distances travelled and costs incurred. These two questionnaires did not set

identical questions, as they were designed to draw out a variety of key themes specific to academics and students.

In addition to the questionnaire a series of focus groups and discussions were held, each covering a different topic. The main, relevant, outcomes of these discussions are also outlined in this chapter. Focusing on the responses made allowed for a thematic analysis drawn from the data itself, and these themes will be considered in detail in Chapter 6.

As the research progressed, it was considered necessary to seek out supplementary answers to questions arising and responses were obtained via e-mail to selected academics and organisations, best placed to provide suitable replies. The results of this additional research are summarised here. Academics were asked to provide details of 'experts' on fieldwork and learning in their countries in order to investigate beyond the Anglo-centric nature of the literature available. To explore the issues of fieldwork statements, academics were asked if their countries had a benchmark statement in which fieldwork was compulsory and geographical societies/associations were contacted and an enquiry made as to any existing statement they may have on the place of fieldwork in the geography curriculum. This additional research is outlined here. Any quotations provided are direct and taken from the original responses or translations. Due to the nature of respondents, with many not having English as a first language, grammatical and punctuation peculiarities are therefore to be expected in these quotations.

5.2 Academic Perspectives

The pedagogic literature presupposes that fieldwork is a highly valued student experience; however any benefits gained depend heavily on the way in which the field is taught (Nairn *et al.*, 2000). It is considered that fieldwork is one of the most enjoyable aspects of teaching geography and a major motivator in students taking up geography as a discipline (Nowicki, 1999). Therefore, a questionnaire was designed for European academic geographers as outlined in Chapter 4. The purpose of this was to discover academics' thoughts on the importance of fieldwork (Questions 3 and 4) as a method of learning and teaching and how this leads to the making of a 'geographer' (Question 12).

Educationally, fieldwork strengthens classroom learning by providing experience in the 'real world' thereby reinforcing cognitive learning (Foskett, 2004) and it is through fieldwork that the skills of observation, considered so important in the making of a geographer (Gade, 2001), are honed. Academics were questioned on their teaching and discussion centres on whether it is possible to teach geography without fieldwork; which areas are considered impossible to teach without fieldwork (Question 5) and how educators could replace fieldwork in their teaching (Question 6). In the last decade there has been a move towards providing students with the opportunity to develop a variety of both subject specific and generic skills, in line with the Bologna Process and its aim to increase student employability (European Commission, 2000). This has resulted in educators being criticised for ignoring the views of their students in favour of focusing on pedagogy and the skills agenda. In practice this had led to a lack of willingness, by students, to take part in fieldwork and has had a negative effect on student learning overall (Orion and Hofstein, 1994). Examining the thoughts of academics on why geographical knowledge is valuable (Question 11) provides an understanding of whether skill acquisition is central in the minds of the academics surveyed.

Higher education geography academics are ideally placed to provide insights into the current state of geography fieldwork in Europe. Academics were therefore questioned on decision making within their institutions (Question 14), the frequency of the fieldwork they undertake (Question 15) and any constraints affecting fieldwork (Question 16).

This chapter will report the questionnaire responses and is organised so as to cover questions in the order set (Table 5.1). Tables of results have been created for each question and can be found at Appendix 3 (A3), the percentages expressed in these tables, and subsequently this chapter, may not always total 100 due to rounding and the qualitative nature of the answers given. In all, 72 responses from geography academics were received and, as respondents could give more than one answer to some questions, the totals can exceed 72. Not all academics responded to the questions set and the few non-responses are provided in the tables.

Table 5.1: Questions to Academics

Question Number	Question
Q1a	Country
Q1b	University
Q1c	Subject specialism
Q1d	How long have you worked in higher education as a Geographer?
Q2	In the past 12 months students from my department have been on geography fieldwork to: Year of study – Place visited – Number of days – Was the trip compulsory (yes/no)
Q3	How important is fieldwork to physical geography studies? (1 = unimportant/ 5 = very important)
Q4	How important is fieldwork to human geography studies? (1 = unimportant/ 5 = very important)
Q5	Are there any areas of geography you feel are impossible to teach by textbooks and classwork alone?
Q6	If fieldwork were impossible, what/how would you try to substitute first hand observation and experience?
Q7	Do you enjoy fieldwork with students?; Yes - No
Q8	Why?
Q9	Do you evaluate (measure) the effect of fieldwork on students learning?
Q10	How?
Q11	Why is geographical knowledge valuable?
Q12	What makes a good geographer?
Q13	How essential is fieldwork to this process?
Q14	Who decides upon the frequency of fieldwork?
Q15	What constraints are there to fieldwork?
Q16	In your department has there been more or less fieldwork over the last 10 years?: Much less – Less – Same – More – Much more
Q17	Why?

5.2.1 Countries and Universities Represented by Academics

For the purpose of this study, it was considered important to gain some response from each of the countries outlined in the defined Europe (Table 4.1). The number of questionnaires from each country is given in A3.1, together with the names of the institutions that took part. In all, 27 countries were represented with academics from 48 higher education institutions. By providing the name of the institution it was possible to split Academic University Geography Departments from Teacher Training Institutes/Departments for later comparison. Overall, 15 institutions were represented by one academic from their geography department with the rest of the

institutions having between one and three additional responses. The one exception to this was Hungary who provided six responses from one institution. It should be noted, however, that the questions were aimed at obtaining the perspectives of individual academics, rather than an institutional perspective.

5.2.2 Subject Specialism and Teaching Experience

The multidisciplinary nature of geography is such that, in order to gain an understanding of the range of geography specialisms represented at universities across Europe, a table was drawn up (A3.2) listing responses. It was considered that the type of specialism may impact on the type and frequency of fieldwork undertaken. Teaching experience could indicate the different values placed on fieldwork and whether the academics' length of service changes dependency on, or the importance of, fieldwork to them.

5.2.2.1 Subject Specialism

The academics surveyed came from a variety of subject specialisms: whilst some came from teacher training institutions others came from academic university geography departments and for this reason it was necessary to further investigate the specialisms. To look at the results in more depth, questionnaires were categorised, according to the academics' stated subject specialism(s), into three groups: physical geographers, human geographers and geographers/teacher trainers. Within the answers to the specialisms, the term 'geographer' or 'geography' ($n=18$) was interpreted to mean teaching both human and physical aspects of the subject as would be the case with an academic working as a teacher trainer ($n=6$) and for this reason the two were grouped together as geographers ($n=24$). The remaining specialisms were classified as either human geography ($n=28$), including historical, cultural etc. and physical geography ($n=20$) which included earth science and geology (see A3.2). Categorisation of specialism was based on whether the subject as an undergraduate degree or module in the UK would lead to a BSc (science) or BA (arts) degree specification. In categorising specialisms certain factors had to be included such as whether the academic came from a University geography department or Teaching Training Institution. In some cases academics stated more

than one specialism, e.g. geoinformatics and cultural geography which would be categorised as physical and human geography, or GIS, survey engineering and environment all of which would be categorised as physical subjects, these however still require to be listed as cited specialisms and categorised accordingly (A3.2). The number of factors taken into account highlighted which of the three categories they belonged to for the purpose of this research.

5.2.2.2 Teaching Experience

The experience of the academics as geography educators was seen as a way of exploring their attitudes towards the methods of teaching used and the importance they placed on fieldwork in the learning of their students. A breakdown of the length of experience outlined in the questionnaires is given in A3.3 and is simplified in Table 5.2.

From Table 5.2 it can clearly be seen that 45 of the academics responding to this questionnaire had more than ten years' experience. This forms a good basis for gauging perspectives and attitudes to fieldwork, given the majority of respondents are experienced educators. This level of experience will be reflected upon later in section 5.2.5 where experience is linked to teaching methods.

Table 5.2: Number of Years as an Educator as Provided by Academics

Number of Years	Number of Academics (<i>n</i> =72)
1 - 5	11
6 - 10	1
11 - 15	19
16 - 20	9
21 - 25	1
26 - 30	10
31 - 35	3
36 - 40	2
41 - 45	1
No response	4

5.2.3 Fieldwork Undertaken

Academics were asked to state the number of fieldtrips undertaken in the last 12 months, in addition to providing the year of study for the students, area visited, length of fieldtrip and whether it was compulsory. The compulsory nature of fieldwork would be an indicator of the importance the university and/or department placed upon it.

The 223 fieldwork trips outlined in the 72 academic responses were broken down into 59 international trips, 92 national trips and 65 regional trips, with 7 non-responses. Of these, 17.9% were both international and compulsory, 8.5% offered international fieldwork on a non-compulsory basis with only two institutions offering the clear choice of local or international trips for their fieldwork (Appendix 3.4).

If fieldwork is not compulsory then there is a possibility that students do not gain adequate skills training. Such a situation is particularly relevant to those undergoing teacher training as they themselves will need these skills to pass onto their students. The respondents who have listed non-compulsory fieldwork are given in Table 5.3 together with information on the fieldtrips offered.

Overall, most institutions offered a variety of fieldwork and where there were non-compulsory trips the skills aspect was covered by a variety of compulsory trips, allowing for students to gain all important experience in the field. However, academics in eight countries (Austria, Czech Republic, Estonia, Hungary, Italy, Portugal, Slovenia and Turkey) also acknowledged that the majority of their field trips were non-compulsory. The responses from the academics in these countries suggest a possible gap in the skill acquisition of students and such an indicative disparity reflects on the aim of the Bologna Declaration in enhancing employability. It is interesting to note the large amount of fieldwork on offer in the Czech Republic (14 trips) yet only one trip was compulsory for those training to become teachers.

5.2.4 Importance Placed on Fieldwork

Academics were asked to respond on the importance of fieldwork to both human and physical geography using a Likert Scale, where selecting 1 equalled unimportant and 5 equalled very important (see section 4.2.1). Overall, it was considered to be more important to physical geography (Figure 5.1). Although there were more human geographers ($n=27$) in the sample compared to physical geographers ($n=22$), 78% of those surveyed placed fieldwork as most important to physical geography compared to the 49% who thought it of high importance to human geography.

It was considered necessary to ascertain whether there was a relationship between the academics' stated subject specialism and their attitude to the importance of fieldwork, i.e. did physical/human geographers consider it of higher importance to their area of geography? In order to look at this result in more depth, questionnaires were categorised, according to the academic's stated subject specialism (Question 1c), into three groups: human geographer, physical geographer and geographer/teacher trainer (where geographer/teacher trainers are considered by nature to be teaching both human and physical geography) and compared to the responses for Question 5 (Figure 5.2).

In all three cases, academics thought fieldwork to be most important to physical geography which leads to the questions whether the academics who thought it less important to their area of geography could teach adequately without the use of fieldwork and if so how would they replace it in their teaching?

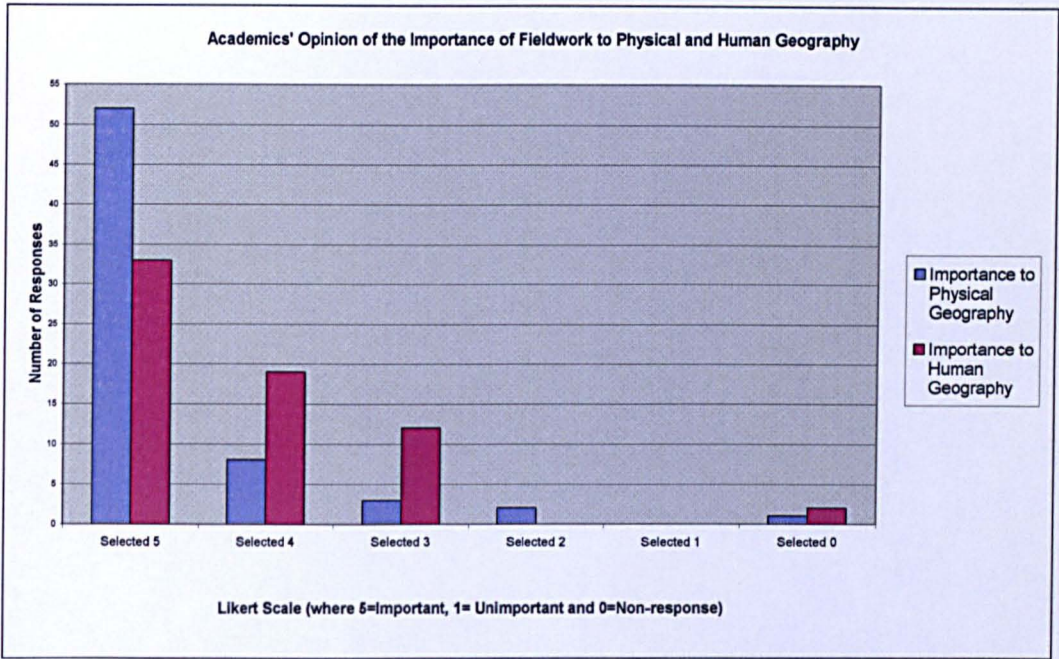


Figure 5.1: Academics' Opinion of the Importance of Fieldwork to Physical and Human Geography

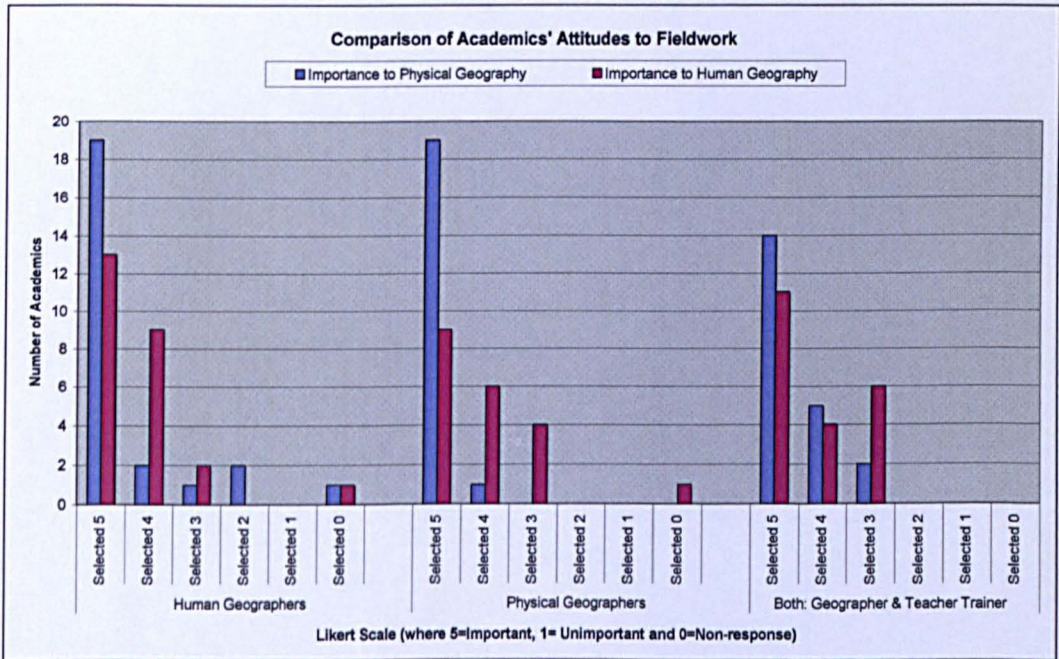


Figure 5.2: Comparison of Academics' Attitudes to Fieldwork

5.2.5 Teaching without Fieldwork

Responses to the question on the topics impossible to teach by text book and class work alone provided 25 specific topics outlined by academics as requiring fieldwork to teach. Moreover in addition, 22.2% of respondents stated ‘all topics’ were impossible to teach without fieldwork. These 25 named topics are given in A3.6 with sampling and research methods coming out on top of the list with 27.8% of responses. The most common topics suggested are mainly physical geography subjects, with the top five responses all being physical geography and the top ten responses including only one human geography topic, that of rural and urban geography. In addition to the skills and training intrinsic to geography one other more extrinsic factor is provided by two respondents, that of intercultural experiences.

Looking further at these results the subject specialisms provided by the academics were divided into three areas; physical geographers, human geographers and geographers (including teacher trainers). These areas were then compared to Question 5 to look at any bias educators had toward their specialism and topics they would require fieldwork to teach (Table 5.3). Whereas the physical geographers clearly think fieldwork is necessary to their teaching, 11 human geographers thought they could teach their subject without fieldwork, which supports the conclusion that fieldwork is considered of most importance to physical geography topics.

Table 5.3: Investigation of Bias towards Subject Specialism

Fieldwork is NOT considered to be important to:					
	Human and Physical	Human	Physical	No response/ none	TOTAL
Type of Geographers					
Geographers	12	6	2	4	24
Human Geographers	13	4	7	4	28
Physical Geographers	5	11	0	4	20
TOTALS	30	21	9	12	72

It was considered that the more experience the educator had (Question 1d) the less they would be able to rely on fieldwork. In order to analyse this hypothesis a comparison was made of the length of time the academics had worked in HE as an

educator and whether there were any areas of geography they felt impossible to teach by textbooks and class work alone (Question 5). This comparison would provide insight into the areas of geography possible to teach without fieldwork.

The academic with the least years' experience was in fact a physical geographer specialising in periglaciation who, upon further prompting in Question 6, stated that in place of fieldwork they use aerial photographic analysis. The academic from the UK, with eight years' experience as a teacher trainer, conceded that although you can teach without fieldwork "effectiveness is seriously diminished if fieldwork is not included" (UK: RA48). The remaining eight academics had a range of experience of between 14 to 45 years and three of these academics made statements regarding the importance of fieldwork. These statements, as with all quoted opinions from data collected are coded as presented in Table 4.5, Coding for Respondents and Participants, and are direct quotes:

"...knowledge would lack the quality" (Slovenia: RA22)

"very important because fieldwork give practical experiences" (Estonia: RA9)

"...fieldwork lends itself particularly well to bringing students in contact with the 'other' in the form of other environments, other cultures, other spaces and places" (UK: RA47).

Of the 72 respondents, ten considered that all areas of geography could be taught by textbook and class work alone. Years of experience in teaching for this group ranged from 3-30 years with a median of 14.5. Conversely, 13 academics thought that geography cannot be taught by textbook and class work alone. Their experience also ranged from 3-30 years with median years in teaching being 13.0. These figures are evenly matched, from which it can be concluded that there is no clear link between the methods and ability of teaching geography, and the academics' years of experience as an educator.

5.2.6 *Substituting Fieldwork*

Thirteen methods of replacing first hand observation and experience were provided by the 69 academics responding to this section. Multimedia (CD, DVD, slides and photographs) came top of this table (A3.7) with 59.7% considering it the best method, 34.7% opting for problem based learning (case studies and role play) and 12.5% for virtual field trips. Only one academic thought there to be no alternative method and this was a physical geographer with 12 years teaching experience from Hungary who stated:

“Nothing. There are no methods and tools substituting the direct experiences.” (Hungary: RA63)

Despite answering the questions set, it was clear that many academics would be uncomfortable with substituting fieldwork:

“All aspects of physical geography relate to real world phenomena, even though their analysis is increasingly taking place in the digital world. Some component of fieldwork will always be essential if the science is to relate to the reality out there it is trying to explain.” (Sweden: RA62)

“You can teach theory in classroom, but if students need skills in collecting new information it is impossible without practice. **Field courses are needed to learn to make geographical observations in a scientific way**, whether it is landscape mapping, urban mapping, planning of field work, practical measurements by instruments, observations by augerings, interviews and so on.” [Respondent’s emphasis] (Denmark: RA5).

However, academics did suggest alternatives such as teaching through their own personal experiences gained by travel, fieldwork and research, for example, as cited by an academic from Italy with 30 years teaching experience:

“My personal experience on personal fieldwork because I visited many countries, or students personal experience.” (Italy: RA58)

Also an Irish academic (RA35) with 5 years' experience conceded that there are few areas impossible to teach without fieldwork, but that the learning experience is greatly enhanced for all elements of geography if fieldwork is involved, aiding deeper learning and facilitating better engagement by the students. This academic outlined that they would make their own virtual learning environment by visiting the field themselves to create their own digital videos, thereby replacing the students' experience with their own.

Further examples include a teacher trainer from Norway with 12 years' experience who outlined that it was not impossible to replace fieldwork in human geography suggesting:

“You have to bring the ‘field’ into the classroom, with good photos, videos, slides and samples.” (Norway: RA21)

A Spanish academic (RA41) with 15 years' experience thought it impossible to teach geography without fieldwork. They stressed the importance of fieldwork by stating it was not possible “to substitute first-hand observation and experience”. The same academic then went on to suggest the potential use of virtual fieldwork suggesting this could “...contrast with reality” although at the same time they conceded that the sensations and experience would not be the same. Even in suggesting alternatives, several academics mentioned that if necessary they would change the type of fieldwork on offer to students, e.g. making short one day or half day visits, cutting out international fieldwork etc. These comments highlighted that to some the very thought of not undertaking any fieldwork was alien to them.

5.2.7 Enjoyment of Fieldwork

The questionnaire asked academics whether they enjoyed fieldwork and required a ‘yes’ or ‘no’ answer: there were responses from all 72 academics: 70 selected ‘yes’ (97.2%), no academics selecting ‘no’ but two academics changed the questionnaire and stated “yes and no” and another “perhaps”. Despite answering ‘yes’ to this question, some academics went on to expand further:

“Mostly yes – but sometime groups are too large or in the case of 1st years the course too repetitive”. (Estonia: RA10)

“Generally yes but demanding and tiring work”. (Hungary: RA64)

“Depends on the composition of the group”. (Hungary: RA68).

Overall, therefore, academics enjoyed taking part in fieldwork, with 38.9% citing that the informal interaction with students was central to this and 31.9% outlined their own personal satisfaction from seeing students experiencing the ‘real’ world and observing theory into practice. Other reasons given included the benefit to learning and teaching, students gaining confidence and skills and allowing teachers to estimate the existing skills of students: a full breakdown is given in A3.8.

5.2.8 Evaluating Fieldwork

Question 9 was “How do you evaluate (measure) the effect of fieldwork on students’ learning?” The aim of this question was to discover the levels of evaluation within fieldwork education, i.e. how academics measure the quality and effectiveness (Biggs and Tang, 2007) of the learning experience. In evaluating teaching, educators are made aware of the levels of thinking skills students reach. Bloom (1956) outlines a hierarchy of verbs which describes levels of thinking used when learning. In this model it is necessary to learn the lower levels before effectively using the skills above (Figure 5.3).

Bloom’s Taxonomy of Learning Domains provides a structure for design, assessment and evaluation of education and can measure the effectiveness of the learning experience (Moore et al., 2008). The model can be used as a checklist through which to ensure teaching is planned to meet the learning objectives and deliver the correct level of development required. Understanding the level students reach during fieldwork courses is not straight forward to gauge. In order to really evaluate learning it is necessary to engage in a variety of methods to fully understand the level reached.

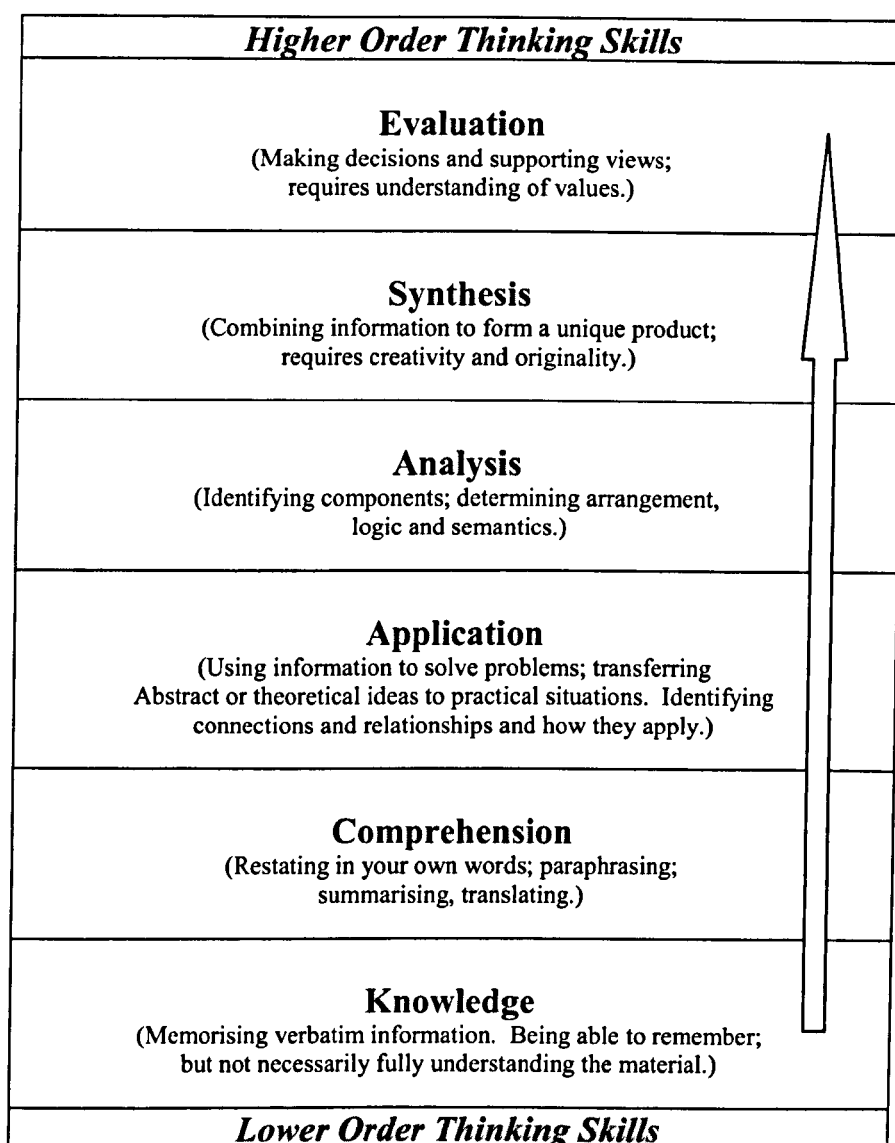


Figure 5.3: Bloom's 1957 Taxonomy of Learning Domains.
Source: Adapted from Moore et al., (2008)

There are several methods which can aid this evaluation. Formative assessment can take place during the fieldwork and this, together with summative assessments, student feedback questionnaires/rating forms, student viva/interview and consultation with other academics teaching within the year group, can provide an overall view as to whether the desired level of learning was reached. Therefore the 'evaluation', referred to in this study's questionnaire, was to identify an understanding of learning and teaching and the methods in place to ensure the skills gained are linked to learning outcomes and subsequent objective evaluation of the course and level of learning gained. In other words, how academics measure how successful a student

has learned what was taught (Biggs and Tory, 2007). Such evaluations would also be part of a teacher's own professional development, in addition to heightening their students' understanding (Biggs and Tory, 2007).

Evaluation can highlight whether:

- Teaching techniques/methods are worthwhile
- The best use is made of resources
- The educator needs further development to teach or their resources need improving
- The skills and knowledge that contribute to recruitment and student retention are provided
- Any need to further invest in training/education. (Moore *et al.*, 2008)

Group work and questioning strategies, such as those developed through fieldwork, develop the ideas of Bloom's taxonomy of questioning and assessment, allowing students to show how much they understand, and offering latitude for students to display their knowledge (Ramsden, 1996). This may also encourage greater individual student responsibility for self-directed learning.

Analysis of the responses showed that 87.5% stated they evaluated fieldwork but when describing how they evaluated, despite the careful wording, most interpreted this to be 'how do you assess fieldwork'. This becomes obvious with 36.1% listing evaluation through field reports, 19.4% through written exam and 16.7% through field exercises and practical tests, other areas such as seminar discussion, oral presentation and project work are also cited (A3.9) which indicates that the question was not understood as meant. The ambiguity of the question set regarding evaluation was not picked up at the pilot stage and could result from the academics used in the pilot being linked to the HERODOT network, and therefore interested in, and knowledgeable about, learning and teaching.

Thorough consideration was given to this question based on the widespread consensus that fieldwork is invaluable to geography education (Chapter 3).

However, this claim is actually very difficult to 'prove' but in a climate of accountability, such as demonstrating value for money, is of increasing pertinence. Whilst many geographers clearly believe that the value of fieldwork exceeds any numerical or quantifiable achievements or grade, this issue ought to encourage European Geographers to endeavour to evaluate student experiences of learning resultant from fieldwork. It was therefore interesting to note that almost without exception (1 academic in the UK) the respondents interpreted 'evaluation' as being the same as summative assessment. This of course could (in responses from academics where English is not their first language) be due to a linguistic issue in translation but may have further links to the understanding and attitudes towards pedagogical theory in relation to geography fieldwork. The actual meaning of the term 'evaluate' on the academic questionnaire was to ask what is it exactly about fieldwork that 'makes' a geographer, something intrinsic or intangible that goes deeper and further than marks gained in an exam?

The only respondent who seemed to understand exactly what the question intended was an academic in the UK (RA47) with 45 years' experience who enjoyed taking part in fieldwork as it was considered to be "...so beneficial to [student] learning in so many ways". This academic stated:

"An excellent question and most difficult to answer. We evaluate each field course/visit but not the effect on learning. We assume they are better team players; better academics; better people but how do you measure this?" (UK: RA47)

Despite the difficulty with this question, there are five specific responses worthy of mention with this regard, their answers being promising yet at the same time only suggestive. Where possible the length of teaching experience of those responding has been included.

"By previous studies and subsequent analysis". (Italy: RA58 - 30 years' experience)

This hints towards the intended question suggesting that some evaluation takes place year on year.

“Students have to map their experiences”. (Netherlands: RA20 - experience not supplied)

An interesting method of student reflection.

“It is very positive. I measure by fieldwork homework and reference in the final exam”. (Spain: RA41 - 15 years’ experience)

If information is not specifically asked for this would actually indicate the influence and memorability of fieldwork observations and experiences.

“As part of college module review process”. (United Kingdom: RA42 - 15 years’ experience)

5.2.9 The Value of Geographical Knowledge

The question to academics regarding the value of geographical knowledge was asked in order to gauge their positionality on the importance they placed on geography, and the usefulness of the knowledge gained from it. With the exception of one cultural geographer with 13 years teaching experience from the UK, who stated “I don’t feel it is especially valuable”, the remaining 69 respondents, had clear and often lengthy thoughts on why geographical knowledge was valuable (A3.10). Understanding the world and its problems was cited by 31.9% of academics to highlight its value, with integrating people and problems at 22.2%. Although responses were categorised in order to analyse the qualitative responses of academics, these categories are remarkably similar, i.e. understanding the world and its problems, understanding environment and society and integrating people and problems are very similar, all but for the choice of words used. Again integrate knowledge of space and place (12.5%) and understand at different levels – regional, national, global (6.9%) are similar things. It is very clear from the responses that these academic geographers surveyed valued geography as a subject and the knowledge gained through its study:

“Because ‘space and place’ matter rather a lot in fact! Other fields of knowledge do not provide an integrated view – space and place often get lost.” (Iceland: RA18)

“Global survival! If the issues such as Global Citizenship, Climate Change and Sustainability are to be seriously tackled then much of the meat of geography is involved.” (Ireland: RA54)

Because it’s different from other disciplines and concentrates on interdisciplinary, consequently helps to understand the world we are living in as one system.” (Lithuania: RA60)

“Because our daily life is full of problems which can be solved with geographical eyes...It gives spatial dimension to the economic, social and natural facts. Its nature with the use of more technical tools makes it able to approach the spatial problems of our time. It is of great importance in the evaluation and analysis of process and change, both in rural and urban environments, in the use of natural resources and in managing territorial and environmental planning. Geographers are the best professionals for the management of interdisciplinary work groups because they have the skills in connecting both humanistic and technical points of view.” (Spain: RA24).

5.2.10 Making a Good Geographer and the Role of Fieldwork

The aspects that academics considered made a good geographer are outlined in A3.11 and centre on understanding and thinking. Understanding the inter-relationship between environment and society and understanding process and change were considered equally important with 16.7%, and these are both things that are normally acquired by students over time, and within the frame of a geography degree, as is theoretical knowledge and good practice (12.5%). The remaining categories considered the way geographers think and the mental attributes considered necessary to become a geographer, for example creative and critical thinking, having a broad interest or viewpoint, being open minded and having an inquiring mind. Spatial thinking and observation (each with 13.9%) are attributes normally associated

with geographers, however both can be taught, and it is usually through fieldwork that both these attributes are gained. The UK Benchmark Statement for Geography (QAA, 2007), states:

“Geographers should demonstrate an awareness of the constitution of places outside their own immediate everyday experience and be aware of the global context of all their learning.” (QAA, 2007)

It is, therefore, worth mentioning that a mere 2.8% recognised having a global view as being an aspect that makes a good geographer. Similarly, only 1.4% considered a good geographer should have a spirit of exploration. According to Smith (2008), there has been a decline in expedition style fieldwork, which could be attributed to a reduction in fieldwork provision at schools and universities. Smith (2008) contends that this lack of experience led to new educators having little confidence in being able to undertake expedition style fieldwork where students embrace the more traditional aspects of exploration. Over time, such a situation could lead to a change in the style of fieldwork undertaken by students.

Given the level of importance Bologna gives to employability skills, and the fact that such skills are obtained through fieldwork, it was surprising to note that no academics included employability skills as being necessary in the making of a good geographer.

How essential academics thought fieldwork was to this process is clear with 36.1% classing fieldwork as vital or fundamental and 19.4% as very important. Only three of the 70 respondents considered fieldwork as ‘quite’ or ‘nominal/not’ important. Whilst two of the three were human geographers, the academic who considered fieldwork to be nominal in the making of a geographer was a Belgian geomorphologist with over 30 years teaching experience who outlines a good geographer to be “Someone who is aware and understands the close relationship between society and environment” (Belgium: RA3).

5.2.11 The Frequency of Fieldwork and Constraints

The final three questions on the questionnaire were put in order to gauge the state of geography fieldwork within each academic's department and/or institution and provide an overview of its importance on a wider scale within Europe.

5.2.11.1 Decisions on the Frequency of Fieldwork

The decisions made with regard to the frequency of fieldwork (A3.13) showed 33.3% of individual educators making this decision with 15.3% stating that department members, as a group, made such decisions. This result was encouraging showing that 48.6% of geography departments had the final say on their fieldwork. 22.2% stated that academic committees had the final say on this, such committees could, of course, also include geography department members. An additional 16.7% outlined such decisions were made by head of faculty or head of department. As such, those with more senior management roles within institutions could be restrained by budget rather than the need to keep fieldwork's centrality to geography education and by the balancing of the whole. This could lead to situations where the value of fieldwork to geography is overlooked by non-geographers in favour of the budgetary concerns for the whole institution. Within this result it should also be noted that whilst 11.1% of academics responded that the curriculum made this decision for them:

“Our curriculum says how many fieldwork days a student has to attend till graduation. The faculty is responsible for the design of the curriculum.”
(Germany: RA14)

Taking this into account it means that some 50% of the decisions made on the frequency of fieldwork are taken from the hands of geography educators (48.6%). An additional consideration is that there were those academics who considered fieldwork bound by government regulations (4.2%) including Poland, Bulgaria and Hungary, for example:

“[decision made by]...the academic council of the Faculty according to the existing regulations” (Hungary: RA6).

Interestingly, 6.9% of academics cited student input as contributing to the decision on the frequency of fieldwork, for example, in Turkey and Greece academics responded by stating that they made this decision together:

“Me and my students decide it together. In fact, their budget and enthusiasm are the main factors planning a fieldwork” (Turkey: RA27)

“The teachers, but not without discussing with students.” (Greece: RA3).

Several responses suggested the question should be not ‘who’ but ‘what’ decides on the frequency of fieldwork and qualitative answers subsequently raised budget and staff availability (11.1%) as concerns. These responses therefore lead to Question 15 (A3.14) of the questionnaire regarding constraints on fieldwork.

5.2.11.2 Constraints on Fieldwork

Assessing the qualitative responses to Question 15 created 18 categories (A3.14). Noticeably heading this table is finance (62.5%) and time/staff availability (34.7%) both of which reflect responses to the previous question regarding the frequency of fieldwork. With regard to finance there are other categories which would also be considered to impact on the provision of fieldwork, i.e. student numbers (12.5%) cost of travel and accommodation (12.5%) and lack of resources/old equipment (8.3%). For example, academics stated:

“The number of students. If you have too many students they cannot hear you and you cannot supervise all of them at the same time. They have to form small groups. In this case it is not easy to find out who does most of the work and why the rest don’t participate as much as you expect them to do.” (Greece: RA17)

“High expenditure on travelling and per diem for large groups of students ... 14 day fieldwork is for 80 geographers.” (Bulgaria:RA6)

“Usually they [academic council of the university] rely on the limited funding and old equipment.” (Bulgaria: RA29)

“Economic constraints principally and relevant and updated equipment that can be expensive.” (Sweden: RA61).

Also cited is the lack of understanding of other academic departments (4.2%) which could include understanding the additional budget needed for fieldwork or clashing with other subject timetables:

“Budgets, availability of teaching staff, lack of understanding from other university departments as to the particular position of fieldwork in geography.” (Denmark: RA51)

“The daily programme of the university (students are not able to leave the main building where lectures take place every day).” (Greece: RA33)

“Full time-table Mon-Fri., so other subjects object to trips on these days. So we usually go on Saturdays. Now students have part-time jobs & resent losing pay most only participate if compulsory and that they gain grades/credits for the trip. Funding.” (Ireland: RA56)

“Sometimes other colleagues do activities the day of the fieldwork and they are also compulsory. And pupils divide into the activities and fieldwork. Then not all of them take profit of the opportunity of going to fieldwork.” (Spain: RA41).

Staff availability/willingness for out-of-hours fieldwork (5.6%) and colleagues' lack of interest (4.2%), required further investigation as to whether the attitude to colleagues was linked to the length of time as an academic geographer, and if there was any correlation between this. Revisiting the qualitative results for Question 15 and individual academics information provide in Question 1d, all those showing concerns had between five and 12 years' experience teaching geography, it can therefore be concluded that the comments were not made lightly and without substantial teaching/fieldwork experience. Whilst these responses were not highlighted as major obstacles, they remain worthy of note:

“Too many students on each trip – we need more staff to create smaller groups on fieldtrips.” (Germany: RA13 - 7 years’ experience)

“Budgetary. Staff availability. Staff willingness to participate after hours.” (Ireland: RA34 - 5 years’ experience)

“Many colleagues are more interested in theoretical issues, only a few of us take the students on fieldwork.” (Belgium: RA5 - 12 years’ experience)

“Costs. Time. Equipment. Expertise...” (UK: RA45 - 11 years’ experience).

What could be considered the more ‘contemporary’ issues regarding geography fieldwork, i.e. health and safety and student behaviour were discussed by six of the 72 academics surveyed. For example, one academic from Ireland, stated:

“Large numbers of students, e.g. 400 students year 1 and only 12 staff has meant no fieldwork in that year, except local/campus short exercises. Student availability – so many have work/family commitments. Health and Safety issues. Concern about student behaviour on residential trips – not a major issue so far, but...” (Ireland: RA54).

Another lengthy response worthy of comment is from a UK academic with 18 years teaching experience who listed many of the key findings and raised the further issue of two-tier students and the divide between the relatively wealthy students and those struggling to exist on student loans and grants or with family and work commitments:

“The big one is the obvious one – financial difficulties. It is something that is becoming increasingly significant and we are aware of a gap emerging between relatively ‘rich’ (i.e. those that can afford long haul) and the relatively ‘poor’ students. As a result we have offered a short haul destination in second year to cater for the latter group. Another growing factor is the different type of student that is now being educated (single parents/mature students/mothers with family responsibilities) and the

international dimension is simply not convenient for them. Equally, the work demands placed on the students means that taking extended time off from work can have serious repercussions on them. The constraint is that ultimately they may vote with their feet and not attend and out of necessity field courses may become redundant (in spite of our educational protestations to the contrary).” (UK: RA44)

5.2.11.3 Fieldwork in the Last Ten Years

In Questions 16 and 17 the academic respondents were asked to comment on fieldwork over the last ten years; firstly by stating whether there had been more or less fieldwork during this period and then expanding on this by providing the reasons why (A3.15). Those respondents selecting ‘less’ and ‘much less’ totalling 37.5% compared to ‘more’ and ‘much more’ totalling 33.4% and the overall figure for those considering fieldwork has remained at the same level being 29.2%. This highlights that over 66% have seen fieldwork stay the same or decrease, with very little increase in comparison despite the increasing level of importance to skill acquisition and geography as a discipline. Therefore, the percentage figures are similarly split between those undertaking more/much more/the same (62.7%) and those undertaking less/much less/the same (66.7%).

Many of the constraints, outlined in section 5.12.2, are twinned to this section of responses, for example funding, time, staff availability, student numbers and conflict with other subjects are included as reasons for the loss of fieldwork in geography departments. Only two of 68 academics expanding on the frequency of their fieldwork discussed the time and resources attached to compliance with the Bologna Declaration as a reason for undertaking less fieldwork, with one academic outlining the issue of labour market pressure in requiring actual work experience over fieldwork skills. Of those undertaking the same amount of fieldwork; this is related to a standard consistency within their courses and that bureaucracy will not allow for an increase in fieldwork but rather there is a constant need to legitimise it at the current level.

“We have fought tooth and nail to keep it in our curriculum and to-date we have been able to get university subvention to help subsidise the cost of the trips. Whether this will continue is the perennial question that we face.” (UK: RA44).

It is interesting to note that only two academics mentioned Bologna in relation to the amount of fieldwork undertaken. At the time of this study, European higher education was undergoing a major transition in conforming to the Bologna Process. Questions should be asked, therefore, as to why academics are not engaging and considering compliance when Bologna is the frame in which they are working? The quality of fieldwork must also be comparable in order to create successful student mobility, which indicates that despite the many official meetings and reports leading to the EHEA, geography academics are not considering how their fieldwork fits into this framework. Ultimately, this raises questions about the dissemination of Bologna to those academics working at the ‘ground level’ when their senior management are engaged in the process through the European Universities Association.

The motivation of staff and their persistence in recognising the learning and teaching benefits of fieldwork (9.7%) are central to departments showing an increase in fieldwork. Where successful programmes are in place they lead to better funding and equipment (5.6%). Added to this the promotion of geography fieldwork within the degree course is seen as a positive with 4.2% commenting on this benefit.

Four of the 68 academics considered they had undertaken ‘much more’ fieldwork in the past 10 years. Reasons given for this include:

“Evaluation of fieldwork proves the necessity of it.” (Netherlands: RA20)

“I suppose this is down to me looking to attract students in a declining market. It also reflects my passion for this form of learning.” (UK: RA47).

However, one academic in Poland, although stating they had undertaken much more fieldwork in the last 10 years, outlines a current lack in funds which will change the level of fieldwork they are able to provide:

“Now our institute have not enough funds.” (Poland: RA36).

Having analysed both the quantitative and qualitative responses provided by academics to the questionnaire, it is clear that there are many issues impacting on the state of geography fieldwork in Europe. Further comparisons of data have been necessary to draw out the position of fieldwork as a method of teaching and learning across European geography departments. Whilst the academic questionnaire focuses on the teaching aspects of fieldwork and its place within university departments, the questionnaire issued to students will address the learning associated with fieldwork. The results of the student questionnaire are presented in the following section.

5.3 Student Perspectives

The purpose of the questionnaire directed to the European geography students was to gain a perspective on and understanding of their thoughts on fieldwork, to discover what learning took place, which areas were visited and what benefits students derived from their fieldwork. Learning through fieldwork is considered by many academics (Lonergan & Andresen, 1988; Gold, 1991; Kent *et al.*, 1997; Naim, 2005; Fuller *et al.*, 2006; Hope, 2009; Fuller, 2011) to be enjoyable and effective, central to geography and essential in higher education degree courses. It is through fieldwork that theoretical concepts taught in the classroom come alive in a practical environment, ultimately resulting in students becoming qualified geographers (Kent *et al.*, 1997). Despite its importance to geography, from an education standpoint, its benefits can be seen as subjective with little evidence as to why it works as a method of learning (Nundy, 1999; Stokes *et al.*, 2011).

Questions were therefore designed to go some way in researching the benefits of geography fieldwork to students across Europe, why it has a central role in geography education and what importance is placed on fieldwork by both students and their institutions. Students provided information on the type of fieldwork undertaken, whether it was regional, national or international and how long each field trip was. This provided information on the amount of fieldwork being undertaken by students and the variety of sites covered (Questions 2 and 3), highlighting the amount of training given and commitment of their institution to

fieldwork. The cost of fieldwork (Question 4) has been a focus of academic writing as student life-styles change; work and family commitments make long-term residential fieldtrips inconvenient and expensive (Pawson & Teather, 2002) which is considered particularly true where student tuition fees have been introduced (Chalkley, 1998). Gauging the benefits of fieldwork to students' studies (Question 5) and their perceived learning (Question 6) will highlight its effectiveness (Fuller *et al.*, 2006) and place in higher education geography.

One of the key elements of the Bologna Process, in addition to mobility, is enhancing employability (European Commission, 2000) and this is reflected in the Dublin Descriptors (Bologna Process, 2009c; Trowler, 2004): geography fieldwork is seen as a way of providing the generic skills linked to this, i.e. teamwork, communication, etc. Students are therefore asked specifically about the skills they have gained from fieldwork (Question 7) and this in turn will be compared to the TUNING survey carried out by a working group of professional academic geographers (Wall and Donert, 2004) as to the subject specific and generic skills students should gain from a geography degree (Tables 2.6 and 2.7). The enjoyment of fieldwork will be reflected upon (Questions 8 and 9) as this will be directly compared to the answers from academic geographers, providing insight into the subjective reasons behind their responses.

This chapter presents the results of data gathered and reports them in order of the questions set (Table 5.4); tables of results have been created for each question and can be found at Appendix 5 (A5). A total of 340 questionnaires were completed and received from European geography students. The percentages expressed in these tables, and subsequently this chapter, may not always total 100 due to rounding and the qualitative nature of the answers given, as students could give more than one answer to some questions the totals can therefore exceed 340. There were some non-responses to the questions set and these are highlighted where necessary in the tables.

Table 5.4: Questions to Students

Question Number	Question
Q1a	Country
Q1b	Institution
Q1c	Level of study: Bachelors – Masters - PhD
Q1d	Year of study: 1 – 2 – 3 – 4 - 5
Q2	My field trips were: Regional – National - International
Q3	Fieldwork in the last 12 months: Place visited – Number of days - costs
Q4	Does your university help you pay the cost?: Yes - No
Q5	How important is fieldwork to your studies and why?
Q6	How does fieldwork help your learning?
Q7	What skills do you gain from fieldwork?
Q8	Do you enjoy fieldwork?: Yes - No
Q9	Why?

5.3.1 Countries and Universities Represented by Students

The students that responded came from 45 universities in 27 countries and those questioned are linked to the academics surveyed; each academic being asked to distribute six questionnaires to their students. Overall, the majority of countries (20) provided between five and 14 student questionnaires. Poland and Hungary provided 19 and 21 questionnaires respectively; Poland had representation from three institutions and Hungary two. The academics from Spain were particularly interested in the responses to the questionnaire and presented it to groups undertaking fieldwork at the time; between the two universities 29 responses were received. Whilst this was not always possible, there is representation from each country (A5.1). Iceland, Norway and Slovakia only provided one student questionnaire, each corresponding to one academic response from these countries. Lithuania, despite the language issues raised by the academic responding, provided three student questionnaires. The greatest imbalance in the survey was with the UK. Students from four UK universities responded and three groups of students were surveyed whilst undertaking fieldwork, thereby providing 18, 38 and 41 responses. All responses were considered to be relevant whether it be one student in Iceland or 98 students in the UK, an element of feedback was necessary from every country in order to provide a snap shot of European geography fieldwork.

5.3.2 Level of Study

A breakdown of the level and year of study for the respondents is given at A5.2. The highest proportion were studying at Bachelor's level (220 students), with 161 of those in study years two and three. At Master's level 114 students responded with the addition of six PhD students. As the Bologna Process aims to bring into line degree courses throughout Europe initiating a 3+2+3 system (three years Bachelor's degree; two years Master's degree and three years for a PhD) it is interesting to note from the student survey that the Bachelor degree students responding listed course years 1-7; Master's degree students 1-10 years and PhD students 1-6 years, indicating a significant gap in what would be expected of degrees conforming to Bologna. The length of some bachelor's and master's degree supports the fact that, in some European countries, degrees have in the past (and, indeed, at the time of this study), stretched out over many years.

5.3.3 Nature of Fieldwork Undertaken

Questions 2, 3 and 4 centred on the nature of the fieldwork students took part in; whether it was regional, national or international (A5.3); the number of fieldtrips over the last 12 months (A5.4); the number of days' duration and whether they received any help towards the cost of fieldwork (A5.5).

5.3.3.1 Type of Fieldwork

All 340 respondents replied to this question: 55.8% had undertaken regional fieldwork, 50.3% national fieldwork and 38.8% international fieldwork. As many students completed more than one field course with a mix of regional, national and international, these figures were further disaggregated in order to show the number of students who undertook only one type of fieldwork, i.e. regional, national or international. The results show that 23.2% of students carried out only regional fieldwork, 22.9% only national fieldwork and 18.2% only international fieldwork. Overall regional fieldwork was slightly more popular (by less than 1%) than national fieldwork.

It is worthy of note that 18.2% of students had only undertaken international fieldwork. To consider this in more depth Table 5.5 provides a comparison between the respondents in each country and the number of students undertaking international fieldwork. This enables further analysis highlighting any split in the traditional 'eastern'/'western' European countries. Of the 27 countries surveyed nine would be considered 'eastern' European countries. Only four of these undertook international fieldwork: Hungary, Poland, Romania and Slovenia. Seven of the countries showed in Table 5.5 had no students undertaking international fieldwork whatsoever. It should, however, be noted that in analysing these data there are different numbers of students in each country and therefore it cannot provide a complete picture.

Examining these data closely reveals that Spain, despite receiving 29 student responses, has only one student undertaking international fieldwork compared to Hungary where almost half of those responding had undertaken fieldwork of this nature. Of course, one important fact should be noted, which is the distance of institutions from borders to other European countries. This will impact on the costs and time travelling from country to country.

Table 5.5: Comparison of Students Undertaking International Fieldwork

Country	Number of respondents from each country (n=340)	Number of students undertaking international fieldwork
Austria	13	3
Belgium	6	5
Bulgaria	7	0
Czech Republic	8	0
Denmark	7	4
Estonia	5	0
Finland	5	2
France	10	5
Germany	13	8
Greece	6	1
Hungary	21	10
Iceland	1	1
Ireland	9	3
Italy	8	8
Lithuania	3	0
Malta	10	0
Netherlands	10	5
Norway	1	1
Poland	19	1
Portugal	10	0
Romania	6	4
Slovakia	1	0
Slovenia	14	6
Spain	29	1
Sweden	9	1
Turkey	11	1
United Kingdom	98	54
Total	340	124

5.3.3.2 Fieldwork in the Last 12 Months

The amount of fieldwork undertaken by students in the last 12 months was considered useful in indicating the health of fieldwork within their institutions. Overall, the figures show that the majority of students undertook between one and three trips (94.7%). Of these 38.8% had one fieldtrip; 27.7% had two fieldtrips and 31.2% had three field trips. In order to investigate any possible correlation between the year of study and the number of fieldtrips taken, a table was produced for comparison (Table 5.6). This table shows that most fieldwork takes place in years two and three, which would be in line with a three-year undergraduate degree, where the first year provides overarching teaching. In the second and third years students are able to opt for modules and follow their interests more closely.

Students had indicated more one-day fieldtrips than any other duration and therefore the length of field trips was considered. The question set for them was aimed to indicate the place visited, for how many days and at what cost. These data allowed for a comparison to measure the extent of fieldwork undertaken in days (Table 5.7). In all, 229 students took one day fieldtrips, 95 students undertook one week of fieldwork and only six students two weeks. Surprisingly, given the move towards Bologna, only one student indicated fieldwork as being part of a student exchange covering a whole semester, even more so was the fact that this French student's exchange was not in another EU country but in the USA.

To create a clear picture as to the extent of fieldwork across Europe a comparison has been made between the countries surveyed and the number of days fieldwork students have undertaken (Table 5.8). Here Lithuania have the longest average fieldtrips (14.3 days) with Italy second (13.3 days). Malta is bottom of this table with 1.3 days but given the size of the country and the fact that there is only one university and a small population this could be expected. Spain, however, with 1.6 days is considerably lower than other European countries. The median of all trips undertaken by students is 7.2, which is representative of the UK.

Table 5.6: Year of Study Compared to Number of Field Trips

Year of Study Cited	Number field trips in last 12 months	Cited by number of students
1	1	11
	2	27
	3	6
	4	1
	5	1
	12	1
2	0	2
	1	60
	2	21
	3	19
	5	1
3	0	2
	1	20
	2	19
	3	42
	5	1
	8	1
4	0	1
	1	18
	2	18
	3	21
	4	2
	12	1
5	0	2
	1	14
	2	2
	3	15
6	0	2
	1	2
	2	2
7	1	2
8	3	1
9	1	1
10	1	1
TOTAL RESPONSES		n=340
0 = No response given to this question		

Table 5.7: Length of Field Trips in Number of Days

From 658 fieldtrips cited	
Length of fieldtrip in days	Number of students responding
0.5	2
1	229
2	31
3	52
4	49
5	84
6	25
7	95
8	19
9	17
10	24
12	4
14	6
15	6
21	2
28	1
30	3
90	1
120	1
150	1
240	1
Whole semester exchange	1
No response to whole of this section = 9 No response to number days only = 13	

Table 5.8: Average Number of Fieldwork Days per Country per Student

Country	Number Students Responding	Number of Days Fieldwork	Average (number of days divided by number students*)
Austria	13	86	6.6
Belgium	6	42	7.0
Bulgaria	7	48	6.8
Czech Republic	8	101	12.6
Denmark	7	99	14.1
Estonia	5	73	14.6
Finland	5	22	4.4
France	10	83	8.3
Germany	13	49	3.8
Greece	6	48	8.0
Hungary	21	128	6.1
Iceland	11	11	1.0
Ireland	9	50	5.5
Italy	8	240	30.0
Lithuania	3	43	14.3
Malta	10	27	2.7
Netherlands	10	61	6.1
Norway	1	15	15
Poland	19	220	11.6
Portugal	10	81	8.1
Romania	6	67	11.2
Slovakia	1	0	0.0
Slovenia	14	201	14.3
Spain	29	126	4.3
Sweden	9	61	7.6
Turkey	11	67	6.1
United Kingdom	98	703	7.2
Median - days of fieldwork = 7.2 days.			
*n = 340			

5.3.3.3 Help Towards the Cost of Fieldwork

In order to examine the financial implications to students undertaking fieldwork, some level of understanding as to the costs incurred was considered relevant. The results from the questionnaire are shown in A5.5 which is calculated to show the total number of fieldtrips undertaken by students and the percentage of those trips subsidised by the intuitions. The amount of help provided by institutions could also indicate the importance or understanding the institution as a whole has about the

benefits of fieldwork. There were three non-responses to this section from the 340 questionnaires returned; and two students who didn't know whether they received help towards their costs. Whilst in some countries all students were helped financially with their fieldwork (e.g. Bulgaria, Czech Republic, Iceland, Sweden) other received no help at all (Finland, France, Slovakia).

To discover the financial cost of fieldwork to students across Europe all respondents who had provided the costs of their fieldwork were looked at more closely. It was considered that in creating a mean, where there were too many zero costs, would not provide adequate insight into the situation. Therefore, a mean was created from the students who did provide such information and these responses were then converted, where necessary, from local currency to Euros. An additional aspect to this calculation was that those trips for periods longer than two weeks, and therefore excessively high in comparison to other students from the same country, were omitted. Results from this calculation of mean are given in Table 5.10 and provide a comparison of the average costs of fieldwork per European country. Italian students paid the highest for fieldwork, however, on closer examination of the responses, these students travelled on international fieldwork for two week durations and at a cost of over 1,000 euro per trip. Greece had zero costs for fieldwork for all students responding and Slovakia only had one student responding to the questionnaire and therefore little value can be gained from this figure. The situation in Malta is unique in that the geology and settlement on the island allows for most fieldwork topics to be covered and the size of the island means there is little travel involved unless visiting the islands by ferry, e.g. Gozo. Maltese fieldwork is therefore of minimal cost, which is reflected in the small amount students pay towards their fieldwork. The cost of fieldwork to UK students (£231.01) can be compared to a survey of UK fieldwork costs undertaken in 1990-1991 where the average cost was then £54 per student per year (Gray, 1993). The average cost of fieldwork for Europe based on Table 5.9 is €134.80 and the median €96.45. These figures can only be used as a guide as they do not take into account the individual countries' cost of living.

Table 5.9: Cost of Fieldwork per Country
 (Exchange rate calculated on 03/08/10)
 Source: XE On-line Currency Converter <http://www.xe.com/ucc/>

Country	Mean Cost in Euros
Austria	181.82
Belgium	136.18
Bulgaria	52.50
Czech Republic	52.17
Denmark	166.22
Estonia	25.00
Finland	10.00
France	228.75
Germany	128.03
Greece	0.00
Hungary	51.63
Iceland	431.00
Ireland	306.55
Italy	656.25
Lithuania	105.00
Malta	3.40
Netherlands	234.82
Norway	184.00
Poland	64.03
Portugal	26.81
Romania	53.00
Slovakia	0.00
Slovenia	38.42
Spain	71.90
Sweden	96.45
Turkey	104.55
United Kingdom	231.01

Elements of comments (not direct quotes) made by some students regarding financial help available, highlight the differences in support and included:

Reduced costs of food as a student. (Finland: RS33)

Help available if needed but local fieldtrips not covered. (Germany: RS4)

Subsidy is available. (Italy: RS305)

Use own transport and pay other costs such as ferries. Some receive a maintenance grant which allows for fieldwork. (Malta: RS53)

Pay own travel and food but accommodation covered. (Poland: RS152)

Very little help. (Slovenia: RS165)

Regarding international fieldwork, one student outlined that there was a discounted price and that in addition they personally received extra help because of their own financial circumstances. (UK: RS237).

5.3.4 Fieldwork and Learning

In order to understand how students perceive learning through fieldwork, their questionnaire asked how important they thought fieldwork was to their studies and how it helps with learning. Interpretation of these responses will lead to an understanding of the place of fieldwork in their learning experience.

5.3.4.1 Importance of Fieldwork to Studies

Of the 338 responses to this section, in which students were asked to comment on how important they thought fieldwork was to their studies, the majority classed fieldwork as very important (43.5%) and important (17.6%) whilst 9.1% considered this method of learning to be vital (A5.6).

These results show conclusively that students perceive fieldwork as central to their studies. Upon further questioning, the qualitative responses were categorised into

13 reasons for the importance of its role in studies. Analysis of these reasons shows that 60.6% of students consider fieldwork's importance to their studies to be that of providing 'real world' experience; of converting theory taught in the classroom into practice in the field:

"...fieldwork is very important...knowledge gained through experience is more important than theory studied at school. It's useless to have knowledge about theory without knowing how to use it in practice." (Estonia: RS27)

"The visit has enhanced and enriched the teaching. It was much better than theory studies..." (France: RS133)

"...fieldworks are very important it makes it possible to use the knowledge from the courses in real life and in situations that could be found within the jobs that belong to geography."
(Iceland: RS291).

In response to the question set on the importance of fieldwork to studies only 0.6% of students considered fieldwork important because it developed their independent thinking. Given the current skills agenda within Bologna, a mere 5.3% of students felt fieldwork helped their studies by providing them with new skills and knowledge. Furthermore, most of the comments on skill acquisition came from students in the UK and in the rest of Europe only two students commented:

"Very important, gives a better of ideas of work skills." (UK: RS248)

"Fieldwork is very important for my study. I can gain lot of new skills. Fieldwork helps me applying theoretical knowledge". (Czech Republic: RS20).

In addition, 7.9% thought fieldwork only to be important to their studies as it was linked to their course assessment.

“Obligatory to pass the semester, but not of that big relevance for my studies in general.” (Denmark: RS290)

“It’s part of the requirement for the final exams.” (Germany: RS48).

Comments highlighted understanding the country in which you live (1.8%) and experiencing travel (3.8%) in particular different cultures and viewpoints (5.6%). The social aspects were also picked up on with 5.3% citing this as an important aspect to their studies.

Only 3% of respondents cited fieldwork as being just ‘useful’ or ‘not important’:

“The specific fieldwork wasn’t that important for my general study. As a consequence of a lack of alternatives, I choose the fieldwork that was the cheapest.” (Denmark: RS289).

5.3.4.2 How Fieldwork Helps with Learning

Student responses to the question of how fieldwork helps with their learning (Table A5.7) mirrored the previous question to some extent, in that theory into practice was cited by 42.9% of students, linked to this is the theme of understanding processes at 17.9%. Some 17.9% of students clearly understood that experience in the field provided clearer understanding and deeper learning:

“Things learned by fieldwork remain very long in your head.” (Austria: RS6)

“...the knowledge and practice gained this way is likely to stay in memory longer.” (Czech Republic: RS22)

“It is easier to understand and remember the phenomena when you see them ‘in action’. It deepens understanding.” (Finland: RS36)

“It helps your learning of the subject or topic to its full extent and in depth. Especially for visual learners and kinaesthetic learners.” (UK: RS190).

The development of, and improvement in, existing skills is given by 12.1% of students and can be linked to providing self-confidence and motivation (3.2%). Aspects of learning that would normally be associated with educators are cited by a few students for example highlighting that fieldwork allows for creative thinking and independent learning (1.8%).

5.3.5 Fieldwork and Skills

Having discussed in Chapter 3 the linking of the higher education geography curriculum to skills attainment through the process of 'TUNING', the direct question set with regard to the gaining of skills through fieldwork was pertinent to the state of contemporary European higher education geography, particularly in light of Bologna. How students perceive the skills they gain could indicate the success of TUNING when compared to the suggested outcomes for geography students (Table 3.5 and 3.6). In making such a comparison therefore, the responses provided by students have been categorised in line with the TUNING method, i.e. subject specific and generic outcomes. Here the qualitative comments have been categorised into practical outcomes and subject specific outcomes of fieldwork (A5.8): non-responses to this question totalled ten.

In all, 27.6% of respondents cited subject specific field techniques, those which would be considered 'practical' in nature for example experience of mapping, using GPS and other field equipment. With regard to those students training to become teachers the practical aspect of fieldwork for them was considered to be gaining teaching skills.

“Acquiring field practices, applying field tools and equipment is very important in our profession.” (Hungary: RS309)

“The most important skills is learning to handle situations with young people which contains education, intervene in problematic situations, lead through areas of responsibility, motivation, etc.” (Austria: RS8).

The skills of observation and interpretation, commonly associated with geography, came out top of the subject specific skills with 25% of students, followed by data collection and research methods at 14.1%. Whereas putting theory into practice had been extremely important to student in the previous two questions, this aspect was only considered to be a skill by 5.9% of those responding here:

“A deeper sense of observing details, that otherwise would have been lost. It can strengthen the students analytical observations and the ability to quickly reflect on how the actual theme is subsists”. (Denmark: RS289)

“The ability to be observant in my environment as usually I would have looked to a book first to see what I should see. The ability to work as a team with a wide range of different people and not just my friends. The ability to analyse the landscape and to realise the meanings of things”. (Ireland: RS144)

“Fieldwork taught me how to make a note inside the bus :-) And also taught me how to look and what can I see around me”. (Poland: RS158).

Of the generic skills which would aid future employability, 15.9% of students cited teamwork, which is top of this list of skills, followed by critical, analytical and reflecting thinking at 12.4%. Communication, presentation and social skills are given by 26.4% of students as important skills.

“Teamwork, better imagination, how to use my senses, learning by doing.”
(Germany: RS43)

“I learned talking and communicating with people, other students and teachers.” (Estonia: RS29).

5.3.6 Student Enjoyment of Fieldwork

Discovering if students enjoy the fieldwork they take part in and the reasons why would provide an insight into the elements of their teaching that were considered

important to them (A5.9). Just four students did not respond to the question as to whether they enjoyed fieldwork, two made no comment at all, one student stated 'no' and one commented 'yes and no', the reasons given being:

“Because the destinations didn't meet my goals.” (Germany: RS40)

“I ticked both because I not always enjoy the hard labour on fieldtrips. On the other hand, it often leaves memorable moments and hard earned insights in field/cases!” (Denmark: RS287)

One student, although stating they enjoyed fieldwork, complained that it was ineffectual stating:

“Sometimes it was too long lasting, uneffective. This was due to bad organisation of field courses. Important skills could have been taught in shorter time.” (Finland: RS35)

Unquestionably therefore, European geography students enjoy fieldwork within their studies (98.8% - A5.9) and offer a variety of reasons as to why. The skills agenda falls to the bottom of this table with teamwork (4.1%), development of skills (3.8%), whilst 8.8% admit they enjoy the different learning style. The most popular learning experience/ outcome in this section is that fieldwork provides seeing theory in practice (29.1%). However, the reason that students enjoy their fieldwork is given by 32.9% of respondents to be the social aspect of fieldwork – it is fun, exciting and students meet new people in addition to bonding with their peers and lecturers:

“Socialising, being outside, seeing the link between theory and reality”.
(Belgium: RS13)

“The best thing in fieldwork was the 'friendmaking'. It is important, because we (students of geography) are friends now, but before it we were only students in the same programme.” (Czech Republic: RS19)

“Because I was there with my friends. We got to know each other much better. Also it was interesting to spend so much time with my lecturers. I liked that the studying environment wasn't academic.” (Estonia: RS27)

“Because we are out in the nature, visiting beautiful places and having fun.” (Bulgaria: RS118)

“The easiest way to acquire knowledge, develop skills and have fun at the same time since there are no strict rules that limiting our creativity and social interaction, from ideas to happy moment with friends. In addition the participation in a team-work fortifies the feelings of being responsible in something important.” (Greece: RS137)

“Loved every minute, fun way of learning. I got to explore places I've never been, while learning and having fun. Really did learn stuff and I loved seeing elements of my study come to life in the landscape. I also got an opportunity to meet a wide range of new people in my course, in the postgraduate courses and the staff. Trip of a life time would totally do it again!” (Ireland: RS144)

“The atmosphere is very relaxed; better companionship; putting your learning into practice.” (Spain: RS178).

The claim that fieldwork enriches science, study and research was cited by 4.4% of students and is worthy of note from a learning and teaching perspective, e.g.:

“Because I think my learning has been enriched thanks to fieldwork.” (Spain: RS91).

Finally, two more quotes from students regarding the enjoyment of fieldwork are enlightening, particularly when compared to the academic viewpoint on the centrality of fieldwork to geography education and the issue of funding it:

“Because whatever the trip there will always be something interesting in it for me once it has a geographical aspect to it. Also I do not want to gain a degree in geography and not have some ideal of the practical side and skills involved.” (Ireland: RS293)

“It is not so dry information it is highly inspiring to gain real skills for future/occupational use! More funds for departments to be able to organise field courses with up-to-date tools, methods, teachers. More fieldwork!” (Finland: RS33).

From the responses to the student survey it is has emerged that the quantity and nature of fieldwork undertaken by geography students varies considerably between countries. Students enjoy fieldwork as a method of learning and acknowledge the benefits gained including the skill acquisition. Whilst this chapter has so far addressed the responses received from both academics and students, further comparisons between the two surveys will provide additional insights into the current state of geography in Europe and the impact on learning and teaching. The following section will discuss these comparisons.

5.4 Further Data Analysis and Comparisons

Academic and student responses to the questionnaires have been presented in this chapter. There were, however, some areas of data collected from both questionnaires and additional information sources (e.g. focus groups etc.), which required analysis and comparison are outlined here.

5.4.1 Comparison of Academic and Student Perspectives

A comparison of what academics considered to be the most important aspects of fieldwork in the making of a geographer (A3.12) and how important students thought fieldwork to be to their studies (A5.6) was made. In both cases seeing theory in practice had the highest responses from both academics (42.9%) and students (22.2%). From the student perspective, skills were considered as an outcome of learning through fieldwork (12.1%) whereas academics did not cite skill acquisition

as necessary to become a geographer. Academics mentioned experimentation (12.5%) and becoming a 'professional' (4.2%) and the latter could be seen to indicate that the so called skills agenda, central in contemporary European higher education, is not considered to be important to the making of a geographer. Whether this is because so few academics place importance on Bologna within their teaching is not clear, but would imply a lack of concern or knowledge with regard to the outcomes of achieving the European Higher Education Area, and the introduction of Europe-wide comparable degrees, which would include the teaching and learning outcomes of fieldwork. Overall students listed those aspects reflected in educational theory, i.e. deep learning, creative thinking and independent learning (totalling 19.7% for these categories), compared to just 7.9% of academics stating that fieldwork challenges students and improves critical thinking.

Expanding on the analysis in this area, an additional comparison was made to the academics' viewpoints outlined in A3.12 (importance of fieldwork to making a geographer) and the student responses with regard to how important they considered fieldwork to their studies (A5.6). Again in this case experiencing theory in practice headed the tables of categories with 60.6% of students and 22.2% of academics. However, where academics gave real world experience (17.7%) as an essential aspect of fieldwork in becoming a geographer, students outlined understanding different cultures and viewpoints, and experiencing travel and learning about their own countries (10.6%). Whilst 7.9% of academics considered fieldwork to improve critical thinking only 1.2% of student surveyed cited the development of thinking as important to their studies.

Overall, in the qualitative responses provided by academics regarding the importance of fieldwork there was little mention of the skills educational theory purports that experiential learning provides. The only skills mentioned by academics that link to the TUNING Survey were given as understanding the relationship between physical and human environments, spatial and critical thinking. In light of the European Commission's TUNING Surveys originally initiated in 2000, students were asked specifically in their questionnaire about the skills they considered were gained through fieldwork. This enabled the students' responses to be matched to the subject specific and generic lists of skills prepared through the TUNING of geography

carried out in 2003 and 2004 by a working group of professional geography academics (Tables 2.6 and 2.7).

Of the subject specific competences outlined in Table 2.6 students mentioned most of these in one way or another with the exception of:

“Draw knowledge, understanding and diversity of approaches from other disciplines and apply them in a geographical context”

The outcome of this competence could be best described as working in an interdisciplinary manner. This would indicate a lack of fieldwork where students are in a position to work with those from other disciplines, and that interdisciplinary research is not the norm.

From the students’ perspective the TUNING competences lacked the following categories:

Understanding local cultures and people

Putting theory into practice

Looking at the bigger picture (local, national, global)

Gaining respect for nature and the environment.

Examples of students’ comments with regard to these missing categories are presented below:

“It’s relevant to get to know other cultures, other life styles and traditions of other countries.” (Italy: RS299)

“One learns the culture, heritages, languages and histories of other countries.” (Ireland: RS142)

“It help me to observation of people to learn their languages, their folklore and they social cultures.” (Poland: RS164)

“Helps us link the theory to real life...” (Belgium: RS13)

“I think that is really useful because we can see theory in reality.” (Czech Republic: RS24)

“...I find out how the theory works in practice.” (Slovenia: RS37)

“Understand interdependencies between local, national, global issues.” (Denmark: RS288)

“...gives global overview.” (Czech Republic: RS21)

“If you think global you’ll realise that without fieldwork experience your work (theory) is without any basis.” (Romania: RS 75)

“I can better realise rules of nature and recognise, why these things in nature are...” (Czech Republic: RS23)

“To see the nature as a whole. To notice different features of nature at the same time.” (Finland: RS36)

“I respect the nature and I try to protect it.” (Slovenia: RS86).

Putting the theory learnt into practice could be considered specific to fieldwork. This element is constantly brought out through student responses. It is clearly considered to be a very important aspect to student learning and is gained primarily through fieldwork. However, the remaining three categories shown above are more likely an indication of why students choose to study geography. Understanding cultures and people refers to travel and experiencing different places; the bigger pictures i.e. sustainability, globalisation and respect for nature and the environment are key aspects of geography education in schools and in the case of sustainability and environment constantly under discussion in the media.

The generic outcomes categorised from student responses all appear on the TUNING list of generic competences (Table 2.7) albeit in different wording. The TUNING of

generic competences, as drawn up by the academic working group, was worded with greater depth and understanding of the discipline, which is only to be expected, and includes skills over and above those provided by the student responses. This implies that students are very aware of the skills gained through fieldwork and in turn the higher education academics in Europe have provided a succinct list of competences, the understanding of which is reflected in the answers students provided to this question. It is surprising therefore that the academic educators surveyed, although the questions were not set in the same way, do not acknowledge skill acquisition in their responses regarding the importance of fieldwork in their teaching or indeed in their students' learning as they train to become 'geographers'.

Academic writing outlines that skill acquisition and personal development are considered to be the 'hidden agenda' of fieldwork (Kent *et al.*, 1997). It must be conceded, however, that it is extremely difficult to produce a definitive list of skills as many aspects of geography fieldwork, including interpretation and observation, are in fact unquantifiable (Clarke, 1996). Most importantly, as employability skills are one major aspect of the Bologna Declaration it is suggested that more interaction between employers and universities (Thomas, 2008) is required in order to ensure students gain the correct skills for the employment market.

The only mention of skills is given by academics through Question 8 (A3.8) as to why they enjoy fieldwork. This can be compared directly to student responses to the same question (Question 9: A5.9). Here academics cite enjoying seeing students gain confidence and skills (5.6%) and estimating the existing skills of students (4.2%) whereas only 3.8% of students cite developing skills as a reason they enjoy fieldwork. Social interaction topped both tables with 38.9% of academics and 32.9% of students stating it as a reason for enjoying fieldwork. Additionally, learning by experiencing theory in practice was given by 29.1% of students whilst 31.9% of academics admitted gaining satisfaction through seeing students make the link to their classroom teaching.

5.4.2 Further Perspectives of Academics, Students and Geographical Organisations

A variety of supplementary information was collected through a series of focus groups and discussions, in order to add to the questionnaire responses. Material from this will be presented in this section. Additionally, as the research progressed and further questions presented themselves, it led to the direct opinion of relevant individuals and organisations being sought and these results will also be summarised here in order to provide a complete picture of the research and questions it raised.

In all seven groups provided data (Table 5.11), two planned focus groups, four specific discussion groups and one set of discussion comments covering the same topic but undertaken throughout a 12 month period. Full details of the composition and the dates these groups took place are provided in Appendix 2. Initially, research was aimed at increasing the understanding and expanding upon the questionnaires issued. For example, Group 1: *Enjoyment of fieldwork* was the first of two planned focus groups and linked to Question 7 for academics (nine academics involved in November 2006), Group 2: *Importance to becoming a geography/ Skills* linked to Question 13 academics and Question 7 students (seven academics and three students involved in March 2007), Group 3: *Importance of fieldwork* provided additional data for Questions 3 and 4 academics and Question 5 students (nine academics and two students involved in September 2007). Upon analysis of the questionnaires constraints to fieldwork were becoming more apparent and therefore Focus Group 2 was planned in order to address the issues brought to light – Group 4: *Issues/Saving fieldwork* (17 academics and three students in October 2007). Whilst so many academics and students felt fieldwork to be beneficial, students had not been asked specifically to comment on any disadvantages to fieldwork, and this element whilst missing from the questionnaire was considered relevant to the research. Group 5: *Disadvantages of fieldwork/issues* was raised with a group of 13 students during June 2009. Group 6: *Education UK/ Europe/USA* consisted of ten academics all of whom had taken part in discussions specifically about the links between UK, European and US education. Their comments were relevant to the understanding of how concepts in education travel between countries. Finally, in light of increasing financial pressures it was considered relevant to understand the attitudes of students toward paying for their education, i.e. working in addition to study or being supported wholly by their families. Group 7: *Funding the cost of higher education* took place

in September 2010 with a group of nine PhD students all of whom had studied in more than one country and felt able to discuss their opinions of student life under these circumstances.

5.4.2.1 Focus and Discussion Groups

In this research project focus and discussion groups can be differentiated by the planning of these events. Focus groups were planned and took place at a set time with the group members being advised in advance. Discussion groups, however, took place spontaneously, in conversation and in a relaxed environment. All group members were made aware of the research being undertaken and agreed for notes to be taken and that responses would remain anonymous. Details of each group can be found at Appendix 2 and the topics covered are provided in Table 5.10. With the exception of one lengthy half-day session, these discussions were not recorded and therefore there is no verbatim transcript. This is due to the fact that clear recording of conversations was often impossible due to background noise and indeed professional transcription services warn against recording in these circumstances (Penguin Transcription Services, 2010; Focus Group Transcription Services, 2010). Therefore no direct quotations are provided for these sessions as the information was recorded in note form.

The question of the enjoyment of fieldwork discussed with nine academics in Barcelona, Spain, provided answers in line with those from the academic questionnaires. Academics raised the social interaction between students and tutors, allowing them to learn to work together and communicate. Overall, fieldwork was considered to be enjoyable with many gaining satisfaction from seeing their students grow, gaining confidence, skills and connecting theory to practice.

With regard to the importance of fieldwork and skill acquisition a discussion was held with seven academics and three students in Valletta, Malta. The importance of geographers being able to work in an interdisciplinary way and geography's connection to citizenship were key areas according to academics. Being able to work within disciplines was also seen as important for the future of geography and highlighted the skills geographers gain through fieldwork. With reference to the

TUNING survey and Bologna, it was considered that geography was in a key position to provide employers with well-rounded, well-educated graduates with a variety of skills including analytical, observational and technological expertise.

Skills were further discussed at a meeting of nine academics and two students in Stockholm, Sweden with reference to the importance of fieldwork. Fieldwork was seen as the place where geography students gain the skills to make them good geographers and provided them with transferrable employability skills. It was considered central to understanding ‘other’ and ‘place’ and as a means of relating theory to practice. Furthermore, it was stressed that no alternative, i.e. virtual fieldwork, photographs etc., can take the place of the learning that is achieved on fieldwork, particularly with regard to landscape interpretation and observation.

Table 5.10: Summary of Discussion Topics

Group	Number/Type Participants	Topics Discussed
1	9 Academics	Enjoyment of fieldwork
2	7 Academics 3 Students	Importance of fieldwork to becoming a geographer / Skills
3	9 Academics 2 Students	Importance of fieldwork
4	17 Academics 3 Students	Issues / Saving fieldwork
5	13 Students	Disadvantages of fieldwork / Issues
6	10 Academics	Education in UK / Europe / USA
7	1 Academic 9 Students	Funding the cost of higher education

In order to investigate further the constraints on fieldwork, and any disadvantages in undertaking it, two focus groups were undertaken. A focus group of 17 academics and three students held in Sibiu, Romania, discussed the constraints and issues linked to fieldwork whilst a group of 13 students considered disadvantages to undertaking fieldwork at a session in Liverpool, UK. Academic responses mirrored those of their questionnaire with time and cost being paramount. Many thought that insufficient funding for fieldwork was an issue particularly as technological advances meant that equipment also needed to be updated. Colleagues outside of geography did not understand the need for fieldwork and in some cases timetables clashed with

planned trips. One academic, from Spain, (Pers. Comm. PA4:16) made the point that it was becoming more difficult to fit fieldwork into the timetable as they moved towards the 3+2+3 system implemented through Bologna. The amount of preparation and lack of financial compensation for this was also an issue with academics, although this was considered to be negated by their enjoyment of, and the need for, fieldwork within their discipline. Student safety and risk assessments were also mentioned and interestingly the behaviour of students on some trips. It was of concern that some students did not feel the need to follow safety rules, behaving more as if they were on holiday rather than taking part in a university educational experience (Pers. Comm. PA4:1; PA4:4). Academics also realised that there were students for whom fieldwork was difficult and inconvenient as it coincided with outside pressures such as work and family.

The student discussions on the disadvantages of fieldwork also highlighted similar themes, including the clashing of timetables and life outside of university such as their part-time jobs. Some also had an understanding of the issues of costs and fieldwork organisation, in addition to raising the issue of out-dated equipment. Whilst they appreciated the benefits of fieldwork they also felt long-haul trips to be too expensive, which meant that not all students could take part, and therefore would have a different fieldwork experience to their peers. They considered trips should be cheaper so that everyone could afford to travel and experience different places and cultures. A Romanian student commented that there was less time for fieldwork as the courses are shorter due to changes in the degree system within Bologna (Pers. Comm. PS5:13). Certain students mentioned that fieldwork was not always an enjoyable experience, especially if the weather was bad. Also the issue of attending fieldwork that was not accredited was seen as pointless (Pers. Comm. PS5:9). The issue of student behaviour was raised by some students who felt that the fieldwork experience can be spoilt by a few students who do not want to take part and are therefore disruptive (Pers. Comm. PS5:9; PS5:11). Students, however, despite seeing this as a negative, conceded that dealing with difficult people in a group was a skill in itself.

At various times discussions were held with ten academics from the USA and Europe. These discussions focussed on general comparisons of education systems

and the similarities and differences, the successes and failures in their countries. The points raised were of interest as it was considered that the systems in place in the USA education system often transfer to the UK first filtering out across Europe. Academics from Turkey (Pers. Comm. PA6:3), Italy (Pers. Comm. PA6:10) and Ireland (Pers. Comm. PA6:2) all felt this to be true. In addition, many of the themes investigated in this research were supported by comments from the American academics and these included lack of cooperation between schools and universities; aging professors with out-of-date skills sets (Pers. Comm. PA6:7); and the advance of technology and the increased use of GIS. One academic considered that GIS was the driving force in school education with spatial technology linking directly to university courses, for example cartography and other areas of geography (Pers. Comm. PA6:8). Increased environmental awareness was also seen as a boost to geography at higher education level. Indeed, it was commented that GIS was the 'saviour' of geography in US schools and that the increase of pupils studying geography within the school curriculum has led to increased student intake at US universities (Pers. Comm. PA6:6).

A final discussion group, held in Heidelberg in 2010, emerged in relation to research results suggesting that students were increasingly working alongside studying for their degrees. The interest here was whether they actually needed to work to pay for their education or whether this was merely for aspirational reasons, i.e. to fund self-improvement or for materialistic gain. One academic and a group of nine PhD students, all of whom had studied in more than one country, took part in this discussion. The academic was from Germany (an Associate Professor, university lecturer and PhD supervisor), and explained their system of education where degree courses are free in order that everyone gets an equal and fair chance to reach their potential, whilst at the same time there are many vocational courses in place too. Degree students in Germany pay a small administration fee of around €500 which covers library costs etc.

Many students work in addition to their study: however it was considered that this helped to fund their modern lifestyles, with computers, mobile phones, etc. In Italy students often tried to stay close to home and not so many have jobs as their parents finance them. This was considered to be a cultural issue in Italy linked to family

groups, although it was conceded that those students who do work are financing their style of living rather than their studies, with technology and fashion items amongst these (Pers. Comm. PA7:1; PA7:2). It was commented that even the wealthiest of students find it difficult to keep up with technology as it moves so quickly. Two Polish students thought their peers aspired to a standard of living and worked to keep themselves in university and to fund their life styles, as they compare themselves to 'western' European students. They also noted that technology was costly and salaries low (Pers. Comm. PA 7:7; PA7:8).

The two UK students, not surprisingly, focused on the cost of higher education and the amount of student loans and subsequent debt with banks offering students interest-free overdrafts and the student loan company offering loans to cover fees and living costs. One commented that students were not always sensible with their loan payment and spent money for living allowance on a new laptop or mobile phone (Pers. Comm. PA7:9). They considered the system to be wrong and that not everyone would be able to pay back the debt. The difficulty of balancing study with work was mentioned, particularly when working to deadlines. Jobs were considered more difficult to find in the UK due to rising unemployment and part-time jobs can be lost when work and university commitments clash (Pers. Comm. PA7:9).

5.4.2.2 Further Questions asked of Academics and Organisations

Throughout the period 2008-2011 questions arose from responses and research. Opportunities were made to investigate further some of the research issues and themes which accrued during data analysis and reflection (see 4.6). The main areas of importance are outlined here. In 2008, a sample of 28 academics (see section 4.6.1) were asked to comment on the existence of benchmark statements referring to fieldwork in their countries, as a means of indicating the importance placed on fieldwork by decision makers. This was followed in 2009 by a further request to provide details of academic writing on fieldwork, or the names of academics specialising in this area within their countries. As the reported academic writing was on the whole Anglo-centric, it was necessary to ascertain whether this was due to the language barrier or a general overall lack of writing in this area. Finally, the issue of

student behaviour on fieldwork was broached in 2010 in order to determine if some of the issues experienced in the UK were also observed in other European countries.

Benchmarks

In light of the UK's Quality Assurance Agency for Higher Education benchmark statement stressing the importance of fieldwork to a geography degree (QAA, 2007), a further selection of 27 academics were contacted, again by e-mail. On this occasion academics were asked to comment as to whether their country had a benchmark statement in which fieldwork was a compulsory element of higher education. In all, 26 European countries provided a response to this question. The majority did not have a benchmark statement and fieldwork was not compulsory within higher education. The exceptions to this are the Netherlands; here fieldwork is part of the national benchmark statement but it is still not compulsory and in the UK, the QAA benchmark statement, offers only guidance and is not prescriptive.

In both Finland and Slovenia there is no national benchmark statement and fieldwork is not compulsory although both commented that this would change with Bologna and the academic from Finland in particular envisaged fieldwork becoming a compulsory part of higher education geography. Romania was an interesting case; there is no national geography benchmark statement as such. Here, their version of the UK's quality assurance agency (Romanian Agency for Quality Assurance in Higher Education – ARACIS) provides a quality statement for higher education and whilst fieldwork is not compulsory within this, in practice universities do have compulsory fieldwork in the first two years of a bachelor's degree. As it is not formalised and compulsory within the quality assurance agency, Romanian universities are under pressure to either make all fieldwork optional or indeed drop fieldwork completely from the curriculum.

Benchmarks and statements on fieldwork were also considered to be relevant, given that statements on fieldwork exist in the UK and are championed by the geographical associations – i.e. Royal Geographical Society-Institute of British Geographers and the Geographical Association. Whether other European countries have such statements was investigated in 2010 by searching web sites and issuing an e-mail request to geographical societies and associations throughout Europe. Such

information would highlight the importance placed on fieldwork education in Europe.

The research results found that few recognised fieldwork as a separate entity from geography that required special attention. Whilst some associations offered field guides, e.g. Belgium (Royal Belgian Geographical Society, 2010), Denmark (Royal Danish Geographical Society, 2009), Italy (Italian Geographical Society, 2010) and Slovakia (Ljubljana Geographical Society, 2009), the rest offered no such information on the teaching of fieldwork within their country's education system. The fact that the UK is considered to be ahead in this area is supported in the academic literature (Caie, 2003). One member of the Danish Association of High School Geography Teachers received the e-mail request whilst at the 2010 iGEO Geoolympiad in Taiwan and raised the question with other European colleagues; again there appeared no specific statements on fieldwork that they could provide information on. Spain is in the process of issuing their guide to the geography curriculum which includes a mention of fieldwork but this has not yet been fully approved (Tapiador *et al.*, 2007; Pers. Comm. by e-mail, 2010). An interesting response was received from the Netherlands:

“In the Royal Dutch Geographic Society we do not have any statement of that kind. Fieldwork and excursions are common practice of course in higher education, but it is not a subject of discussion in our association.” - Netherlands (Pers. Comm. by e-mail).

This highlights the apparent lack of support given by associations and societies in Europe.

It should be noted, however, that in 2009 the author was involved in a research group initiated through the HERODOT network (HERODOT, 2009) to produce a benchmark statement for fieldwork in European higher education geography (Appendix 6). Despite this work, the European Association of Geographers (EUROGEO), the formation of which was the main outcome of the HERODOT project, does not yet list this benchmark statement on their web pages.

Anglo-centric nature of academic writing

Overall, the majority of writing on fieldwork and experiential learning is in English and could be seen as 'Anglo-centric' in nature. Therefore, the question of whether this is an issue of the language barrier with regard to literature searches or whether this topic is indeed something written about mainly in the USA, UK and Australasia and on the whole in the English language, needed to be addressed. This investigation would ensure that opinions from across Europe had been taken into account within the review of literature which could in turn feed back into results. A selection of academics (based on Table 4.3) from 27 countries (Lithuania was not in the study as no questionnaire were received from them) were contacted by e-mail in June 2009 and asked to provide the names of experts in fieldwork education within their countries. The result of this e-mail, whilst approximately 50% had a negative response, found that writing on fieldwork education although prominent in the UK was less common in the rest of Europe and that countries, for example Spain, Norway and Sweden, did have experts who wrote about fieldwork but the papers suggested this was in fact related to the use of technology and problem based learning. The explanation for the increased writing on fieldwork in geography in the UK could, of course, be attributed to the discussions and implementation of benchmark statements for higher education in the 1990s. During the late 1990s and early 2000s, awareness was raised through academic journals, such as the *Journal of Geography in Higher Education* (Chalkley and Craig, 2000) and the *Geography, Earth and Environmental Sciences Subject Centre* (GEES).

Student behaviour on fieldwork

Both academics and students have made mention in their questionnaire responses and discussions of the poor behaviour of some students during fieldwork. Researching academic writing on this area of geography fieldwork provided little information and although Cook *et al.* (2006) discuss behaviour on fieldwork and risk, there are no specific examples of the type of behaviour referred to. Despite the notable paucity of published research on this subject, an internet search of UK geography departments provides information on risk assessments and fieldwork rules most of which refer to 'unacceptable student behaviour' with regard to trips, e.g. University of Oxford (2010) and University of Dundee (2010). This situation was considered worthy of further investigation as in the UK there appear to be problems with student behaviour

on fieldwork (Pers. Comm. by e-mail), however whether this was an issue in other European countries is largely unknown:

“Night after night the majority of the student group caused drunken disruption in the hotel”. (UK: Pers. Comm. by e-mail)

“[the students] had no consideration of the impact that their behaviour had on the rest of the group. (UK: Pers. Comm. by e-mail)

“Drinking on the coach on the way to the fieldwork (coach left at 8.30am)”. (UK: Pers. Comm. by e-mail).

In order to begin to explore the issue of difficulties associated with student behaviour on fieldwork, in December 2010 an e-mail was sent to a mix of 39 academics and students from 20 countries (Table 5.11). They were asked to report on whether the behaviour of students on fieldwork was an issue in their countries and to provide examples of any problems encountered. The 22 replies received consisted of a series of short e-mail responses from academics and students plus three lengthy responses from academics in Romania and the UK. These outlined examples of poor behaviour in many of the countries contacted. Overall, it seems that the main problem is alcohol and an outline of some of the comments and reported problems is given here.

In Estonia the academic responding worried about taking responsibility for fieldwork as there were issues with “immoderate drinking” (Pers. Comm. by e-mail) and occasionally theft. Also, there can be friction with locals due to the arrogance of students and general bad manners, however this academic stated that in Estonia conflict can be initiated by local drunken people as in rural areas heavy drinking is a major social problem. In this regard there was a worry that expensive equipment could be damaged. An academic from Hungary stated that these incidents are not common at their university, however they had heard of poor behaviour elsewhere.

“...students are usually too busy doing their work, mostly because field trip opportunities are rare so they try to make the best of their field trips.”
(Hungary – Pers. Comm. by e-mail).

Table 5.11: Countries Approached and Responses Received Regarding Student Behaviour on Fieldwork

Country	Responses Received	Country	Responses Received
Austria	0	Lithuania	0
Belgium	0	Netherlands	2 academics + 1 students
Bulgaria	1 academic	Norway	1 academic
Czech Rep.	0	Poland	1 academic + 1 student
Estonia	1 academic	Portugal	1 academic
Finland	1 academic	Romania	1 academic
Germany	1 academic	Slovenia	1 academic
Greece	0	Spain	1 academic
Hungary	1 academic + 2 students	Turkey	2 academics
Italy	1 academic	UK	2 academics

In Italy students considering themselves free from their parents’ control has led to problems in Italy where one academic states “Many professors are stopping to go on trip for more than 1 day” (Italy: Pers. Comm. by e-mail). They have a poor attitude to all studies and now “do not consider field trip important” (Italy: Pers. Pers. Comm. by e-mail). The Netherlands provided mixed responses from academics and students. Academics talk of heavy drinking, being loud on the bus trip and in the hotel. As a result of poor behaviour changes were made in fieldwork provision including, and making fieldwork at the end of course so that people who don’t want to be there will have dropped out by then, lower numbers on fieldtrips, more local day trips and making fieldwork voluntary in the hope that only those interested will attend. This academic stated:

“I am tired of being a police woman all the time. It is too stressful.”
(Netherlands: Pers. Comm. by e-mail).

With regard to Poland one student pointed out that there were always problems with alcohol with students drinking more than normal as if:

“alcohol was the only pleasant activity during our trips...field trips meant having fun: going out (pubs, clubs), having parties in their rooms.” (Poland: Pers. Comm. by e-mail).

The academic responding from Poland confirmed this, additionally stating that there were increasingly problems with drugs.

From Romania the students responding also commented on drinking and partying “almost everyone drinks it is normal” (Pers. Comm. by e-mail). However, the academic responding gave a lengthy reply about the state of fieldwork and education there.

“What I find really worrying is how quickly this country is catching up with the rest of the EU members. But only in bad things not in the good ones. It is like they have had a sort of bad behavior manual to refer to, like somebody was giving them a crash course on that... I wonder if [the students'] parents are aware what they are doing to their off springs when encouraging the consumerist behavior and the whole idea of 'service'.” (Romania: Pers. Comm. by e-mail).

The Spanish academic who responded to the e-mail request outlined that they did very little fieldwork now longer than one day and admitted that it only takes a few to spoil the trip for everyone.

One Turkish academic, now working in the UK, admitted that bad behavior from students on fieldwork from UK universities is an issue. In Turkey, however, the higher education system is extremely bureaucratic with many regulations for teaching activities and rules associated with them. If someone breaks the rules they will be punished or even expelled from university. Conversely, a second academic from Turkey considered students everywhere to be basically the same although in Turkey there are different cultural values. In the past 20 years this academic has witnessed behavior deteriorating with some students not taking work seriously, drinking all night, not sleeping and therefore unable to carry out work to a satisfactory level the next day.

Two lengthy responses outlining a variety of incidents from fieldwork undertaken by UK students were received: both were clear in their opinion that it should be remembered that whilst there is an element of bad behaviour on most fieldwork:

“...it is usually a minority of students and many of the other students are as horrified as staff are” (United Kingdom: Pers. Comm. by e-mail).

Despite this, serious bad behaviour is reported, particularly with regard to first year students at a residential field centre including smuggling of alcohol, noise, drunkenness, drug abuse, nudity, stealing from vending machines, with students being considered to be:

“Too drunk/hung-over to participate in fieldwork. Drinking on the coach on the way to the fieldwork (coach left at 8:30 a.m.)” (United Kingdom: Pers. Comm. by e-mail).

In order to minimise poor behaviour brought on by time spent drinking, students were worked from 9 a.m. to 7 p.m.:

“Nevertheless (and despite a signed code of conduct outlining that students must present themselves fit for fieldwork every morning) there are frequently students who are hung-over and unable to participate.” (United Kingdom: Pers. Comm. by e-mail).

Following this incident, fieldwork in the department was reviewed and future first year fieldwork will be based at a national field centre, with no other guests, and a distance away from any local amenities.

Three staff members in a further UK university were interviewed about issues with student behaviour on fieldwork. Whilst a member of the administrative staff making appointments for the interviews stated that in the past two years there had been some serious incidents, the staff members themselves did not admit to this during the interviews. Rather they stressed the disciplinary rules of their University and their ‘three strikes and out’ policy. The head of learning and teaching at this university

also reported that fieldwork was not compulsory, therefore only interested students sign up; they only undertake international fieldwork because of the weather in the UK and that:

“you have to wonder about the government stand on 30% of pupils gaining a university education – when not all are from the same socio economic background and therefore perhaps do not know how to behave in such situations.” (United Kingdom - Pers. Comm.)

Such comments from a range of European academics highlight the possibility of a minority of students causing problems which could impact upon fieldwork provision as a whole. This study, whilst mainly anecdotal, and based on a small number of replies, highlights the need for further study in the future.

5.5 Conclusion

This study has focused on the current state of geography fieldwork education in contemporary Europe during a period of educational transition as countries aim to realise the European Higher Education Area.

Academic respondents outlined 231 fieldtrips with institutions offering a wide variety of compulsory and non-compulsory trips. Despite this, respondents from eight countries highlighted possible gaps in skills acquisition (Table 5.3) impacting on employability skills gained through higher education geography fieldwork. Great importance was placed on fieldwork by academics with a higher number considering it vital to physical rather than human geography. Teaching geography without fieldwork was thought to be impossible by some 22.2% of academics, with others outlining 25 specific topics they felt impossible to teach by classwork alone, many of which were linked to skills acquisition. In spite of this, 69 academics, as requested in the questionnaire, outlined a wide range of alternatives should fieldwork be impossible; comments overall, however, showed that to many not including fieldwork in geography teaching was unacceptable. Respondent academics enjoyed undertaking fieldwork with their students, citing amongst other things the informal

interaction with students and their satisfaction in seeing students grow through experiencing the 'real world', as reasons for this.

With regard to evaluating the impact of fieldwork as a method of teaching and learning, most interpreted this to mean 'assess' and the impact on learning is on the whole assumed. However, geographical knowledge was valued by academics and considered key to becoming a good geographer, particularly in understanding the relationship between environment and society. Academics considered fieldwork vital/fundamental (36.1%) or very important (19.4%) to becoming a geographer.

Looking in particular at the state of geography fieldwork within European universities, it was clear that decisions were made at a variety of levels although it was encouraging that 48.6% of geography departments had the final say in the amount of fieldwork offered to their students. Very few responses (6.9%) cited student input as a deciding factor in the type and frequency of fieldwork.

Academics provided 18 categories thought to be constraints on fieldwork, and finance headed this list with 62.5%. Time and staff availability was also believed to be an issue by 34.7% of academics. Additionally, both of these constraints were considered to be relevant by 4.2% who cited a lack of understanding outside of the department with little sympathy for the resource intensive nature of fieldwork. The staff to student ratio was of concern with some departments having a large student cohort and few staff, e.g. a respondent in Ireland with 400 students and only 12 academic staff. This issue also has more contemporary constraints attached to it such as Health and Safety, risk management and student behaviour. Also academics mention an increase in international and exotic trips to entice students to specific universities and courses which could be seen as creating a two-tier system between wealthy students and those already struggling to balance outside commitments such as work and family.

The amount of fieldwork provided within geography departments over the past 10 years has remained the same or decreased for 66.7% of those surveyed and remained the same or increased for 33.3%. Therefore, this even split shows virtually no change in the amount of fieldwork being undertaken.

In all, 340 geography students responded to questions aimed at gaining an understanding of their thoughts on fieldwork. Whilst many students undertook a mix of regional, national and international fieldwork, 23.2% attended regional only, 22.9% national only and 18.2% international only. The majority of students (94.7%) took between one and three trips, and most field trips were in the second and third years of undergraduate study. The length and frequency of fieldwork resulted in 229 students taking part in one-day field trips, 95 in one week of fieldwork and a mere six, two weeks or more.

A comparison of the average cost of fieldwork highlighted that Italian students paid the highest amount, however these trips included international fieldwork and stays longer than one week. Greece on the other hand had zero fieldwork costs, Malta, due to the unique geography of the island, minimal costs and the UK had a mean cost per student of £231 for fieldwork in the 12 month period under view. Although not all had help toward the cost of their fieldwork others outlined subsidies including cheaper accommodation or food for students.

Learning through fieldwork was perceived by students to be an important element to their studies with 43.5% considering it very important and 9.1% vital. Therefore most students considered fieldwork central to their learning and they outlined 13 categories including in particular 'real world' experience and the transfer of theory taught in the classroom into practice. Only 5.3% considered fieldwork as important in providing new skills and knowledge. Disappointingly, some students considered fieldwork important only as a means of assessment. Despite this, overwhelmingly students realised the significance of fieldwork to their learning, citing that it delivers an understanding of theory into practice and of geographical processes, whilst providing deeper learning. In addition, students understood clearly the benefits derived from fieldwork with regard to the acquisition of skills and not surprisingly these were considered of high importance to 25% of students with 27.6% listing practical subject specific skills, e.g. mapping and use of field equipment. Also skills generic in nature which could be considered useful for future employment were understood by students and they included skills such as teamwork, critical analysis, communication and presentation skills. Whilst students seem to understand the importance of learning and skill acquisition through fieldwork, when asked about

their enjoyment of fieldwork, this was somewhat contradictory. Here, although students' enjoyment of fieldwork is high the social aspects and seeing theory translate into practice were the main reasons given. The skills agenda and teamwork is considered less important compared to the enjoyment factor with few students mentioning these areas. This seems to indicate that students differentiate between the learning and teaching aspect of fieldwork and link 'enjoyment' firmly to the social elements.

Comparisons made between academic and student responses show that seeing theory in practice is a theme acknowledged by both sets of respondents as an important element provided by geography fieldwork. However, when it comes to the importance of skills 12.1% of students considered this a key aspect of learning through fieldwork whereas academics did not. These results clearly show that whilst the skills agenda is important within the Bologna Declaration it is not considered so by academics. As the single most important change in higher education legislation at the time of this study, Bologna should be playing an overarching role in European universities and their teaching and learning. Fieldwork is an ideal opportunity to enhance areas of employability skills which will aid the creation of future 'professional' geographers, and create comparable fieldwork within the new European comparable degrees. However, those academics involved in teaching fieldwork are making little note of changes in encompassing this legislation. This lack of engagement, or possibly knowledge, is an indication that the process is not working and not filtering through to those working on the 'ground'.

Discussion and focus groups contended that geography was an ideal discipline and able to provide employers with well-educated and well-rounded graduates with a wide variety of skills. Fieldwork was seen as the place for such acquisition and was central to the understanding of 'other' and 'place'. It was stressed that there was no alternative to fieldwork and that other teaching methods, e.g. virtual fieldwork; photographs etc. could not take its place, particularly with regard to observation and interpretation. Conversely, under the 3+2+3 system of Bologna some academics considered it more difficult to fit fieldwork into the timetable. In addition, risk and student behaviour came through in these focus groups.

Students taking part in discussions highlighted issues such as fieldwork clashing with other classes within their timetables, the cost of fieldwork and having to work in addition to study. They also felt fieldwork suffered from lack of investment and out-dated equipment. International fieldwork should, they contended, be cheaper and fairer so that all students, not just the wealthier, could take part and have the same experiences. In addition, some students commented negatively upon the disruptive behaviour of peers during fieldwork. The need to work as well as studying was considered in the main to be for aspirational reasons, funding a modern lifestyle, e.g. computer, mobile phones etc. Nonetheless, for some students, particularly in countries where tuition fees are high, work is a necessity to cover their cost of living and education.

Additional research was undertaken regarding the existence of benchmark statements across Europe stressing the importance of fieldwork to geography. Academics responded from institutions in 26 countries indicating that the majority of their countries did not have such a statement. Few geographical associations/societies mentioned fieldwork specifically, although some did offer field guides. When compared to the support given in the UK from geographical associations/societies, this highlights the lack of support given to European university fieldwork as a whole. Whilst, from learning and teaching standpoints, fieldwork is seen to be extremely valuable to geography as a whole, this is not supported by the European geography associations. Despite the major changes taking place in higher education across Europe, such associations seem to show little interest towards the legislation that is impacting on their memberships. This could of course be due to the fact that few countries have in place their own quality driven benchmark statements for the associations to promote, and support their members in achieving.

Poor student behaviour on fieldwork has been reported as an issue and further research into this area has provided examples from many countries as to the type of behaviour taking place and the ways in which university geography departments are changing their field courses in an attempt to improve the situation. Such behaviour is also impacting on the provision of fieldwork at current levels.

This chapter has presented all the research results from the planned questionnaires and focus groups, as outlined in chapter 4, through to the supplementary questions set as this research progressed. The method of thematic commentary provided an efficient and effective system in bringing forward the real state of geography fieldwork in Europe, the benefits, issues and constraints, whilst providing an image of teaching and learning in European geography fieldwork. The success of this method has meant that analysis is solely data driven and themes have emerged from the responses provided, thereby allowing the most important aspects to be brought through. Chapter 6 will focus on these results reflecting upon similarities and differences and discussing these in relation to current academic literature.

Chapter 6: Discussion and Reflection

6.1 Introduction

Fieldwork is the central reason for many students choosing a geography degree (Nowicki, 1999; Foskett, 2004; Fuller, 2011) although its value to the whole student experience is, in the majority of literature, assumed (Nairn *et al.*, 2000). Learning is enhanced and skills developed through active learning with fieldwork reinforcing the theory taught in class with first-hand experience thereby strengthening cognition (Foskett, 2004; Hope, 2009). Whilst there has been a move towards promoting transferrable skills through fieldwork, on the whole teachers are more focused on the technical geographical skills (Orion and Hofstein, 1994) despite the fact that students are more focused on the development of personal skills and group work (Fuller *et al.*, 2000).

This chapter will evaluate the similarities and differences in how academics and students perceive geography fieldwork in European higher education. Key themes derived from academics' and students' observations will be highlighted and discussed including the importance placed on fieldwork within the discipline, enjoyment of fieldwork and the gaining of transferrable skills. Constraints that academics and students regarded as impacting on the centrality of fieldwork to the discipline will be addressed and the future of geography fieldwork considered.

A method of thematic analysis, as outlined in Chapter 4 (4.5.5), has been used to identify similarities and differences within the responses received and through the reading and coding of these responses it has been possible to categorise themes. This has afforded a data driven approach to the results presented here. In addition, focus and discussion group opinions are referenced where necessary in support of text or academic thought.

6.2 Importance Placed on Fieldwork

The importance of fieldwork to geography teaching and learning is a recurring theme within this research. Academic results highlighted that fieldwork was considered especially important to physical geography, irrespective of the type of geographer responding or to their experience as an educator (Chapter 5.2.4). An additional indicator of the importance placed on fieldwork by academics was their inability to teach geography without such trips and the methods they suggested as a replacement if necessary. Whilst within the analysis of their qualitative responses, 25 topics (see Appendix 3; Table A3.6) were cited, that academics considered could not be taught without fieldwork. Only 22.2% of academics stated outright that they were unable to teach all topics, deemed to be part of geography, without fieldwork. A mere 13.9% of geography academics felt they could teach all topics without fieldwork. Furthermore, the substitution of fieldwork provided a range of teaching methods although many expanded by outlining that, with the loss of fieldwork, teaching would lack the practical skills and experiences central to geography education, ultimately leading to loss of quality.

Students also believed fieldwork to be an important aspect of their learning and some 70% placed a high value on fieldwork as a method of learning. Providing 'real world' experience and linking theory to practice were elements considered to be crucial, and an enhancement to teaching provided in the classroom. Some 17.9% of students stated that practical experience in the field led to deep learning whilst developing skills and increasing confidence. The Hungarian responses in particular scored high with regard to understanding this element with seven of the 21 responses citing deep learning (Bradbeer and Livingstone, 1996; Fuller *et al.*, 2003). There is, however, no specific link to other particular countries and the 17.9% reflects students across Europe.

These aspects are mirrored within current literature and pedagogical thought. Many academics have written of the importance of fieldwork in geography education (Kent *et al.*, 1997; Nairn 2005; Hope 2009) which is reflected by the Quality Assurance Agency's benchmarks for UK higher education geography which consider fieldwork to be a distinguishing element within the training of a geographer (QAA 2007).

Fieldwork is, therefore, a positive and exceptional aspect in the learning and teaching of higher education geography in Europe, providing students with a high level of experiential learning (Dykes *et al.*, 1999) leading to deep learning and strengthening understanding of the real world (Hope 2009; Pers. Comm. PA3:4) Deep rather than surface learning is therefore attained through such experiences and real world problem solving (Kolb, 1984; Gibbs, 1992; Biggs, 1999) and a number of the students surveyed clearly understood this. The results of this research, however, show acceptance and understanding of this among students to be wider than previously reported in the current literature.

As so much has been written on the importance of fieldwork in geography education, it is not surprising that both academics and students reiterated this line of thought. However, despite its status within the discipline little has been discussed as to why fieldwork has remained a central part of the geography (Driver, 2000, 2001; Herrick, 2010). Similarly on its effectiveness as a method of learning (Kent *et al.*, 1997) or on the negativities of fieldwork, with some considering the importance and benefits of fieldwork to be assumed by students (Nair *et al.*, 2000; Stokes *et al.*, 2011) merely on their teachers say so. Indeed, in light of increasing pressure to show fairness to all students (resulting from the introduction of discrimination laws within the UK), some academics no longer see fieldwork as central to geography (Scott *et al.*, 2006).

Further research undertaken regarding benchmarking and the status of fieldwork within European geography societies and associations revealed that, with the exception of the UK (RGS-IBG and GA) few associations make reference to fieldwork or have a fieldwork statement available to their membership (5.4.2.2). Therefore, if the bodies representing geography across Europe openly place little value upon fieldwork, as a key element of geography, it makes it difficult for them to justify to governments and decision makers the importance of fieldwork within the curriculum.

6.3 Enjoyment of Fieldwork

A positive, enjoyable, experience leads to greater understanding (Kern and Carpenter, 1984) and a high potential for deep learning (Biggs, 1999). Studies have

shown that learning through fieldwork has allowed for increased development in personal skills (Fuller *et al.*, 2002; Pers. Comm. PA1:2) thereby engaging students as participants rather than observers (Kern and Carpenter, 1984).

For this study both academics and students were asked directly if they enjoyed fieldwork. Overwhelmingly, in both cases, the answer was 'yes'. The academics' opinions on the enjoyment of fieldwork would serve to evaluate its usefulness as a method of teaching and it can be seen from their responses as to why they enjoy fieldwork:

"Familiarity, confidence, you become part of student's lifeworld, excellent teaching results." (Austria: RA2)

"They learn without realising it and enjoy it." (Belgium: RA4)

"Effective and active teaching, good feedback." (Czech Republic: RA7)

"My motto is: Geography begins and ends with outdoor experiences. We only understand what we see and do." (Germany: RA14)

"I can see the growth of knowledge/critical thinking about 'real-life' or see that gaps in knowledge." (Slovenia: RA23).

To the fore of their responses was building relationships with their students in an informal setting and the gaining of personal satisfaction, as educators, in seeing their students make the direct link between theory taught in the classroom and practice in the 'real world'. Academics enjoyed the informality of this method of teaching whilst also being provided with an ideal opportunity to assess the existing skills of their student group (Pers. Comm. PA1:8).

The negative aspects provided by academics were the issues of large class sizes and the long hours, making for tiring work. This is supported by Price, (2001) whose research showed that staff enjoyed fieldwork and getting to know their students, but complained about the large number of students. Where groups were large, teaching

was considered to be repetitive as the classes were split into manageable, smaller, groups with lecturers spending time with each group (Pers. Comm. PA4:4; PA4:12). Fieldwork places a high demand on academic staff for little or no financial reward or departmental recognition (Nairn *et al.*, 2000; Pers. Comm. PA4:12). Despite this, geography academics continue to fight for the survival of fieldwork in their teaching and it seems very clear that their continued enjoyment, and the benefits that both they and their students derive from it (Pers. Comm. PA1:1), outweigh the negatives such as lack of recognition (Nairn *et al.*, 2000) and poor student behaviour (Cook *et al.*, 2006; Pers. Comm. PA4:1; PA4:10).

Students were surveyed on their enjoyment of fieldwork in order to draw out the methods of teaching that were important to them. Almost all students stated they enjoyed fieldwork and provided several reasons (including theory into practice, social aspects and skills development) within their qualitative responses to expand upon this. As with the academics the social interaction with lecturers and peers in a relaxed learning environment was extremely important to the students. For them the trips, in particular visiting new places and meeting new people, made fieldwork fun and exciting. The most popular outcome for their experience being the observation of theory translated into practice:

“The fieldwork (in a theoretical formulated way) creates the mental link between the course (subject matter) and the felt sensations during the fieldwork. These sensations can be visual, oral, even emotional and through sensation. Remembering those helps me remember the theory behind the fieldwork, thus helping me remember my course. It improves your learning.”
(Belgium: RS16)

“I think that is really useful because we can see theory in reality. Sometimes it is better than studying only from the books.” (Czech Rep: RS24)

“It's the time to put learnt knowledge into practice. Plain theory is useless if one has no connection with the real life.” (Estonia: RS31)

“It helps link practice to theory.” (France: SR: 132)

“It allows you to understand the work. Practical work is sometimes easier to learn and grasp concepts compared to theory work. “ (UK: SR209).

Both the academic and student results were so similar that it is worth considering how much of the lecturers’ enthusiasm and general acceptance of the importance of fieldwork in geography framed student opinion both prior to and during their trips. A study of students, who were split into indoor laboratory work and outdoor field studies, was undertaken in 1984 by Kern and Carpenter, the results of which demonstrated that learning in the field was thought to be considerably more enjoyable and that students gained greater insight from this method of teaching and learning (Kern and Carpenter, 1984). Therefore enthusiasm created through enjoyment of working in the field clearly leads to the embedding of transferrable skills and enhanced final assessments (Kneale, 1996) as deep learning is achieved.

6.4 Skills Agenda

The Bologna Declaration stresses the need for degrees that equip students with the relevant skills to enhance their employability status; which for European higher education means that universities are expected to ensure that degrees offer transferrable skills backed by benchmark statements (Caie, 2003; Fuller, 2011). Geography fieldwork offers many of the generic skills linked to enhanced employability (Vodenska 2000; Dumbraveanu and Dumitrache, 2007) and this outcome is considered to be one of its outstanding characteristics (HMI, 1992).

In assessing the level to which skills are understood to be an important element of fieldwork training, academics were asked to comment on the knowledge it takes to become a geographer and the role fieldwork plays in this. Their qualitative responses, it was considered, would allow an opportunity for the areas of knowledge gained by fieldwork to come to the fore, indirectly assessing the understanding of academics as to the importance of transferrable and/or employability skills.

The results show that academic geographers considered geographical knowledge valuable in understanding the world and its problems and the areas they outline that

make a good geographer reflect this, (see A3.11). Fieldwork is considered vital to this process (Pers. Comm. PA2:5) by many and despite outlining several reasons why this is the case all the skills listed are, on the whole, subject specific in nature and do not include any of the so called employability skills. Comparing the qualitative academic results to the tables drawn up for the TUNING of geography in Europe (Tables 2.6 and 2.7) very few of these competencies were outlined by the academics surveyed when discussing the value of fieldwork and the making of a geographer - those mentioned, being the relationship between physical and human environments, spatial and critical thinking. Compared to the questionnaire responses the academics involved in focus groups and discussion sessions realised the importance of skills, however, it should be noted that some were involved in the TUNING project and as a result would have a greater understanding of the position of skills acquisition and employability within Bologna.

Skills gained through fieldwork are three-fold; subject specific, transferrable and social and could be considered to be somewhat unquantifiable; they are impossible to list conclusively and are therefore often referred to as the 'hidden agenda' of geography fieldwork (Kent *et al.*, 1997). Students must understand this aspect of fieldwork and the relevance of these skills in relation to the employment market (Biggs, 1999; Pers. Comm. PA2:4) particularly as increasingly the employment market is leaning towards portfolio careers where student will take on many jobs in the course of their working life.

Students were asked directly to state the skills they gained from fieldwork and compared to the academics' results, they were relatively knowledgeable about skills acquisition through fieldwork. Their results were also compared to the TUNING competencies (Tables 2.6 and 2.7) showing a high level of compatibility. The question as to where the students are gaining this understanding from is interesting as most of the academics did not see the acquisition of transferrable skills as important to geographers; in complete opposition to Bologna and current literature. It is possible that educators are highlighting skills acquisition during fieldwork, and its importance, in order to support the contention of 'value for money' particularly where students are paying fees to undertake their degrees. However, in reality these geographers do not see this aspect as crucial to geography. It has been suggested

that students undertake a geography degree in order to increase their employability (Gedye *et al.* 2004) since the UK benchmark statement outlines that a geography degree should provide transferrable skills to enhance employability. Students in this research study cited a wide range of both generic and subject specific skills and therefore seem to understand the benefits of these.

It is interesting to note that whilst academics do not include generic skills as a vital part of geography training, students are aware of the transferrable skills they gain through fieldwork. Relating to this in the UK is the opinion of the Environment Agency, with regard to environment and earth science graduates, who comment that those graduates recently employed by them did in fact have a skills deficit which was costing the Environment Agency financially as they needed to hire external training consultants to fill the knowledge gaps (Thomas, 2008). As students face increasing financial demands, it is possible that students will turn away from university geography, despite its employment record and breadth of skills, moving towards vocational degrees, in the hope of minimising student debt (Chalkley, 1998; Williams and Vasagar, 2010). With regard to UK higher education as a whole, never has this been so clearly possible. The Browne Report, an independent review of higher education funding and student finance (Browne, 2010) outlines the changes necessary to provide a sustainable higher education system. This includes the suggestion of higher tuition fees of £6,000 to £9,000 per academic year compared to the current annual fee of £3,290. In light of this move, surveys outlined in The Guardian newspaper state that more students will need to hold down jobs and work longer hours to finance their degrees and that current final year students are already working longer hours than their predecessors (Williams and Vasagar, 2010). Additionally, a poll found that school pupils from poorer backgrounds were 50% less likely to think of university if the fees increased even to £5,000 (Williams and Vasagar, 2010).

The lack of appreciation for generic skills by the academics in this survey is contrary to the current literature reviewed where many academics outline the inclusion of employability skills as a positive aspect of Bologna and something they are working towards (Vodenska 2000; Oost and Kannevorff, 2000; Warren, 2002; Dumbraveanu and Dumitrache, 2007; Schembri and Attard, 2007). Only one study suggests that

educators are more interested in geographical skills and pedagogy than transferrable skills (Orion and Hofstein, 1994) and this study is very much pre-Bologna.

The one skill students failed to recognise in the research results when compared to the subject specific competences outlined by the TUNING of geography (Table 3.5) was to:

“Draw knowledge, understanding and diversity of approaches from other disciplines and apply them in a geographical context.” (Wall and Donert, 2004:21)

This competence highlights interdisciplinarity and indicates a lack of fieldwork where students are placed in a position to work in this manner. Therefore, interdisciplinary research with those from other subject areas was not the norm for the students responding, leaving a gap in their knowledge and them lacking a skill considered to be crucial to future employment (Jones and Merritt, 1999; Bracken and Oughton, 2009).

Whilst on the one hand some academic writing considers interdisciplinary work is increasing (Schoenberger, 2001) other literature calls for improved dialogue between academic subjects (Powell, 2002). Although interdisciplinary work has been highlighted in geographical academic writing, it appears that this has not yet fed through to teaching and learning in European higher education. Justification for interdisciplinary work in research is no longer required as it is so widely recognised (Bracken and Oughton, 2009) yet despite geography being ideally placed to explore cross-discipline research (Baerwald, 2010), it is clearly not the case in European geography fieldwork. The importance of creating such methods within fieldwork should be stressed, as by integrating other fields with existing geographical knowledge, within a modern curriculum, interdisciplinarity will become a central means of inquiry in geography (Baerwald, 2010) providing an holistic knowledge to research problems. Such training will allow European geography graduates to lead the field in this area of research as they have experienced the multi-disciplined nature

of geography as a subject (Ashbrook, 2004) in addition to being trained to work at such levels through fieldwork.

6.5 Constraints on fieldwork

All the universities in this survey undertook fieldwork within their geography degrees albeit at varying levels. Financial pressures are increasing and in some institutions it is the funding available that shapes the nature of the fieldwork provided (Dewsbury and Naylor, 2002; Hovorka and Wolf, 2009). In certain countries in Europe (e.g. Hungary, Ireland, Romania, Turkey, UK) the rise in student numbers has led to changes in the staff student ratio thereby increasing the pressure on geography departments to provide high quality fieldwork within their existing budgets (Abbott, 2006; Pers. Comm. PA4:4). It is becoming important to generate funds for such trips as fieldwork is an extremely resource-intensive style of teaching (Gold *et al.*, 1991) both in time and money.

Consistent with the literature, both the issues of student numbers and resources are outlined by the academics in this study as they cite the problems of travelling with large student groups, which is expensive and pushing their fieldwork budget to the limit (Pers. Comm. PS5:4). To this end there is the additional problem of lack of investment in new equipment. Whilst departments are managing to stretch funds to cover all important fieldwork, the need for modern equipment relevant to work in the field has to be deferred (Pers. Comm. PA4:6).

Despite these problems, academic geographers are called upon to deal with a situation that could jeopardise the quality of the fieldwork provided (Jenkins, 1994) - in an atmosphere of accountability and value for money. In this regard, justification of fieldwork's 'added value' (McEwen, 1996), needs to be impressed upon students, staff and budget holders (Pers. Comm. PA4:5). Cuts in university funding have affected higher education across Europe, in spite of whether students are paying tuition fees, and increasingly academics are being judged on their ability to raise funds (Brock-Utne, 2002; Gardner, 2009; Mundell, 2009) through acquiring grants or funding being added to publications as a measure of academic success. Added to this is the challenge of planning fieldwork around the timetables, with other lectures

clashing with field trips and a general lack of understanding amongst those colleagues outside of the discipline (Pers. Comm. PA4:15; PA4:17).

6.5.1 Changing Needs of Staff and Students

The roles and needs of staff and students in higher education are changing. For example - fewer staff wishing to take part in fieldwork, struggling with out-of-date equipment and lack of funding and support from colleagues both inside and outside their departments. Students, particularly those with tuition fees to pay or from non-traditional educational backgrounds, are becoming increasingly consumer driven and need to work whilst studying to pay for their education and lifestyle (Chapter 2.3.3; 3.3.4). In order to gain a greater level of funding for fieldwork, a clear purpose must be illustrated within the curriculum. This purpose should be constantly reviewed in order that fieldwork meets the changing needs of both staff and students (Brock-Utne, 2002). When planning fieldwork, academics need to ensure accessibility for all, in line with disability legislation, which requires a high level of inclusivity. Additionally, health and safety laws require risk assessment and adequate insurance, both of which are necessary to ensure maximum safety and limit any potential for litigation (Jones, 2006; Scott *et al.*, 2006).

With regard to students, their lifestyles have changed dramatically over the past 10 years (Pawson and Teather, 2002; Pers. Comm. PA4:4) with many students working in order to pay for their studies, thereby making fieldwork inconvenient with long and residential trips increasingly less appealing (Pers. Comm. PA4:14). This trend, according to some academics surveyed, could lead to two-tier fieldwork where the wealthy students receive the benefits of long-haul international experiences compared to poorer students who only undertake a series of one day inexpensive local trips (Pers. Comm. PS5:8). This research has highlighted the average cost of fieldwork to European geography students as being €143.80 per student with the UK figure being €231.01 compared to a study by Gray (1993) who outlined the average UK figure to be £54 (approximately €60.26 – <http://www.xe.com>: 03/08/2010). These figures indicate a considerable increase in cost to students, in line with Gray (1993) who considered that by 1998 funding available to students will have begun to decrease, leaving them a greater cost to bear. Students are also under pressure to

make choices between other course lectures and their fieldwork as sessions clash, leading to added stress due to missed study time (Pawson and Teather, 2002; Fuller *et. al.*, 2003; Pers. Comm. PS5:7). Additionally, there are now more mature students in higher education and such students have added outside pressures to consider (Pers. Comm. PA4:4). Quite often these needs outweigh the value of fieldwork for them (Jenkins, 1994; Pawson & Teather, 2002; Fuller *et. al.*, 2003), for example those with families will have to arrange child care etc. These points have also been raised by the students surveyed who comment on the problems of taking time off work, family commitments and timetable clashes (Pers. Comm. PS5:7; PS5:8). In addition, one student focus group highlighted that whilst in some countries with little or no tuition fees (e.g. Italy, Poland and Germany) students' still balanced education with work. This was in order to gain personal spending power, often driven by their aspirations to own the latest technology and fashion items (Pers. Comm. PS7:2).

In the UK, where students increasingly take on a high level of debt through student loans, employment helps towards their cost of living. Additionally, students are aspiring to a higher standard of living (Pers. Comm. PS7:7; PS7:8) which is reflected, certainly in the UK, by the increased level of 'luxury' in modern student accommodation built by universities. One example of this is the recently opened, purpose-built, complex 'Spitalfields', London, which has been designed to compete with the standards in the USA where customer services and comfort are to the forefront. This complex provides flat-screen TVs, telephone, internet access and in-room cleaning and laundry services although at a cost of £10,000 per year is aimed at wealthier students particularly those from overseas who are already paying large tuitions fees (Barford, 2010). These developments could be seen as a further example of the so called 'two-tier' education whilst highlighting the increasing aspirations of students studying in UK. This situation is somewhat ironic considering the increasing level of debt for many students paying high tuition fees, yet students have greater expectations and aspirations in life (Pers. Comm. PA7:1; PS7:7; PS7:9) which could be said to be driven by increased globalisation and a consumer society.

Opting out of residential fieldwork from a geographical education point of view lessens the student experience as residential fieldwork in particular provides

opportunities for an embodied experience, where students are in a position to eat, drink and sleep fieldwork (Nairn, 1996) using their skills and knowledge and applying all the senses to their experience of the field (Nairn, 1999). Indeed, many academics (Davis, 1920; Berry, 1997; Robson, 2002; Elwood, 2004; Nairn, 2005; Lee and Ingold, 2006) outline the importance of an embodied fieldwork experience in students becoming geographers. A fieldwork where all the senses are stimulated is important in understanding geographical phenomena (Davis, 1920). Whilst it is assumed observation leads to knowledge, fieldwork should also provide students with an understanding and experience of 'other' challenging student perspectives (Elwood 2004; Robson, 2002). No amount of virtual fieldwork can replace such experiences particularly as embodiment often is unpredictable; for example, a student may remember their field site because as they observed the landscape they were too hot, too cold or too tired (Nairn, 1996).

Considering the type and frequency of fieldwork across Europe, many universities have offered one-day fieldtrips and, in some instances, a variety of local, national and international options are available. Whilst accommodating the changing needs of students by providing a range of suitable fieldwork, it should also be considered that the nature of geography as a discipline should alert students to be prepared to undertake a level of compulsory fieldwork (Maguire, 1998) as indeed many universities outline fieldwork in their prospectuses as a selling point and a beneficial feature of their geography courses (HMI, 1992; Williams *et al.*, 1999; Abbott, 2006).

6.5.2 Staffing Issues

Importantly, whilst overwhelmingly academics support fieldwork and have clear views on its usefulness and place within a geography degree, a number of academics surveyed commented on issues with staffing and general lack of support from colleagues. As outlined in Chapter 5, these comments were not made lightly and those academics with concerns had sufficient experience as educators to highlight these problems. Staffing levels were of concern (Pers. Comm. PA4:4; PA4:14) and together with issues of budget, safety and student behaviour have the ability to impact significantly on the amount of fieldwork undertaken (Pers. Comm. PA4:1;

PA4:4). Student safety and behaviour will be considered in more depth later in this chapter.

Staff availability due to increased responsibilities and reduced staffing levels in some universities has impacted on the willingness of colleagues to undertake out-of-hours fieldwork for little or no financial gain or credit considering the additional workload undertaken (Higgitt, 1996; Walters, 2003; Pers. Comm. PA4:10). This is supported by a UK survey by Her Majesty's Inspectorate (HMI, 1992) at which time only a third of universities provided remission for staff undertaking fieldwork teaching and such allowances were often less than the actual time spent. Also Nairn *et al.* (2000) outline academics' lack of recognition despite defending the continuance of fieldwork in higher education geography. Additionally, the HMI report found a quarter of university geography departments made no such allowances to recognise staff commitment to fieldwork despite it being considered to be one of the most resource-intensive methods of teaching (Gold *et al.*, 1991). There is concern that fieldwork is becoming unsustainable due to the changing pressures on academics' time (Boyle *et al.*, 2007). One academic from Belgium commented that colleagues were more interested in theory and therefore did not feel it necessary to take students on fieldwork (Pers. Comm. PA4:2), for example academics in Ireland and Germany highlighted their issues as being:

“Not all members of staff are willing to commit the necessary resources to further develop fieldwork, but some improvements have occurred including the compulsory work in 1st and 2nd year. This has been due to the persistence of a small number of individuals who believe in the central role of fieldwork.” (Ireland: RA55)

“Travel and housing costs, appropriate fieldwork material (e.g. instruments for measurements); preparational work takes a lot of time which is not included in our official time budgets (so we do it in our free time at the weekends).” (Germany: RA14)

The situation where academics prefer teaching theory to fieldwork could in fact reflect another issue raised by those surveyed for this study; the lack of expertise, due

to aging staff being replaced by a younger generation with less experience of the field, as outlined by an academic in Denmark discussing constraints on fieldwork:

“Budgets, less time/resources for preparation, aging of staff. Maybe also a diminishing interest in empirical work in comparison with theoretical work - (fear of empiricism).” (Denmark: RA51)

There is also a concern that teacher trainers are not being provided with sufficient overseas fieldwork within their training which leads to a decrease in the understanding of ethnicity and use of negative stereotypes passed on through their own teaching which can result in students lacking empathy and not questioning previously held beliefs (Bulman and Rice, 2004). This situation can also impact on higher education teaching staff with them having less experience themselves in fieldwork, therefore being unlikely to include it as an important element of their own teaching.

Crucially, a combination of these factors could be seen as an ideal excuse for increasingly over-stretched academics to cut down on the type and duration of fieldwork offered despite their students considering it a vital aspect to their studies.

6.5.3 Student Behaviour

This section has been referred to as ‘unrecorded issues’ which notably investigates in particular student behaviour on fieldwork as an unpublished but not necessarily un-discussed issue within fieldwork.

There is considerable academic writing on the challenges of student behaviour in the school classroom (Miller, 2003; Morgan 2009; Apter *et al.*, 2010; Hulac and Benson, 2010; Gilles, 2011) and providing ways in which to deal with it. However, the incidents of poor behaviour within higher education are not so commonly written about. Furthermore, student behaviour on fieldwork is something that is hardly touched upon in academic writing and when it is the statements are ambiguous, for example outlining student behaviour or poor behaviour and risk without expanding on the meaning of ‘behaviour’ (Cook *et al.*, 2006). The alternative viewpoints of

fieldwork are outlined by Gardiner *et al.*, (1996) who contend that the student attitude to fieldwork is that of it being an opportunity for ‘fun and late nights’ whilst the public opinion of fieldwork sees students ‘having a good time’ (Table 3.1). Questionnaire responses and discussions were similarly ambiguous:

“...[enjoyment of fieldwork] Sometimes yes, sometimes no, depending on the composition of the students’ group. If they are interested in the common work, in the theme of the fieldwork, then yes.” (Hungary: RA68)

“...good grounding in 1st year instils expectations for all subsequent field trips. They need to understand risks and behaviour.” (UK: PA1:1)

“...students do not always do as asked, do not follow safety rules which impacts on all concerned.” (Belgium: PA4:1)

“...not everyone is good to work with...some don’t want to be there and it spoils the experience for others.” (Netherlands: PS4:9)

Where academic geographers meet and discuss fieldwork such experiences are recounted but never put to paper formally, other than in a passing statement under the umbrella of ‘student behaviour’. This is something that academics, and students to some extent, are very much aware of. Responses from focus and discussion groups and some research questionnaires support this area of concern (see 5.4.2.2 – Student behaviour, pp. 119-208).

Behaviour can impact on the rest of the cohort creating a disruption in learning (Jones and Philp, 2011). In an era of value for money, staff not managing to address students efficiently and effectively curtailing further disruptions can be seen in a poor light by fee paying students (Young, 2003; Alberts, 2010; Jones and Philp, 2011). Whilst disruptive or poor behaviour is subjective, writing in the USA has included highlighting challenging behaviour in college students (higher education) with professors particularly concerned by increased hostility, complaints and comments of a personal nature being made by students. Informality in the classroom has led to a general absence of respect for academics and peers and is coupled with a

lack of punishment within the college system for poor behaviour (Alberts *et al.*, 2010).

Similarly, general behaviour of higher education students has now been reported in the UK with students being reprimanded for various misdemeanours including excessive drinking, drug taking and harassment. In 2007 UK universities gave almost 2,000 students formal warnings as a result (Paton, 2007). One report outlines that 29% of academic staff have witnessed verbal abuse, and 27% offensive language, aimed at other students with incivility considered to be increasingly impacting on academics and students alike (Attwood, 2009).

If such poor behaviour is said to be increasing generally in higher education, with examples outlined in academic text and higher education writing, why then is it not publically said to be occurring in geography fieldwork? The fact that most university geography departments publish a code of behaviour for fieldwork could be seen to indicate a problem, which is supported by comments made during the course of this research.

As a result of this and following personal communications, questionnaire results and discussion/focus group feedback, it was deemed appropriate to follow up the issue of student behaviour during fieldwork to discover how widespread this was in Europe and the impact on both academics and students.

Individual personal e-mails to selected academics and students provided responses from 14 European countries (Table 5:12). Many of these responses highlighted issues of student behaviour with regard to heavy drinking (in some cases drugs) and partying in hotel rooms with a general attitude of being on holiday rather than away working as part of their degree course. Staff members considered that they spent too much time policing such fieldtrips and some commented that they were changing the provision of fieldwork in order to minimise such incidents; for example an academic in Italy outlined that fieldwork has been reduced to day trips only and the working day was extended in order to minimise time available for drinking (Pers. Comm. by e-mail); similarly it would seem this has also been adopted in some departments in the UK and Netherlands.

There is clearly an unrecorded issue here regarding fieldwork, and student behaviour is an additional constraint on the continuation of fieldwork at current levels. The reasons, however, for not clarifying this behaviour, or admitting to such problems, specifically in academic writing and questionnaire responses, is interesting and complex. It raises questions about the reasoning behind this omission, i.e. is behaviour to some extent ignored by departments as they worry about funding being withdrawn from the fieldwork budgets or indeed a blanket ban on fieldwork due to the element of risk to others? Are staff members not reporting incidents as they fear appearing to colleagues and management unable to keep order and deal with problematic situations (Alberts *et al.*, 2010)?

Academics clearly indicate the importance of fieldwork in their teaching and as being central to the discipline of geography; this could be an explanation for not focusing on the incidents of poor behaviour. Additionally, it should be remembered that such behaviour would vary between cohorts where the majority of the students are keen and happy to work but the few disruptive members of the group spoil the experience for all and last in the memory. Despite this, at a time when a compensation culture is expanding across Europe, there is an increased risk of legal action being taken against universities should disruptive students create dangerous situations for group members during fieldwork. Whilst the majority of universities clearly stress the importance of fieldwork safety and risk, asking students to sign a declaration regarding appropriate behaviour during fieldwork, by some is seen as an empty threat as incidents are rarely taken up at a level above the department and therefore have little impact overall (Alberts *et al.*, 2010; United Kingdom – Pers. Comm. by e-mail).

Antisocial behaviour evidently disrupts teaching and learning and is rarely heard of other than anecdotally. Poor classroom behaviour is difficult enough but the same students taken into an unconfined learning arena with many distractions will not suddenly become attentive and considerate of others. Therefore, unchallenged behaviour can soon spiral into lack of respect and cooperation and such situations are not helped if the offenders are aware that the university do not deal actively with breaches in the students' code of conduct to a suitable level.

Additionally, given the financial constraints highlighted in this research and lack of support for those decision makers outside geography, poor behaviour could very much impact upon the continued support of fieldwork as a method of teaching and learning. This is particularly true where risk is a factor with any litigation caused through an inability to control, what is after all an 'adult' group, reflecting badly on the university as a whole as well as the supervising staff. There is also concern that such a situation could lead to a decrease in compulsory fieldwork with elements of risk limiting fieldwork to a somewhat unadventurous and restrained investigation (Table 3.2) (Foskett, 2004). Already academics are outlining student behaviour as a move away from their traditional style of fieldwork. These highlighted so called 'unrecorded' incidents would benefit from additional research.

Leading directly from behaviour is a further but linked aspect of fieldwork; the issue of students increasingly behaving as consumers with raised expectations and an attitude of entitlement towards aspects of their education (Alberts *et al.*, 2010), including geography fieldwork. Discussions have revealed that some students consider fieldwork to be more of a holiday than a learning experience:

“...concern about residential trips with students mistakenly thinking they are on holiday.” (Ireland: PA4:4)

“...sometimes student don't want to learn and yes think it is a holiday and not serious work.” (Netherlands: PA4:10)

This is not helped by university prospectuses increasingly using the exoticism of the fieldwork they offer as a marketing ploy to draw students to their institutions to study geography (Lomas, 2007). The costs of such exotic fieldwork are considered to be unfair (Kent *et al.*, 1997) leading to a divide between wealthier and poorer students; whilst those students paying for expensive fieldwork expect to receive value for money (Kent *et al.*, 1997).

Increased tuition fees, particularly in countries such as the UK, where fees in 2012 will range between £6,000 and £9,000, are changing student expectations. In Romania, increased access to other European countries is reported as having raised expectations post -1989, (UK and Romania – Pers. Comm. by e-mail), leading to a

demand for higher quality accommodation and exotic fieldwork locations with minimal cost to the students taking part. Academics have reported an increased overall lack of respect from students during fieldwork (UK, Romania, Poland and Netherlands – Pers. Comm. by e-mail) indicating a move towards a change in attitude between educators and students; where students consider themselves increasingly as the paying customers and the educators and universities the service providers.

6.5.4 *Equipment and Technological Advances*

Rapid advances in technology with increasing use of GIS, GPS and PDAs, for example, have meant that investment in new equipment in order to compete in a competitive market is necessary for many university geography departments (Pers. Comm. PA4:6). Such investment, at a time when finances are under scrutiny in higher education for providing students with value for money, can be difficult to achieve. There is concern that a combination of these obstacles could endanger 'traditional' fieldwork (Butler, 2000). Both academic literature and the results of this research show that teaching aids such as slides and virtual reality are considered by the majority to be no replacement for fieldwork (Haigh and Gold, 1993; Lai, 1996; Stevens, 2001; Pers. Comm. PA4:2). A lack of traditional fieldwork in geography degrees could have the effect of producing a generation of future educators who are inexperienced and lack fieldwork skills themselves, leading to a loss of confidence in teaching in the field and less willingness to undertake such methods. Ultimately, this situation could impact on future generations of geographers for many years to come (Butler, 2000).

The emergence of new technologies is becoming a vital part of geography fieldwork in higher education and impacts on the place of 'real world' study in fieldwork (de Blij, 1990; Maxfield, 1997). Whilst technology, it could be argued, has always been central to geography education (Driver, 1995) advances in satellite imagery, and digital elevation models made possible through GIS, are changing geography education significantly (Brierley *et al.*, 2006). This research shows that academics would use such technology if fieldwork were impossible or to enhance teaching, but not as a replacement, although the overall results confirm that experience gained

working in the field cannot be replaced by either technology or other methods of teaching. However, the speed of technological advances makes it difficult for departments to keep up with the latest developments (Xirgo-Tarres, 2009). The cost to departments in updating fieldwork equipment and providing relevant updated technologies is high and of concern to some academics, particularly as students increasingly expect to be trained in the use of modern equipment (Pers. Comm. PA4:6), for example:

“The fieldwork would be very useful if we had better conditions (equipment, accommodation) on a fieldtrip.” (Bulgaria: RS123)

“Acquiring field practice, applying field tools and modern equipment is very important in our profession.” (Hungary: RS309)

“It is important that you watch and you learn the way that you have to work as a geographer scientist. You learn to use technology to real situations.” (Greece: RS141)

Such expenditure is not always possible as departmental budgets are finite and in some cases less fieldwork has been reported by academics due to the cost of renewing and updating equipment:

“Economic constraints [to fieldwork] principally and relevant and updated equipment that can be expensive.” (Sweden: RA61)

This is supported by Boyle *et al.*, (2007) who argue that the cost of improving technology leaves fieldwork underfunded leading to more classroom based activities through the use of GIS and virtual fieldwork.

6.5.5 Teaching Time and Timetabling

Lack of understanding from colleagues in other departments and the clash of timetables (Pers. Comm. PA4:15) can influence the frequency and length of fieldwork and is cited by some academics as a constraint on fieldwork:

“Time, money, human resources, timetabling restrictions.” (Ireland: RA55)

“Budgets, availability of teaching staff, lack of understanding from the other university departments as to the particular position of fieldwork in geography.” (Denmark: RA51)

This situation was raised by students in one focus group, who found it unreasonable to have fieldwork clashes with other topics/lectures. Within this group one student had to choose between a revision lecture prior to examination or fieldwork (Pers. Comm. PS5:7) and is supported by academics in this study, for example:

“Sometimes other colleagues do activities the day of the fieldwork and they are also compulsory. And pupils divide into the activities and fieldwork. Then not all of them take profit of the opportunity of going to fieldwork.” (Spain: RA41)

Conforming to the Bologna Declaration has also been seen by some as impacting on teaching time (Brock-Utne, 2002) and fieldwork. Longer degrees now have to conform to the 3+2+3 Bologna system (Gardner, 2009), and this has resulted in less teaching time, student contact and in some cases the provision of fieldwork. This is ironic given that the aims of the process are to enhance employability, with geography fieldwork ideally placed to provide such transferrable skills (Vodenska, 2000):

[Less fieldwork because] “Bologna does not enable fieldwork because they takes time and other resources. Unfortunately.” (Finland: RA11)

Academics in Bulgaria and Romania report reduced funding, teaching hours and student contact time, all of which have impacted upon fieldwork (Vodenska, 2004; Dumbraveanu and Dumitrache, 2007). Conversely, academics in both Slovenia and Slovakia, as they moved towards European Union membership, found they had gained teaching time, allowing more opportunities for fieldwork (Tolmaci and Tolmaciova, 2003; Lipovsek, 2003). The same too is true of Malta where academics took the opportunity, when overhauling their courses and conforming to the 3+2+3

system, of including more opportunities for credits through fieldwork, thereby improving the acquisition of transferrable skills so important to Bologna (Schembri and Attard, 2007). Overall, in spite of the Bologna Process being European-wide, many 'eastern' European countries have found the transition to the European Higher Education Area complex and financially difficult as many countries have suffered from previous underinvestment in addition to both low staff pay and lack of funds for research (Vasutova, 1999; Salna 2000; Vodenska 2004). This is supported by comments from many academics surveyed that cite finances as a major constraint on fieldwork, including:

“Money.” (Estonia: RA9)

“A lack of funds.” (Poland: RA36)

“Finances (100% from the students pockets - also teachers/assistants have to find sources to cover their expenses!)” (Slovenia: RA23)

[Less fieldwork] “(1) Because the financial assistance is less year by year but the life is more expensive year by year. (2) Because the curricula must follow these tendencies therefore the prescribed time for fieldwork is decreasing.” (Hungary: RA68)

6.6 Conclusion

This chapter has reflected upon the results of the data collection from European geography academics and students and their perspectives of fieldwork within higher education. Fieldwork is considered important within geography and is an enjoyable method of teaching and learning; in addition it provides both subject specific and generic skills which are important to employability and link to the Bologna Declaration and the creation of the EHEA. The needs of staff and students are changing rapidly and there are now many constraints on the continuation of fieldwork at previous levels including financial, staffing and student behaviour. Despite the many problems students face with increasing costs, having to work in

addition to study etc., fieldwork is still considered by them to be extremely important to their studies.

Chapter 7 will briefly summarise the main findings of this research providing an overview of the perspectives of both academics and students with regard to the role of fieldwork in European higher education. Additional themes including the overall lack of benchmarking across Europe, the 'unrecorded' issues within geography fieldwork, increased technology and Bologna are outlined. Finally an indication of the future of fieldwork will be provided together with suggestions for future research.

Chapter 7 Conclusion: Geography Fieldwork in European Higher Education

7.1 Introduction

This research set out to create a record of the current state of contemporary European geography fieldwork, providing a critical analysis of its role within geography higher education and its diversity. The impact of the Bologna Declaration in creating a European Higher Education Area by 2010 was instrumental in providing insight into the changes taking place in European higher education and, in particular, whether fieldwork as a central element of geography degree courses, was affected. Geographical knowledge is of course central to the making of a 'geographer' (Stoddard, 1986) therefore the gaining of such knowledge through fieldwork should be paramount to all students undertaking a geography degree.

In order to contextualise geography fieldwork in European higher education, two questionnaires were designed targeted at geography academics and students in order to gain insights into their perceptions of geography fieldwork. Academics were questioned on their teaching and students on their learning, with 27 European countries surveyed (A3.1).

A large number of responses from both higher education academics and students from across Europe have benefited this research. It is the first survey of this kind, on such a large scale, providing insights into perspectives on fieldwork. These data, in the form of questionnaires, were received from 72 academics and 340 students and have been supplemented by focus and discussion groups in addition to personal communications via e-mail; thereby allowing for triangulation of the resulting data. The use of thematic analysis as a methodology has provided a data driven report on the perspectives on fieldwork from both academics and students in European geography higher education, whereby their responses have been highlighted to create the main themes presented in this thesis.

7.2 Bologna

Despite moves to create the EHEA by 2010 through the Bologna Process, this has clearly not been fully achieved to date. Europe-wide academics discuss moving towards Bologna and students experience varying years of study which do not conform to the 3+2+3 cycle stipulated. In addition, post graduate students report problems when moving to other countries for Master's and PhD studies and more importantly their qualifications are not always being recognised. These instances have led to additional study, or examinations, being required before undertaking their post graduate courses.

Universities are struggling to shorten their courses to fit the Bologna cycle with academics citing lack of student contact time and, in some cases, reduced time for fieldwork arising from this.

Higher education changes such as Bologna are very important to the future of both higher education and academic geography. The aspect of mobility could well see a move away from individual country geographical traditions towards a new 'geographical tradition of Europe' as more students experience geography education and fieldwork in other countries building upon and merging with their existing traditions. However, there is the problem of shortening existing degree courses. Countries such as France and Spain protested against the move away from the 'Humboldtian' tradition of contemplation and critical thinking, seeing Bologna as watering down the academic experience, with courses on offer becoming too short and too similar.

7.3 Perspectives of Academics

Academics from institutions in 27 European countries (A3.1) with experience as educators ranging from 1-45 years provided a total of 32 subject specialisms from their questionnaires (A3.2), highlighting the multi-disciplinary nature of geography.

A wide variety of fieldwork was offered providing European geography students the opportunity to gain all important field skills. Whilst the Bologna Declaration strives

to increase employability through improved skills acquisition, a lack of compulsory fieldwork in some countries and institutions was highlighted and could lead to a gap in this knowledge (Table. 5.3).

Fieldwork, as a method of teaching and learning, was thought to be more important for physical geography teaching, however, many academics from all parts of the discipline clearly considered it an essential element of their teaching. Overall, this is reflected by the number of academics who, although suggesting alternative teaching methods should fieldwork be impossible, stressed these methods were no substitute for first-hand experience in the field. All but one academic agreed that fieldwork was valuable in the gaining of geographical knowledge.

Many constraints on fieldwork were outlined by academics (A3.14), most notably finances and staff time and availability being key elements from the results. Finances were also stressed as an issue regarding the amount of fieldwork currently undertaken and in some cases there is a constant need to legitimise fieldwork at current levels. Staff motivation was suggested as a reason for more fieldwork being taken at some universities but this, of course, also worked with a negative result for those institutions undertaking less fieldwork where colleagues were considered unmotivated and unwilling.

7.4 Perspectives of Students

Students also represented 27 countries from 45 universities, the highest proportion of these studying at undergraduate level (A5.2). Despite the introduction of Bologna, students providing their year of study cited a variety of years: bachelor's 1-7 years; master's students 1-10 years and PhD students 1-6 years. This indicates a notable gap, particularly in bachelor's and master's degree students, in conforming to Bologna. The length of study could, however, also be considered from another perspective, as some students study part-time for their degrees, thereby doubling their years of study. The good health of European geography fieldwork was evident from the number of fieldtrips carried out by students with the majority of students (94.7%) undertaking between 1-5 trips in the previous 12 months. However, it should be noted that a large proportion were one-day fieldtrips (Table 5.8).

Significantly, whilst students outlined disadvantages to fieldwork including: clashing with outside commitments such as family and work; financial costs; poor organisation by staff and out-dated field equipment, they overwhelmingly supported fieldwork as a method of learning. Students perceived fieldwork as being central to their studies as a means of experiencing the 'real world' and converting theory taught in the classroom into practice in the field. In addition, 17.9% of students clearly understood that fieldwork provided them with an opportunity for deep learning which is supported by academic writing (Bradbeer and Livingstone, 1996; Dykes *et al.*, 1999; Fuller *et al.*, 2003 and Drummer *et al.* 2008).

A wide range of subject specific and generic skills were outlined by students as being gained through fieldwork indicating a clear understanding of the added employability value of fieldwork (A5.8). The knowledge of the importance of such skills is particularly interesting in relation to the aims of Bologna. However, students omitted to mention any level of interdisciplinarity within their fieldwork which indicates this method of working is not yet embedded in the fieldwork experience; creating a skill gap. Despite student understanding, academics in this survey provided few examples of fieldwork as a means of affording transferable skills to students. This disparity in the results is interesting as it is not clear where the students gain the information regarding skill acquisition if the academics teaching them place relatively little importance on them as an outcome of fieldwork education.

Unquestionably, students enjoyed fieldwork and considered it an ideal platform for experiencing theory into practice whilst providing an opportunity for social interaction with peers and lecturers.

7.5 Geography Benchmarking

In considering UK benchmark statements, it was interesting to note that there is nothing currently that resembles the UK standard and situation in other European countries. Whilst the Netherlands have a national benchmark statement for geography, fieldwork is not a compulsory part of this. Finland and Slovenia however, envisaged fieldwork becoming a compulsory part of higher education geography under Bologna in order to achieve comparability of degrees. Research

also concluded that few European geography associations and societies championed fieldwork unlike the case in the UK with the RGS-IBG and GA. Furthermore, if so little importance is seen to be given to fieldwork by geography associations and societies, there is no way for them to justify to government and curriculum designers the importance, contribution and centrality of fieldwork to the discipline as a whole.

7.6 Other Issues of Geography Fieldwork

Academics and students mentioned, in questionnaire responses and discussion group sessions, the poor behaviour of some students whilst on fieldwork. There is little academic writing on this aspect of fieldwork although mention is made of 'unacceptable student behaviour' or 'student behaviour' (Gardiner *et al.*, 1996; Cook *et al.*, 2006 and Alberts *et al.* 2010). The fact that this is mentioned at all indicates a possible problem. Further investigation highlighted that there is an unrecorded and hitherto unpublished element to fieldwork with academics providing clear examples of how fieldwork can go wrong, although stressing it is a minority who spoil the experience for all. Such incidents of poor behaviour are leading to changes in the structure of fieldwork undertaken, namely, cutting down on residential fieldwork, only having residential fieldwork at more remote dedicated field centres (away from the public) and reducing fieldwork to one-day excursions.

These experiences have undoubtedly deterred some academics from undertaking traditional levels of fieldwork as they increasingly feel they spend too much time 'policing' students. Outside of departments these occurrences are evidently not usually discussed and given the financial pressures within universities, and the continual struggle to justify fieldwork at a reasonable level, such behaviour could impact significantly on the universities' opinion of its value, leading to further considerable constraints.

Behaviour issues can also be linked to academic attitudes regarding a general lack of support by colleagues to take part in fieldwork. Budget, staffing levels and increased risk heightened by poor student behaviour are all reasons which could excuse departments, and indeed academics, from continuing traditional fieldwork. There is increased unwillingness from academics to undertake out-of-hours fieldwork for

little or no financial gain or credit. However, the students, many of whom are now paying increased tuition fees, consider fieldwork an aspect central to their geography degrees. Cutting fieldwork levels could, therefore, be to the detriment of university geography departments as students opt for universities providing courses with more interesting or exotic residential fieldwork locations. This in itself is problematic, as it has the propensity to lead to a two-tier student cohort, with the wealthier students undertaking long-haul and residential trips whilst poorer students or those with outside commitments have to settle for daytrips.

7.7 Increased Technology in Fieldwork

A further important constraint on providing fieldwork at similar levels is the growing use of technology. Whilst finances are seen as a key constraint on fieldwork provision, students are demanding a level of technology in line with modern living aspirations. Increasingly, students invest in their own levels of technology such as laptops, smart phones and tablet PCs. As a result they expect universities to provide advanced fieldwork technology as standard, and many universities are struggling to provide this equipment, given the rate of technological advancement. Investment in technology, particularly in traditionally 'Eastern' European countries, is seen to be detrimental to fieldwork provision; funding is finite, meaning that there often needs to be a choice between investment in new equipment or fieldwork, and student subsidy remaining at the same level. Despite this investment in the latest technology is increasingly considered to be necessary by students. This situation would also leave some universities open to criticism (as they strive to embrace Bologna and the European Higher Education Area) if they are not able to provide comparable fieldwork education, using up-to-date methods and equipment.

7.8 The Future of Geography Fieldwork

The duality of this research, into European higher education geography fieldwork, within the frame of the transitional period of legislation brought about through the Bologna Process, has highlighted the interlinking of changes in the European higher education system in addition to the focus on geography fieldwork. Predicting the

future of fieldwork is therefore difficult as there are many combinations of constraints currently impacting on universities and geography departments.

Whilst unarguably academics agree wholeheartedly on the pedagogical benefits and centrality of fieldwork to geography education, they face many constraints including funding, staff availability, out-dated equipment and more recently the unrecorded aspect of student behaviour. All of these issues impact on their ability and willingness to provide traditional geography fieldwork at current levels in the future. This research has shown that fieldwork provision was relatively stable in the ten years prior to questionnaire distribution and completion (March 2006 to April 2007).

Students deemed geography fieldwork to be extremely important to their degree studies and in spite of the constraints they listed (finances, outside commitments, work, family etc.) felt it essential and central to their education. However, it appears that whilst universities seek to offer equal opportunities within their institutions this is not necessarily the case for fieldwork. Increasingly, universities are offering the option of long-haul or exotic residential fieldwork which is often beyond the means of some students leading to a situation where the wealthy have a far different fieldwork experience to poorer students.

These different aspects with regard to fieldwork provision are complex. Universities struggle with funding, as European governments reduce support for higher education. This situation, in turn, leads to universities introducing, or increasing existing, tuition fees in order to allow teaching methods, such as, geography fieldwork to continue. On the other hand, students facing such increases are beginning to demand better value for money from their courses, which includes universities providing up-to-date technology and exotic field locations. Such a situation leads to students increasingly behaving as consumers and balancing the best value when selecting universities for their studies.

7.9 Overview of Research

This research is unprecedented, in terms of its twofold aspect of perspectives of European geography fieldwork linked to the transition within higher education as it

conforms to the Bologna Declaration in creating the EHEA by 2010. The number of responses received and themes arising from these data have provided an unparalleled overview of the state of geography fieldwork in European higher education. Whilst there is widespread consent that geography fieldwork is central to the discipline, this research highlights a number of threats to its continuation at current levels including some directly related to the implementation of the Bologna Process. As such, it provides a practical insight to decision makers and educators alike in considering the delivery of fieldwork within the geography curriculum.

The research for this thesis is extensive and was carried out in the years leading to the creation of the EHEA, through the implementation of the Bologna Declaration. It would, therefore, be interesting to make a similar study post-Bologna, in the next five years, to see how things have changed as a result of its adoption.

Further topics have arisen through this research which would be interesting to pursue including:

- An investigation of the opinions of academics regarding their knowledge of Bologna, how this relates to them, and any resultant changes that might have been made to fieldwork teaching to encompass legislation and create compatibility of fieldwork teaching across Europe.
- Exploration of academic and student perspectives into student attitudes towards behaviour during fieldwork, linked to changing relationships moving from educator and students to educator and customers/clients, in a consumerist driven higher education system.
- An investigation of student behaviour on fieldwork, what do students want and value most from their fieldwork experiences?
- Further scrutiny of how fieldwork is financed and in particular who sets the budget for fieldwork within universities and how this is managed.

- An investigation into more current trends which could impact on fieldwork such as the moral issues associated with long-haul fieldwork, sustainability and the ethos towards 'green' fieldwork. This in turn, is linked to the economic downturn across Europe and increasing transportation costs.

7.9.1 Limitations

As the research progressed, any questions or themes arising from the questionnaires were suitably addressed through focus and discussion groups, in addition to e-mail personal communications with a variety of academics and students. This provided further insights and triangulation of data. Certain issues arose with regard to the questionnaires for example:

- Due to the research ethics (Appendix 1) and the anonymity of responses, it was not possible to cross-check focus and discussion group members to ascertain if they also provided research questionnaires.
- Using the HERODOT network as a basis for questionnaire distribution was extremely useful and practical, however, it should be noted that there can be disadvantages to surveying people known personally. Responses may not be completely truthful in nature (Oppenheim, 1992) as respondents may (a) worry about what they write and the impression it gives of them and (b) not want to present their institutions in a bad light. However, it was stressed that this survey was anonymous and the research ethics used ensured that this was indeed the case. Therefore, this was not seen as a major problem regarding the responses received.
- Whilst academics in focus group discussions realised the importance of skills, compared to those responding to questionnaires, this could have been due to the fact that some group members were involved in the TUNING project. Therefore, it was not surprising they would have a greater understanding of skill acquisition and employability in line with Bologna.

Despite these comments, overall this research project provides a thorough analysis and overview of the state of European geography fieldwork from the perspective of both academics and students. The investigation has been far reaching, obtaining responses from staff and students in 27 European countries, using a variety of methodologies providing sound triangulated results. Participation levels are unsurpassed for a study of this nature, with 72 academics and 340 students responding to questionnaires, in addition to some 82 academics and students participating in focus and discussion groups (Appendix 2). This research adds significantly to the current body of academic knowledge about the state of geography fieldwork in contemporary European higher education. In addition, it has highlighted several other themes for future investigation and research.

7.9.2 Recommendations

As a result of this study, the following discussion and recommendations are provided to inform European geography educators and decision makers about fieldwork and to highlight possible areas of improvement which would benefit European geography fieldwork as a whole:

Role of professional bodies and the sharing of good practice

This research has highlighted that many European professional bodies within geography and geography education have no benchmark for the practice of fieldwork within geography courses. In providing clear statements highlighting the importance of fieldwork to geography as a subject, professional bodies can increase awareness not only to their membership but to curriculum designers and decision makers. Such statements can support fieldwork as a central tenet of geography education. In addition, this could assist in creating a framework for those institutions that are part of the EHEA, providing guidance and a level of consistency in teaching and learning. Whilst, in theory, individual professional bodies could supply such information to their members and institutions, in practice this would be difficult to achieve on a pan-European level. There is currently no specific, education focused, association which links all European geography associations together, the nearest to this was the European Network of Geography Teacher Associations, otherwise known as EUROGEO. It was this association that led to the successful proposal for

HERODOT in 2002, under the Socrates-Erasmus Thematic Network Projects, funded by the European Commission (HERODOT, 2009). HERODOT specifically aimed to improve learning and teaching within both higher education and teacher training whilst addressing issues raised by the Bologna Process. It was successful in linking some 200 organisations at an international, as well as European level, and produced a benchmark statement for geography as one of its outcomes (HERODOT, 2009). In order to provide some longevity to the project and its membership, its final contribution was to set up a self-funding association of European geographers. This was achieved in 2009, through the restructuring of EUROGEO, which became the European Association of Geographers (European Association of Geographers, 2012). As a result of these changes, any links, created by this umbrella organisation that could unify geography associations across Europe, were broken.

The only other organisation that encompasses European geography associations is EUGEO which aims to encourage collaboration between scholarly geographical societies, institutes and association across Europe (EUGEO, 2010). However, a search of their web site shows no link whatsoever to education, but rather focuses on current geographical issues and talking points. Furthermore, a search of their on-line journal data base shows no entries for 'education', 'Bologna' or 'fieldwork'.

Benchmark statements are well-established, and championed, within the United Kingdom's geography associations. The Royal Geographical Society (RGS) has, for example, submitted a memorandum to a government select committee on outdoor education (RGS, 2004). The RGS also highlights benchmarking and fieldwork with regard to the global perspectives in higher education (RGS, 2006) on their web site. At secondary school level the Geographical Association (GA) includes fieldwork and benchmarking in their 'Secondary Geography Handbook' (Holmes and Walker, 2006). Both the RGS and the GA have links from their web sites to the QAA Benchmark Statement for Geography (QAA, 2007). Exploring the links to other major professional bodies in Europe, could be one way to highlight the importance of providing such statements for fieldwork, to European geography educators. However, such an intervention would be best disseminated via EUGEO who could provide a platform for higher education learning and teaching in Europe. As a result major scholarly geography associations, decision makers and educators could be kept

appraised of changes across Europe and ultimately become a forum to share good practice.

Cohesion in disseminating Bologna

It has been highlighted in this research that academics engaged in higher education geography fieldwork place little importance on Bologna. Additionally, they gave little importance to the acquisition of skills for the future employability of their students, which is central in the Bologna Process. These issues raise the question as to whether the information required to successfully take part in the EHEA is reaching those teaching at 'ground' level.

Therefore, a cohesive system should be provided through the BFUG which will provide European ministers with the means to ensure that all higher education systems in Europe work to similar guidelines with regard to the success of the EHEA. Whilst this has been an aim of the group, in practice, it appears that the implementation of Bologna had been very much centred on individual countries rather than the whole (European Universities Association, 2010). It has been commented by Labi (2010) that Bologna is over bureaucratic. To this end, despite signing up to the Bologna Process, many countries have not provided adequate information to individual higher education institutions in order to ensure success (Labi, 2010). Therefore, a method whereby ministers of education can inform senior managers in European higher education institutions of their obligations, both within their individual countries and Europe as a whole, should be prioritised. Disseminating updates and progress to staff within individual universities should be encouraged, particularly those staff members working at 'ground' level, to ensure good practice in compliance with the EHEA. The workings of the EHEA should also be embedded in curriculum design and teaching throughout European higher education institutions.

Compensation for the loss of HERODOT

To-date there is no compensation for the loss of HERODOT, or its role in promoting awareness of the Bologna Process and EHEA, to geographers across Europe. EUROGEO does not fulfil the same role as it originally set out to do; instead it focuses on individual geographers rather than representing professional bodies across Europe. European higher education geography would therefore benefit from the

creation of an overarching body through which to disseminate good practice in learning and teaching geography. Such a body, could initially be created through an appropriate avenue of funding, however, it would need to be self-sustaining in order to provide on-going support. In addition, it would need to stay on focus and not deviate too far from its initial role (as HERODOT/EUROGEO did). However, EUGEO (Association of Geography Societies in Europe) does exist and already includes 25 key geographical societies in 21 European countries. This association could therefore, be enhanced further, by including a sub-division for higher education. It would also provide a means of disseminating good practice which could filter down through individual associations to their members.

Using Exchanges for Fieldwork Planning

One solution to the planning of fieldwork within Europe could be the creation of bilateral agreements between universities (Walters, 2003; Rauhvargers and Rusakova, 2010). This would enable international exchange fieldwork, cutting down on staff time by sharing the organisation and could go some way to enable a suitable level of fieldwork for students with less time spent on preparation for staff.

Many European universities cooperate on a bilateral basis with other institutions of higher education. These are also extended internationally to countries such as the Australia, Canada, Japan, New Zealand and the USA (EACEA, 2012). Bilateral agreements are made between two institutions, in order to work on joint initiatives and create an opportunity for both student and staff mobility. Work can include exchange of staff and researchers for teaching, development of programmes of study which are mutually beneficial and exchange of good practice and research materials. In general, the agreements allow for staff exchange of two outgoing members and two incoming members for a set period each year (University of Ghent, 2012).

This research has shown that academics in Europe find time constraints and finances to be of great concern in relation to fieldwork. By planning the use of such bilateral agreements it would be possible to design and undertake fieldwork in another country through the cooperation of academics from a university in the host country. The argument is that, to organise the fieldwork locally is much easier, and less time consuming, than organising fieldwork overseas. Academics from each institution

can use the others' invaluable knowledge of their local area (Walters, 2003). The agreements can help fund staff and student exchanges whilst enhancing the students' experience of fieldwork.

Interdisciplinary fieldwork

There are many integrative skills which can be gained through interdisciplinary fieldwork which will enhance student employability (Jones and Merritt, 1999). Dewsbury and Naylor (2002) have commented that fieldwork is similar across many disciplines and it is important to understand how geographers can share the field in order to enhance research.

The diversity of geography as a subject provides a means of moving into interdisciplinary work. Firstly, by working amongst geography's disciplines and sub-disciplines (Bot et al., 2005) it allows greater insight to teams working on multi-disciplinary research projects, and secondly, bridges the gap between human and physical geography (Schoenberger, 2001). European university geography departments should aim to work together and arrange multi-disciplinary fieldwork as a starting point. Such linkages would encourage the development of cross-discipline projects opening the door for further interdisciplinarity with other subjects. For example, Jackson (1983) states, that anthropology has long been linked to geography.

Geography departments should encourage their students to engage in collaborative work with other disciplines in order to gain a holistic view. In addition, to this being beneficial to students, by combining fieldwork across departments, (for example, geography, geology, anthropology and environmental sciences) group work can be initiated across disciplines and staff can combine efforts in organisational tasks thereby reducing both time and resources.

Increased links to school fieldwork

This study has discussed the gap between schools and higher education geography. Castree *et al.* (2007), consider there to be a 'divide' between geography in schools and higher education. Many academics know little of the school curriculum but complain of its lack of relevance to current research topics (Castree *et al.*, 2007).

However, for those school pupils either wanting to move onto university to study geography, or at the crucial point of selecting their final subjects for examinations, sharing an experience with first year geography undergraduates could be important. This is supported by Edmondson *et al.* (2009) who found that university students and A-level pupils in the UK, who joined together with fieldwork, both benefited tremendously.

In joining together with schools, higher education institutions will help to bridge the gap between the two levels in addition to providing students with a worthwhile experience. Whilst school pupils will come to understand the type of fieldwork involved in geography courses, undergraduates build their confidence by being able to share the knowledge they have gained. School teachers and academics will also come to understand the issues facing transition from school to university and be able to work together to address some of the issues. This type of exchange encourages the sharing of good practice across the levels of education, whilst widening participation and enhancing student recruitment in future years.

Summary of main recommendations

On the basis of the results of this study, six key recommendations are highlighted; these are:

- The formation of an overarching association, which will oversee all European geography associations and societies, with regard to higher education teaching and learning.
- Benchmark statements for fieldwork available to all geography higher education departments for institutions within the EHEA.
- BFUG to legislate in order to ensure that the EHEA is disseminated correctly, via ministers, through to senior university management, and to educators and curriculum design staff working at the 'ground' level.

- The use of fieldwork exchange through bilateral agreements, or similar cooperation between universities and staff, which will enable a reduction in planning time and costs when designing fieldwork in another country.
- Introduction of interdisciplinary fieldwork across university departments providing students with an experience of cross-discipline work.
- Increased interaction with local schools in order to organise joint fieldwork excursions between school pupils and university undergraduates.

7.10 Conclusion

Despite the issues raised by both academics and students, regarding the provision of fieldwork, it clearly remains central to the geography degree. Fieldwork is identified as a key means of providing a wide range of employability and subject specific skills, and equipping students with key transferable skills, which lies at the core of the Bologna Process and the EHEA. Furthermore, fieldwork provides deep learning allowing students to apply theory into practice, and is therefore considered to be an excellent method of teaching and learning. The European institutions surveyed offered a variety of fieldwork to their students with a mix of non-compulsory and compulsory field trips, although the lack of compulsory fieldwork could impact on skill acquisition within the geography degree.

Although fieldwork has many benefits the biggest area of concern to academics is funding, as students driven by a consumerist society, increasingly expect value for money and the availability of the latest technology. Linking fieldwork to the EHEA and highlighting its benefits will go some way to encourage continued financial support from senior management and budget holders, in sustaining fieldwork and its centrality to the discipline.

The creation of a clear benchmark statement for European geography, in consultation with educators, employers and geography associations would benefit academics at 'ground' level in their design of courses and programmes. Such a benchmark could be used as a guide for course and curriculum design, in addition to assisting academics through identifying good practice. The quality of fieldwork offered to

students must become comparable across the EHEA in order for mobility to work, making the wide use of benchmark statements important.

This research has shown that academics have not been engaging in the Bologna Process, and therefore, are not in compliance with the recommendations to ensure the success of the EHEA. Bologna is the frame in which these academics are working and yet they do not understand how this fits in with the fieldwork they provide to their students. One explanation for this is that the information is not being fed down from senior management level to those working on the 'ground'; as universities themselves are closely linked to the changes taking place through the European University Association.

Already the USA is undertaking TUNING, and the BFUG are discussing internationalisation of the Bologna Process. Lessons can be learnt from the responses of the academics in this study as those working on the 'ground' are not actively complying with the process whilst their senior managers are. Despite the EHEA having been created, academic geography has not taken into consideration the process as a whole, particularly with regard to comparability. Whilst the comparability of degrees has been focused on across European universities, in order to create mobility and ensure high quality education for all students, it would seem that geography fieldwork has been overlooked. There is no legislation, specifically aimed at geography fieldwork, to make it comparable across European universities. However, given the acquisition of skills attributed to this style of teaching and learning, benchmark statements would ensure that learning outcomes were comparable, no matter which country a student decided to study in. Therefore, the creation of the EHEA through the Bologna Process has not been reflected in the delivery of fieldwork overall. Consequently, there is room for much improvement in the dissemination of the process, not only amongst the senior university management, but beyond, to the wider academic community.

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Liverpool Hope University Ethics Form

Liverpool Hope University's Ethics Clearance Form

RECRUITMENT OF PARTICIPANTS

How will the participants in the study be selected, approached and recruited?	<i>Participants were selected through network contacts and approached either in person or by e-mail. Participants to be academics and students of geography in higher education.</i>
How many participants will be recruited and of what age group?	<i>Questionnaires from academics and students were requested from each European country. Each academic geographer questioned was requested to ask their students to complete the student questionnaire. (Questionnaires received from: 72 academics and 340 students)</i>

CONSENT

Is written consent to be obtained? *No*

If no written consent is to be obtained EXPLAIN WHY
A covering e-mail was distributed with a copy of the academic and student questionnaires. The e-mail explained what the information was for and that it would be used in a thesis. Completed questionnaires were returned by those who wanted to take part.

Have any special arrangements been made for participants for whom English is not a first language? *Yes*

If yes, give details
In some instances the questionnaires were translated verbally in order that non-English speaking colleagues could complete the questions. Some questionnaires were returned completed in languages other than English and these were translated for inclusion.

Additional Information:

This research was undertaken before an Ethics Clearance Form was a necessary component. However, ethical considerations were taken into account prior to the questionnaires being distributed and all respondents were informed of the purpose and use of any information supplied to me. The questionnaires were anonymous.

The following e-mail text was sent to my contacts across Europe:

"I am writing to ask you for your help. I have now begun research for my MPhil/PhD and am looking for academics who currently teach fieldwork to complete my attached questionnaire. Additionally, I am looking at the attitude of students towards fieldwork and would be grateful if the attached student questionnaire could be circulated for some of your students to complete. As this will be a European comparison I am trying to obtain samples from as many countries as possible.

Questionnaires are anonymous and the data collected will be included in my doctoral thesis.

If you do not teach fieldwork I would be extremely grateful if you could forward this e-mail to one of your colleagues.

Questionnaires can be completed electronically and returned by e-mail or alternatively posted to the address below."

CONFIDENTIALITY

Will the study data be held on a computer? *Yes*

If yes, will the relevant Data Protection Regulations be observed? (e.g. will data be kept under secure conditions so that it will not be accessible, interpretable, and used by individuals outside the project?). Give details of the steps you will undertake to ensure data security:

Questionnaire data is anonymous; there is no way to link responses to an individual. The data is stored on a laptop which is password protected and copied to the university 'I' drive, also password protected.

Questionnaires sent by e-mail were printed off and the e-mail deleted so that there is no way to link to the questionnaire to an individual through e-mail access.

Will the study include the use of any of the following?

Audio/video recording

Yes

Observation of participants

No

If yes to either, how are confidentiality and anonymity to be ensured? What arrangements have been made to obtain consent? Please state how audio/video recording will be destroyed/neutralised at the end of the study:

One focus/discussion group was recorded as MP3. Prior to the session permission was asked to record and before the discussion commenced consent was recorded verbally. Transcription did not include names, just countries and the file deleted after use.

Focus Groups/Discussions: Summary Notes

Coding:

PA = Participant Academic, followed by group number and participant number
 PS = Participant Student, followed by group number and participant number

Group	Academic/Student	Country	Focus Group /Discussion
Group 1			
Barcelona, Spain - November 2006			
<i>Enjoyment of fieldwork</i>			
PA1:1	Academic	Bulgaria	Discussion
PA1:2	Academic	Germany	Discussion
PA1:3	Academic	Germany	Discussion
PA1:4	Academic	Malta	Discussion
PA1:5	Academic	Netherlands	Discussion
PA1:6	Academic	Poland	Discussion
PA1:7	Academic	Romania	Discussion
PA1:8	Academic	UK	Discussion
PA1:9	Academic	UK	Discussion
Group 2			
Valletta, Malta - March 2007			
<i>Importance to becoming a geographer/Skills</i>			
PA2:1	Academic	Bulgaria	Discussion
PA2:2	Academic	Lithuania	Discussion
PA2:3	Academic	Malta	Discussion
PA2:4	Academic	Malta	Discussion
PA2:5	Academic	Netherlands	Discussion
PA2:6	Academic	Netherlands	Discussion
PA2:7	Academic	Poland	Discussion
PS2:1	Student	Netherlands	Discussion
PS2:2	Student	Netherlands	Discussion
PS2:3	Student	Poland	Discussion
Group 3			
Stockholm, Sweden - September 2007			
<i>Importance of fieldwork</i>			
PA3:1	Academic	Austria	Discussion
PA3:2	Academic	Austria	Discussion
PA3:3	Academic	Czech Republic	Discussion
PA3:4	Academic	Estonia	Discussion
PA3:5	Academic	Germany	Discussion
PA3:6	Academic	Greece	Discussion
PA3:7	Academic	Spain	Discussion
PA3:8	Academic	Spain	Discussion
PA3:9	Academic	United States	Discussion
PS3:1	Student	Germany	Discussion
PS3:2	Student	Lithuania	Discussion

Group 4	Sibiu, Romania - October, 2007		
	<i>Issues/Saving fieldwork</i>		
PA4:1	Academic	Belgium	Focus Group
PA4:2	Academic	Greece	Focus Group
PA4:3	Academic	Greece	Focus Group
PA4:4	Academic	Ireland	Focus Group
PA4:5	Academic	Italy	Focus Group
PA4:6	Academic	Lithuania	Focus Group
PA4:7	Academic	Malta	Focus Group
PA4:8	Academic	Netherlands	Focus Group
PA4:9	Academic	Netherlands	Focus Group
PA4:10	Academic	Netherlands	Focus Group
PA4:11	Academic	Romania	Focus Group
PA4:12	Academic	Romania	Focus Group
PA4:13	Academic	Romania	Focus Group
PA4:14	Academic	Spain	Focus Group
PA4:15	Academic	Spain	Focus Group
PA4:16	Academic	Spain	Focus Group
PA4:17	Academic	Turkey	Focus Group
PS4:1	Student	Poland	Focus Group
PS4:2	Student	Poland	Focus Group
PS4:3	Student	Poland	Focus Group
Group 5	Liverpool, UK - June 2009		
	<i>Disadvantages of fieldwork/Issues</i>		
PS5:1	Student	Bulgaria	Focus Group
PS5:2	Student	Czech Republic	Focus Group
PS5:3	Student	Hungary	Focus Group
PS5:4	Student	Hungary	Focus Group
PS5:5	Student	Hungary	Focus Group
PS5:6	Student	Hungary	Focus Group
PS5:7	Student	Hungary	Focus Group
PS5:8	Student	Netherlands	Focus Group
PS5:9	Student	Netherlands	Focus Group
PS5:10	Student	Romania	Focus Group
PS5:11	Student	Romania	Focus Group
PS5:12	Student	Romania	Focus Group
PS5:13	Student	Romania	Focus Group
Group 6	Discussions on this topic at various events		
	<i>UK/Europe/USA comments</i>		
PA6:1	Academic	Australia	Discussion
PA6:2	Academic	Ireland	Discussion
PA6:3	Academic	Turkey	Discussion
PA6:4	Academic	United Kingdom	Discussion
PA6:5	Academic	Turkey	Discussion
PA6:6	Academic	USA	Discussion
PA6:7	Academic	USA	Discussion

PA6:8	Academic	USA	Discussion
PA6:9	Academic/ Industry	USA	Discussion
PA6:10	Academic	Italy	Discussion
Group 7			
Heidelberg, Germany - September 2010 (group of PhD students who have all studied in more than one European country)			
<i>Funding cost of higher education</i>			
PA7:1	Academic	Germany	Discussion
PS7:1	Student	Italy	Discussion
PS7:2	Student	Italy	Discussion
PS7:3	Student	Germany	Discussion
PS7:4	Student	Germany	Discussion
PS7:5	Student	Poland	Discussion
PS7:6	Student	Poland	Discussion
PS7:7	Student	United Kingdom	Discussion
PS7:8	Student	United Kingdom	Discussion

SUMMARY NOTES FROM DISCUSSIONS/FOCUS GROUPS		
Coding	Country of Participant	Topic and Comments
Group 1		
<i>Enjoyment of fieldwork</i>		
PA1:2	Germany	Social interaction between students and tutors are important aspects of fieldwork. Gives opportunity for students to mix with peers and learn to work together through communication and team work.
PA1:5	Netherlands	Builds confidence of students in their ability as geographers.
PA1:4	Malta	Some best teaching result come through fieldwork.
PA1:2	Germany	Enjoyable way of learning for all students and helps them become real geographers.
PA1:9	UK	Good to see students grow in confidence and become more knowledgeable. Also an opportunity to get to know your students and the existing level of their knowledge and skills.
PA1:8	UK	Providing the student the opportunity to experience the field and link to their theory. Helping them move on from a touristic view to a geographer's view.
PA1:9	UK	Get real personal enjoyment from seeing students connect with the real world.
PA1:1	Bulgaria	Enjoy showing my knowledge and experience to my students.
PA1:7	Romania	Fieldwork makes students more engaged and enthusiastic about the subject.
PA1:8	UK	1st year fieldwork is crucial in creating working relationships and friendships within the student cohort which last until the end of their degree studies. Also good grounding in 1st year instils expectations for all subsequent field trips. They need to understand risks and behaviour.
PA1:1	Germany	Because I enjoy fieldwork so much and being in close contact with the landscape my enjoyment impacts on the student group and inspires them to learn. It is great for student-tutor relationships giving opportunity to know each other in a more relaxed atmosphere. Fieldwork is always fun.
PA1:8	UK	Seeing students in action allows you to assess their skills and understanding. Connecting theory to practice improves academic performance and deep learning.
Group 2		
<i>Importance to becoming a geographer/Skills</i>		
PA2:6	Netherlands	Geography is key to a skilled workforce and improved levels of citizenship in Europe - Bologna.
PA2:4	Malta	Bologna to achieve this via TUNING. We can pull out the skills geographers have to offer employers.
PA2:1	Bulgaria	Geography connects to citizenship.
PA2:7	Poland	Interdisciplinarity important for the future of geography and fieldwork, excellent way to build on skills for working cross-discipline and relating to other areas of life.
PA2:1	Bulgaria	Making connection between reason and consequences of process and change important skill for geographers that cannot be wholly taught in the classroom.
PA2:2	Lithuania	Understanding the fundamental skills in fieldwork i.e. Map reading/compass reading can't always depend on technology, i.e. GPS. Need to know the basic skills first.
PA2:3	Malta	Breaks down barriers between students and teachers providing communication and people skills.
PA2:3	Malta	Observation skills and clear theoretical grounding central to being a geographer.

PA2:5	Netherlands	Geographers need many skills within the discipline and fieldwork is the place to hone them. Students see their value through practice in the field.
PA2:4	Malta	Fieldwork enhances recognition and analytical skills. The skills gained pass to the eventual employer with geography providing a well-rounded and educated person well suited to the workplace.
PA2:2	Lithuania	Skills gained through fieldwork help employability, students learn to adapt to many situations through training in the field.
PA2:1	Bulgaria	A good geographer can work both inside and outside therefore fieldwork essential to their training.
PA2:6	Netherlands	Geographers should understand different aspects/ disciplines and be able to integrate them to answer questions. Interconnections between human and physical geography.
Group 3 <i>Importance of fieldwork</i>		
PA3:2	Austria	Can teach all the theory you like in the classroom but nothing provides the skills to become a geographer other than fieldwork.
PA3:1	Austria	Landscape and skills of interpretation cannot be taught in the classroom.
PA3:6	Greece	Whilst virtual fieldwork and use of video and photographs can be useful they should not be used in place of fieldwork but to enhance it. Nothing takes the place of first-hand experience in understanding geographical concepts and interpretations.
PA3:7	Spain	Fieldwork enhances overall learning experience of geography students. It allows for connectivity to be made between physical and human aspects.
PA3:5	Germany	Applied skills of fieldwork are crucial in becoming a geographer - it should always be compulsory to a geography degree.
PA3:4	Estonia	Technological advances should not take fieldwork from courses - it is still essential and technology cannot replace first-hand experience of the 'real-world'.
PA3:5	Czech Republic	Reduction of long-haul and residential courses to day trips can be one way around cuts in the department but no ideal - on crucial aspect of the field trip is the interaction with tutors and peers away from university - cannot always be achieved through day trips.
PA3:2	Austria	Localised fieldwork helps with costs but does not always provide the same outcomes as 'traditional' residential courses. Should always fight to ensure some part of residential courses remain even if not so frequent and back by local day-trips.
PA3:8	Spain	It is important that geographers have opportunity of direct contact with other cultures in order to understand 'other' and 'place'. You can't do this sitting in a classroom.
Group 4 <i>Issues/Saving fieldwork</i>		
PA4:4	Ireland	Lack of time available for fieldwork - too busy with other things. Difficult to arrange with current workload. Financing and staff time are big issues. Not just for fieldwork but conference attendance and purchasing texts etc.
PA4:2	Greece	Some staff do not want to take students on fieldwork so other colleagues cover this every time. But you cannot do geography with theory alone that is why we keep taking students out to the field.
PA4:6	Lithuania	As well as time constraints and finances we have equipment that needs to be updated to provide a modern learning experience. The cost of journals and books is also an issue.

PA4:14	Spain	Suitable staff are not always available to assist on fieldwork, particularly when groups are large.
PA4:4	Ireland	Large number of students makes organisation and transport etc. very difficult.
PA4:12	Spain	When groups too large it makes it impossible to get to know the students well and experience their growth. Large groups make this social interaction aspect of fieldwork impossible.
PA4:17	Turkey	Can be very tiring as it is so demanding as a method of teaching but the atmosphere and enjoyment compensates otherwise we wouldn't do it.
PA4:10	Netherlands	There is a lot of preparation by the staff which is not counted in teaching hours. Do fieldwork because enjoy it but unpaid and not easy to fit in.
PA4:5	Italy	Other departments and those who hold budgets do not understand the need for fieldwork in geography.
PA4:1	Belgium	Student safety is increasingly important and risk assessments take more time. Added to the risk is that student do not always do as asked, do not follow safety rules which impacts on all concerned.
PA4:4	Ireland	There is also concern about residential trips with students mistakenly thinking they are on holiday.
PA4:10	Netherlands	The composition of the group and dynamics is important as sometimes students don't want to learn and yes think it is a holiday and not serious work.
PA4:15	Spain	Sometime lectures clash with fieldwork and it is difficult to get other staff to understand why fieldwork is necessary. Students complain when this happens, they think we should be better organised but not it is always that easy with so many course options.
PA4:17	Turkey	Timetable restrictions are a problem. Many students have a full timetable Monday to Friday and we are forced to undertake weekend fieldwork which students argue they lose pay from weekend jobs. This is particularly true where no credit is given towards their degree course for attending. They don't necessarily want to attend just for the sake of learning something new.
PA4:16	Spain	Becoming difficult to fit in the usual amount of fieldwork to the newly designed 3+2+3 system changes.
PA4:4	Ireland	Staff and student availability - some staff don't want to take part and some students find it difficult due to outside pressures, family/work etc.
PA4:14	Spain	Some students need to work to pay for fieldwork as the costs are 100% paid by them. Staff do not get financial help either and need to pay their own expenses also don't get paid for extra hours worked.
Group 5	<i>Disadvantages of fieldwork/Issues</i>	
PS5:8	Netherlands	Fitting fieldwork in with life can be difficult; tutors try to schedule fieldwork for days when no teaching which means if you work you need to take time off.
PS5:7	Hungary	Sometimes fieldwork is at the same time as other lectures which means we miss a lecture on another topic. E.g. Missed revision lecture due to fieldwork.
PS5:1	Bulgaria	It can be a challenge and you need to physically fit.
PS5:3	Hungary	Don't always enjoy fieldwork particularly when weather is bad and travel difficult.

PS5:9	Netherlands	Enjoy being outdoors learning but topic is not always interesting and relevant but compulsory and necessary to get a mark. Particularly annoying when no credit - don't see the point in going at all.
PS5:6	Hungary	but..."You always discover something new" even if the topic is not exactly when you are interested in "it's all geography".
PS5:5	Hungary	Just enjoying working outdoors and making friends with classmates. It's nice to have a good working group and good company.
PS5:9	Netherlands	That is good but not everyone is good to work with you need people skills because some don't want to be there and don't work, spoils the experience for others.
PS5:11	Romania	You have to learn patience to deal with some people and it is a skill you get from the experience.
PS5:4	Hungary	Experiences of fieldwork are mixed some have been very good with good teachers and clear aims/assessment whilst others we are left alone to work and don't get the same level of support.
PS5:2	Czech Republic	I like fieldwork but don't think it helps me learning any better it is inconvenient.
PS5:7	Hungary	It helps with learning by seeing the things you are taught in class in the field it is a good method of learning. Stays in your mind longer because you experience it.
PS5:2	Czech Republic	We need better equipment some is very old and no money to replace it.
PS5:7	Hungary	Need to learn how to use new technology in the field not always enough equipment because it is expensive.
PS5:4	Hungary	The budget situation is bad in our department I have helped out in organising some part of fieldwork and transport and accommodation is getting more expensive and money allowed for fieldwork not increased. So that is why equipment suffers. Some departments must have to decide between amount of fieldwork they provide and the purchase of new equipment - difficult.
PS5:8	Netherlands	Fieldwork is expensive for students too not everyone can afford longer overseas trips and I have to stick with day trips so it is not so expensive for me. Trips should be cheaper then all could travel and get more experience of different places and cultures. We should all be able to do the fieldwork we would like.
PS5:13	Romania	There will be less time for fieldwork now as courses shorter. Undergraduate courses becoming 3 years long so things are crammed into shorter time.
Group 6		
<i>UK/Europe/USA: Comments</i>		
PA6:6	USA	Geography, particularly in schools failing until GIS entered the discipline. In a way it has been the 'saviour' of geography in schools. More pupils studying geography as a subject in the school curriculum leads to increased student intake and interest at higher education level.
PA6:3	Turkey	Generally educational ideas come from the USA and UK filter through to other parts of Europe certainly true of Turkey (and Italy and Ireland all commented)
PA6:2	Ireland	Whatever happens in the UK travels over the pond to Ireland eventually. "...if it is adopted in the UK it will slowly filter across the water to us - just as it filtered to you from the US" - Ireland
PA6:10	Italy	Yes, think this is the case.

PA6:7	USA	Schools blamed for an incomplete geography education in the USA however in reality the problem is the communication between schools and universities better links would solve this issue.
PA6:7	USA	Problem has been the skills set of older professors too in the USA as technology has advanced dramatically and not everyone has kept up.
PA6:6	USA	Also move away from the old system of tenure and USA faces new academics on short term contracts which ultimately impacts on teaching and stability in the departments.
PA6:6	USA	In the USA the 'no child left behind' national education policy saw the removal of social studies from the curriculum meaning geography was in effect 'left behind'.
PA6:8	USA/Europe	The new driving force in school education is spatial technology/GIS linking directly to cartography and many others areas of geography at higher education level and an increase in environmental awareness linking to environmental science and geoscience at higher education.
PA6:9	USA/Europe	Whereas previously GIS software was considered for industry and some higher education courses, more recently school and education projects have opened up to the use of GIS leading to a need for simplified software. This area is now a steadily growing part for GIS software providers, more so in the USA than the UK. However, GIS is growing across Europe as its importance to geography is increasingly recognised at school level in many European countries.
Group 7 Funding costs higher education		
PA7:1	Germany	Education is free for all as this is the only fair way to ensure all able people get a chance to study for a degree. There are many other types of courses not everyone goes for a degree. Students pay an administration fee only of around 500 euro which covers costs of library and travel etc. Many students also have a job but not because they have to pay for their degrees but to pay for their life styles, mobiles, laptops, designer clothes etc.
PS7:1	Italy	Not many student work for university they depend on their parents to keep them...some prefer to stay close to home.
PS7:4	Germany	Yes, they depend on their parents but still have jobs to have the things they want.
PS7:1	Italy	This is true but many depend on parents to get them through in Italy.
PS7:2	Italy	They do but this is a cultural thing in Italy, they still like to have their technology and particularly fashion.
PS7:7	Poland	In Poland people work for betting things too, they aspire to have technological items and travel so they are working to keep themselves in university and fund their style of living.
PS7:8	Poland	I think this is right, they do aspire to a higher living style as they compare themselves to western European students. However, this is expensive to achieve and salaries are not so high.
PS7:3	Germany	But even the wealthiest student can't keep up with the technology - it moves so fast.
PS7:8	United Kingdom	In the UK student need to pay high fees and these will probably get higher. They have student loans which do not always cover the cost of their living expenses if they are away from home. Most have jobs to pay for their living costs as well as luxury items.
PS7:9	United Kingdom	How many students have you seen blow away their student loan on a laptop, phone, watch before they even take into account living expenses first?!

PS7:8	United Kingdom	True but they need to work to pay for living costs, the banks give them loans and the loan company gives them a loan and they leave in a lot of debt. Not everyone will be able to pay this back. The system is wrong.
PS7:7	Poland	The system is not good for students in the UK but you have to work for everything worthwhile.
PS7:9	United Kingdom	It is very difficult to balance university and work time especially when you have university deadlines. Jobs are hard to come by at the moment and the university expects students to study full time and these do clash.

Academic Questionnaire: Results Tables

Table A3.1

Question 1a: Country and Question 1b: University

Country	Number of responses (n=72)	Institutions
Austria	2	Graz Vienna
Belgium	3	Urye University Brussels KATHO/RENO (Teacher Training) Catholic University Louvain
Bulgaria	3	Shumen University 'Bishop Kkonstantin Preslavski' Sofia University "St. Kliment Ohridski"
Czech Republic	1	Masaryk University Brno
Denmark	4	Roskilde University
Estonia	2	University of Tartu
Finland	2	Jyvaskyla University (Teacher Training) University of Oulu
France	2	Paris X University of Bordeaux 3
Germany	3	PH-Weingarten Uni of Education Ludwigsburg Uni of Education PH-Freiburg Uni of Education
Greece	4	National & Kapodistrian Uni of Athens Aristotle University of Thessaloniki University of the Aegean
Hungary	6	University of Szeged
Iceland	1	University of Iceland
Ireland	4	University College Dublin National University of Ireland, Maynooth St.Patrick's College, Dublin City University
Italy	3	University of Bologna University of Padova
Lithuania	1	Vilnius University
Malta	1	University of Malta
Netherlands	1	University of Nijmegen
Norway	1	Norwegian University of Science & Technology
Poland	5	Akademia Pedagogiczna Nicolaus Copernicus University Pedagogical University of Krakow
Portugal	3	University of Lisbon
Romania	1	University of Bucharest
Slovakia	1	Comenius University in Bratislava
Slovenia	2	University of Ljubljana
Spain	3	Autonomous University of Barcelona Basque Country University University Complutense (Madrid)
Sweden	3	Uppsala University
Turkey	2	University of Gazi
United Kingdom	8	Bishop Grosseteste College, Lincoln Ulster at Coleraine Liverpool Hope University Oxford Brookes University St. Mary's College

Table A3.2**Question 1c: Subject Specialism**

Academics: Subject Specialisms and Categories			
Cited Specialism:	Categorised as:	% of Academics*	Number of Academics*
Geography	Geography/Teacher Training	22.2	16
Human Geography	Human Geography	12.5	9
Geographical Education	Geography/Teacher Training	11.1	8
Physical Geography	Physical Geography	11.1	8
Urban Geography	Human Geography	8.3	6
Geographical Information Systems	Physical Geography	5.6	4
Geomorphology	Physical Geography	5.6	4
Regional Geography	Human Geography	5.6	4
Cultural Geography	Human Geography	4.2	3
Historical Geography	Human Geography	4.2	3
Landscape Geography	Physical Geography	4.2	3
Soil Science	Physical Geography	4.2	3
Agricultural Geography	Human Geography	2.8	2
Cartography	Physical Geography	2.8	2
Ecology	Physical Geography	2.8	2
Economic Geography	Human Geography	2.8	2
Environmental Studies	Physical Geography	2.8	2
Geography of Development	Human Geography	2.8	2
Geography of Tourism	Human Geography	2.8	2
Periglacial Geomorphology	Physical Geography	2.8	2
Political Geography	Human Geography	2.8	2
Climatology	Physical Geography	1.4	1
Earth Science	Physical Geography	1.4	1
Environmental Education	Physical Geography	1.4	1
Geography of Europe	Human Geography	1.4	1
Geography of Industry	Human Geography	1.4	1
Geography of Population	Human Geography	1.4	1
Geoinformatics	Physical Geography	1.4	1
Geology	Physical Geography	1.4	1
Problem Oriented Social Geography	Human Geography	1.4	1
Survey Engineering	Physical Geography	1.4	1
Urban Geology	Human Geography	1.4	1
No response	n/a	0.0	0

* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 72$).

Table A3.3**Question 1d: How long have you worked in Higher Education as a Geographer?**

Academics: Number of Years as a Geographer		
Number of Years	% of Academics*	Number of Academics*
2	1.4	1
3	4.2	3
4	2.8	2
5	6.9	5
6	1.4	1
7	4.2	3
8	4.2	3
9	2.8	2
10	4.2	3
11	2.8	2
12	9.7	7
13	2.8	2
14	4.2	3
15	6.9	5
16	4.2	3
17	2.8	2
18	4.2	3
20	1.4	1
25	1.4	1
26	1.4	1
29	4.2	3
30	8.3	6
35	4.2	3
36	1.4	1
38	1.4	1
45	1.4	1
No response	5.6	4

* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 (n = 72).

Table A3.4**Question 2: Is fieldwork compulsory?**

Academics: Is Fieldwork Compulsory?		
	% of Fieldtrips*	Number of Fieldtrips
Yes	76.2	170
No	20.6	46
No response	3.1	7
Further broken down into International, National and Regional Fieldwork		
Compulsory		
International	17.9	40
National	34.5	77
Regional	23.7	53
Non-compulsory		
International	8.5	19
National	6.7	15
Regional	5.4	12
No response	3.1	7

* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 (n = 72).

Table A3.5

**Questions 3 and 4: How important is fieldwork to physical geography studies?
How important is fieldwork to human geography studies?**

Importance of Fieldwork to both Physical and Human Geography (Responses $n=72$)				
Likert Scale	Importance to Physical Geography		Importance to Human Geography	
	% of Academics*	Number of Academics	% of Academics*	Number of Academics
Selected 5	77.7	56	48.6	35
Selected 4	13.8	10	29.1	21
Selected 3	4.2	3	18.0	13
Selected 2	2.7	2	1.4	1
Selected 1	0	0	0	0
No response	1.4	1	2.7	2

* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 72$).

Table A3.6

Question 5: Are there any areas of geography you feel are impossible to teach by textbooks and class work alone?

Responses from academics academics:		
Topic	% of Academics*	Number of Academics*
Specifically citing:		
All topics	22.2	16
Most topics	1.4	1
No topics	13.9	10
Those citing one or more topics:		
Sampling and Research Methods	27.8	20
Geomorphology	20.8	15
Landscape	18.1	13
Soils	11.1	8
Geology	8.3	6
Environment	6.9	5
Rural and Urban Geography	6.9	5
GIS/GPS	5.6	4
Cartography	5.6	4
Physical Geography	4.2	3
Ecology	4.2	3
Observation	4.2	3
Conservation	2.8	2
Cultural Analysis	2.8	2
Geographic Thought and History	2.8	2
Intercultural Experiences	2.8	2
Regeneration and Renewal	2.8	2
Hydrology	2.8	2
Interconnection between Human and Physical Geography	2.8	2
Regional Geography	2.8	2
Tourism	1.4	1
Climatology	1.4	1
Theory into Practice	1.4	1
Land Use	1.4	1
Problem Solving	1.4	1
No response	0	0
* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 72$).		

Table A3.7

Question 6: If fieldwork were impossible what/how would you try to substitute first-hand observation and experience?

Academics: Alternative teaching methods in place of fieldwork		
Method:	% of Academics*	Number of Academics
Multimedia: visualisation, CD, DVD, PowerPoint, slides and photos	59.7	43
Problem-based learning/Case Studies/Role play	34.7	25
Computer Simulations	16.7	12
Demonstrations/Lab or Practical Work	15.3	11
Internet/networks, chat and video conferencing	15.3	11
Virtual field trips	12.5	9
Cartography	9.7	7
Samples and sample analysis	6.9	5
GIS Exercises	6.9	5
Expert Speakers	5.6	4
Secondary data	5.6	4
Read and discuss books	4.2	3
Relate personal experiences	2.8	2
No alternative	1.4	1
No response	4.2	3
* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 72$).		

Table A3.8

Questions 7 and 8: Do you enjoy fieldwork with students? Why?

Academics: Do you enjoy fieldwork? / Why?		
	% of Academics*	Number of Academics*
Enjoy fieldwork?		
Yes	97.2	70
Not always	2.8	2
Why?		
Informal social interaction with students	38.9	28
Gain satisfaction from seeing students experiencing the 'real world'/observe theory into practice.	31.9	23
Provides effective learning and teaching	12.5	9
Can guide the learning process	12.5	9
Motivates students	12.5	9
Easier to teach by example	11.1	8
Students enjoy fieldwork	5.6	4
Enjoy seeing students gain confidence and skills	5.6	4
Helps estimate existing skills of students	4.2	3
No response	4.2	3
* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 72$).		

Table A3.9

Questions 9 and 10: Do you evaluate (measure) the effect of fieldwork on students learning? How?

Academics: Do you evaluate fieldwork? / How?		
	% of Academics*	Number of Academics*
Evaluate:		
Yes	87.5	63
No	12.5	9
No response	0	0
How:		
Field report	36.1	26
Course evaluation forms	22.2	16
Written exam	19.4	14
Field exercises/practical tests	16.7	12
Field Note book journal	8.3	6
Post fieldwork discussion session/seminar	8.3	6
Oral presentation	6.9	5
Preparation sessions	5.6	4
Individual project	4.2	3
Oral exam of theory	2.8	2
No response	2.8	2
* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 72$).		

Question A3.10

Question 11: Why is geographical knowledge valuable?

Academics: Why is geographical knowledge valuable?		
	% of Academics*	Number of Academics*
Geographical knowledge allows students to:		
Understand the World and its problems	31.9	23
Integrate people and problems	22.2	16
Understand Environment and Society	20.8	15
Integrate knowledge of space and place	12.5	9
Understand at different levels (regional, national, global)	6.9	5
Become a rounded, well-educated World Citizen	6.9	5
Not particularly valuable	1.4	1
No response	2.8	2
* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 72$).		

Table A3.11**Question 12: What makes a good geographer?**

Academics: What makes a good geographer?		
	% of Academics*	Number of Academics*
Understand interrelationship of environment and society	16.7	12
Understanding processes and change	16.7	12
Spatial thinking	13.9	10
Observation	13.9	10
Interdisciplinary perspective/approach	12.5	9
Theoretical knowledge and good practice	12.5	9
Open mind and flexibility	9.7	7
Critical thinking	9.7	7
Inquiring mind	9.7	7
Broad interest/view	6.9	5
Creative thinking	4.2	3
No response	4.2	3
Combine knowledge of environment and society with theory	2.8	2
Global view	2.8	2
Spirit of exploration	1.4	1
* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 72$).		

Table A3.12**Question 13: How essential is fieldwork to this process?**

Academics: How important is fieldwork to becoming a Geographer?		
	% of Academics*	Number of Academics*
Academics specifically stating fieldwork to be:		
Vitality/fundamentally Important	36.1	26
Very Important	19.4	14
Quite Important	1.4	1
Nominally/not Important	2.8	2
Areas for which academics consider fieldwork to be essential:		
Theory into practice	22.2	16
'Real World' experience	16.7	12
Experimentation/outdoor laboratory	12.5	9
Data collection and research	9.7	7
Challenges students and improves critical thinking	6.9	5
Becoming a professional/work experience	4.2	3
No response	2.8	2
* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 72$).		

Table A3.13**Question 14: Who decides upon the frequency of fieldwork?**

Academics: Who decides on the frequency of fieldwork?		
	% of Academics*	Number of Academics*
Individual educators	33.3	24
Academic university committees	22.2	16
Head of faculty/head of department	16.7	12
Department members	15.3	11
Curriculum	11.1	8
Students	6.9	5
Government	4.2	3
Not who but 'what':		
Budget and staff availability	11.1	8
Weather	1.4	1
No response	1.4	1

* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 (n = 72).

Table A3.14**Question 15: What constraints are there on fieldwork?**

Academics: Constraints on fieldwork		
	% of Academics*	Number of Academics*
Finance	62.5	45
Time/staff availability	34.7	25
Large number of students	12.5	9
Cost of travel and accommodation	12.5	9
Student availability/willingness for out of hours fieldwork	11.1	8
Timetable	9.7	7
Lack of resources/old equipment	8.3	6
Health and Safety Issues	5.6	4
Staff availability/willingness for out of hours fieldwork	5.6	4
Colleague's lack of interest	4.2	3
Weather (fitting into the seasons)	4.2	3
Lack of understanding of other academic departments	4.2	3
Student lack of motivation	4.2	3
Curriculum/Module Design	2.8	2
Access to sites	2.8	2
Lack of staff	2.8	2
Student behaviour	2.8	2
Quality/credibility of research results	1.4	1
No response	6.9	5

* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 (n = 72).

Table A3.15

Questions 16 and 17: In your department has there been more or less fieldwork over the last 10 years? Why?

Academics: More or less fieldwork in last 10 years / Why?		
	% of Academics*	Number of Academics*
Much Less	6.9	5
Less	30.6	22
Same	29.2	21
More	27.8	20
Much More	5.6	4
No Response	0	0
Much Less:		
Limited funding	4.2	3
Time constraints	2.8	2
Curriculum constraints	1.4	1
Staff availability	1.4	1
Less:		
Lack Finances/funding	15.3	11
Time constraints	5.6	4
High number of students (two few staff)	4.2	3
Conflict with other subjects/activities	2.8	2
Disinterest/aging staff	2.8	2
Bologna (time/resources taken for compliance)	2.8	2
Not compulsory within the curriculum	2.8	2
Disinterested students/lack motivation	1.4	1
Pressure from labour market for work experience not fieldwork	1.4	1
New department still building fieldwork	1.4	1
Same:		
Standard, consistent fieldwork within courses	9.7	7
Bureaucracy will not allow change, constant need to legitimise	6.9	5
Budget to adhere to	4.2	3
Same amount of fieldwork but not enough	2.8	2
Time constraints	1.4	1
Students able and willing to pay to travel further afield	1.4	1
More:		
Motivation and persistence of staff (recognising L&T benefits)	9.7	7
Successful programme in existence, leads to better funding/equipment	5.6	4
Fieldwork as a skill promoted in geography degrees	4.2	3
Lower transportation costs, students more able to afford fieldwork	2.8	2
More staff	1.4	1
More students	1.4	1
Offer more specialised fieldwork - in addition to compulsory	1.4	1
Fieldwork as exoticism	1.4	1
Less students	1.4	1
Student motivation	1.4	1
Much More:		
Evaluations prove fieldwork is necessary element of geography	1.4	1
More funding	1.4	1
Used as a tool to attract students	1.4	1
Staff motivation	1.4	1
No response	9.7	7
*Respondents were permitted to provide more than one answer, therefore percentages do not add up to 100 (n = 72).		

Student Questionnaire: Results Table

Table A4.1

Question 1a: Country and Question 1b: Institution

Country	No. Responses (n=340)	Institution
Austria	13	Karls-Franzens University Graz University of Vienna (Teacher Training)
Belgium	6	Catholic University of Louvain KATHO/RENO (Teacher Training)
Bulgaria	7	Sofia University
Czech Republic	8	Masaryk University Brno
Denmark	7	Roskilde University
Estonia	5	University of Tartu
Finland	5	University of Oulu
France	10	University of Paris X Sorbonne University of Bordeaux 3
Germany	13	PH-Weingarten University of Education Ludwigsburg University of Education PH-Freiburg University of Education
Greece	6	University of the Aegean
Hungary	21	University of Szeged University of Miskolc
Iceland	1	University of Iceland
Ireland	9	University College Dublin National University of Ireland Maynooth St. Patrick's College, Dublin City University
Italy	8	University of Bologna Universita' Degli Studi di Ferrara
Lithuania	3	Vilnius University
Malta	10	University of Malta
Netherlands	10	University of Nijmegen University of Amsterdam Utrecht University
Norway	1	Norwegian University of Science & Technology
Poland	19	Nicholas Copernicus University Adademia Pedagogiczna Krakow
Portugal	10	University of Lisbon
Romania	6	University of Bucharest - Faculty Geog
Slovakia	1	Comenius University in Bratislava
Slovenia	14	University of Ljubljana - Faculty of Arts University of Maribor - Faculty of Education
Spain	29	University of Leon Complutense of Madrid
Sweden	9	Uppsala University
Turkey	11	University of Gazi
United Kingdom	98	Bishop Grosseteste College Liverpool Hope University St. Mary's College University of Surrey University of Ulster

Table A4.2

Question 1c: Level of study

Question 1d: Year of study

Students: Breakdown of Levels and Year of Study		
Level of Study	Year of Study	Number of Students
Bachelors	1	37
Bachelors	2	76
Bachelors	3	75
Bachelors	4	25
Bachelors	5	5
Bachelors	6	1
Bachelors	7	1
Masters	1	7
Masters	2	27
Masters	3	9
Masters	4	35
Masters	5	28
Masters	6	4
Masters	7	1
Masters	8	1
Masters	9	1
Masters	10	1
PhD	1	1
PhD	2	1
PhD	3	2
PhD	4	1
PhD	6	1

Table A4.3

Question 2: My fieldtrips were regional, national, international

Students: Was fieldwork in the last 12 months regional, national or international?		
	% of Students*	Number of Students*
Regional	55.8	190
National	50.3	171
International	38.8	132
No response	0	0
Broken down to:		
All three	8.8	30
Regional only	23.2	79
National only	22.9	78
International only	18.2	62

*Percentage based on the number of respondents ($n = 340$).

Table A4.4**Question 3: Fieldwork in the last 12 months**

Students: Number of trips taken		
	% of Students*	Number of Students*
1 trip	38.8	132
2 trips	24.7	84
3 trips	31.2	106
4 trips	1.2	4
5 trips	0.9	3
8 trips	0.3	1
12 trips	0.3	1
No response to trips	2.6	9

*Percentage based on the number of respondents ($n = 340$).

Table A4.5**Question 4: Does your university help you pay the cost?**

Students Receiving Financial Help Towards Fieldwork						
Country	% Students receiving help towards costs of fieldwork*	Number of students per country responding*	Actual Break Down of Responses			
			Yes	No	Don't know	No . . response
Austria	69.2	13	9	3	0	0
Belgium	33.3	6	2	4	0	0
Bulgaria	100.0	7	7	0	0	0
Czech Republic	100.0	8	8	0	0	0
Denmark	85.7	7	6	1	0	0
Estonia	40.0	5	2	2	1	0
Finland	0.0	5	0	4	0	1
France	0.0	10	0	10	0	0
Germany	38.5	13	5	8	0	0
Greece	100.0	6	6	0	0	0
Hungary	90.5	21	19	2	0	0
Iceland	100.0	1	1	0	0	0
Ireland	33.3	9	3	6	0	0
Italy	12.5	8	1	6	0	2
Lithuania	66.7	3	2	1	0	0
Malta	40.0	10	4	6	0	0
Netherlands	60.0	10	6	4	0	0
Norway	100.0	1	1	0	0	0
Poland	94.7	19	18	1	0	0
Portugal	90.0	10	9	1	0	0
Romania	50.0	6	3	3	0	0
Slovakia	0.0	1	0	1	0	0
Slovenia	14.3	14	2	12	0	0
Spain	93.1	29	27	2	0	0
Sweden	100.0	9	9	0	0	0
Turkey	0.0	11	0	11	0	0
United Kingdom	74.5	98	73	24	1	0
TOTALS		340	223	112	2	3

*Percentage based on the number of respondents ($n = 340$).

Table A4.6**Question 5: How important is fieldwork to your studies and why?**

Students: How important is fieldwork to your studies? / Why?		
	% of Students*	Number of Students*
Students specifically stating fieldwork to be:		
Very Important	43.5	148
Important	17.6	60
Vital/Essential	9.1	31
Not important	2.1	7
Useful	0.9	3
Areas for which students consider fieldwork to be important:		
Theory into Practice/'real world' experience	60.6	206
Assessment linked	7.9	27
Teaching	5.6	19
Experience different cultures and viewpoints	5.6	19
Social aspects	5.3	18
Gain new skills and knowledge	5.3	18
Job/Career	4.7	16
Research/data collection	3.8	13
Experience Travel	3.8	13
Understand processes/patterns	3.8	13
Need to know about their own country	1.8	6
Develop interdependent thinking	1.2	4
Tourism	0.6	2
No response	0.6	2
* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 340$).		

Table A4.7**Question 6: How does fieldwork help your learning?**

Students: How does fieldwork help with learning?		
	% of Students*	Number of Students*
Theory into practice	42.9	146
Understanding processes	17.9	61
Provides clear understanding/deeper learning	17.9	61
Develops new skills	6.8	23
Improves practical skills	5.3	18
Provides confidence and self-motivation	3.2	11
Practice for teaching	1.5	5
Allows for creative thinking	0.9	3
Independent learning	0.9	3
No help	0.6	2
No response	1.2	4
* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 340$).		

Table A4.8**Question 7: What skills do you gain from fieldwork?**

Students: Skills gained from fieldwork		
	% of Students*	Number of Students*
Practical outcomes of fieldwork		
Subject specific field techniques: Practical experience of mapping, GPS, field equipment etc.	27.6	94
Teaching skills (future teachers)	2.6	9
Subject specific outcomes of fieldwork		
Observation and Interpretation	25.0	85
Data collection/research methods	14.1	48
Understanding local cultures/people	7.6	26
Putting theory into practice	5.9	20
Spatial perception	2.6	9
Look at the bigger picture (local, national, global)	2.4	8
Understand Interconnection of processes	2.1	7
Gain respect for nature and environment	1.2	4
Generic outcomes of fieldwork		
Teamwork	15.9	54
Critical, Analytical and Reflective thinking	12.4	42
Communication	10.0	34
Presentation skills	8.5	29
Social skills	7.9	27
Patience, flexibility and endurance	2.9	10
Organisational skills	2.6	9
Leadership skills	0.9	3
Creative thinking	0.9	3
No specific skills	0.6	2
No response	2.9	10
* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 340$).		

Table A4.9**Questions 8 and 9: Do you enjoy fieldwork?: Yes – No. Why?**

Students: Do you enjoy fieldwork? / Why?		
	% of Students*	Number of Students*
Enjoy Fieldwork?		
Yes	98.8	336
No	0.3	1
No response given	0.9	3
Why?		
Social Aspects: fun/exciting, meeting new people, bonding students/lecturers	32.9	112
Theory into practice: 'real world', practical	29.1	99
Different learning style: being out of classroom, less academic, love to be outdoors	8.8	30
Interesting	7.9	27
Enriches science, study and research	4.4	15
No response	4.4	15
Group/teamwork	4.1	14
Work experience	3.8	13
Develop skills	3.8	13
Good experience	3.2	11
Motivates, provides independence	2.4	8
Ineffective/badly organised	0.9	3
Essential to geography	0.6	2
* Respondents were permitted to provide more than one answer; therefore percentages do not add up to 100 ($n = 340$).		

HERODOT Network Benchmark Statement

FIELDWORK IN HIGHER EDUCATION GEOGRAPHY: A DRAFT BENCHMARK STATEMENT

Fieldwork and Geography in Higher Education

Geography provides students with the ability to learn about the world, its features and processes. In order to do this, geographers need to engage actively in fieldwork activities, using critical thinking and skills acquisition.

Geographical fieldwork is the culture of looking at the landscape to see the real world. Fieldwork provides knowledge, understanding and skills to answer geographical questions, investigate real-world problems and tackle concrete environmental and social issues.

Fieldwork does not normally consist of one single activity but it can include:

- pre-fieldwork preparation or planning,
- field activities including data collection,
- analysis, interpretation and presentation of findings,
- evaluation and discussion.

Fieldwork in Geography can be implemented in different ways, integrated into curriculum subjects as well as through specific courses. Fieldwork can be carried out in different forms, from group activities to individually planned and executed student research.

Fieldwork in an undergraduate programme prepares graduates who are:

- responsible, spatially aware citizens,
- able to make meaning of the world around them
- able to use geographical methods and tools,
- more employable and with diverse job prospects, especially due to the transferrable professional, personal and social skills they acquire, like teamwork, leadership, organisation, adaptability to different situations and environments, decision making, taking responsibility for the processes and results of the fieldwork, and
- able to pursue further place related studies.

Fieldwork in Geography:

- Encourages students to identify issues and to develop approaches to understanding them.
- allows theoretical, technical and scientific methods to be applied in field environments,
- Develops analytical skills
- Develops a sense of place, awareness of difference, and tolerance for others.
- Breaks down barriers, promoting transferrable skills

The following aspects should be taken into account in carrying out fieldwork: students with special needs, health and safety issues, financial considerations, ethical aspects and the accessibility of places and respect for the communities under investigation.

In some cases, virtual field activities, such as the use of e-learning, geoinformation tools and resources can be used to complement actual fieldwork.

LEVEL DESCRIPTOR

Undergraduate level Geography qualification should prepare students in the fundamental aspects of group and independent research including fieldwork activities.

Students should display the ability to:

- critically use basic fieldwork methods and skills.
- analyse and interpret the results of their fieldwork.
- present the outcomes of their fieldwork to colleagues, other researchers, decision-makers, clients and the general public.

The basic knowledge and competences acquired should allow students to further their studies at post-graduate (specialised) levels.

LEARNING OUTCOMES

Students completing undergraduate Geography study programmes should be able to:

- design and develop fieldwork activities to support their studies
- use fieldwork methods and tools to acquire, represent, interpret spatial data at a basic level;
- act individually and as a competent member of a team studying geographical processes and issues in the landscape through fieldwork;
- use their fieldwork outcomes to understand and present geographic relationships, changes, patterns and processes; and
- apply geographic knowledge and understanding from fieldwork to deal with real world problems at a basic level.

This draft benchmark statement has been produced as a result of the HERODOT thematic network for Geography in higher education meeting in Dublin, Ireland in March 2009.

Available on-line from: <http://www.herodot.net/benchmarking/FIELDWORK-IN-HIGHER-EDUCATION-benchmarkdraft>