Evaluation of pedagogic approaches to geography teaching in Libyan universities. An evaluation of different aspects of the way geography is taught in some Libyan universities and comparison with the approach in the UK, with particular emphasis on practical and fieldwork.

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An evaluation of different aspects of the way geography is taught in some Libyan universities and comparison with the approach in the UK, with particular emphasis on practical and fieldwork

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ABSTRACT

Since the 1970s there has been rapid expansion of higher education provision in Libya and also concerns about quality versus quantity of education amid calls to reform higher education in Libya. The aim of the present study is to evaluate the current pedagogic approaches of geography teaching in Libyan universities. This information has been obtained by seeking the perceptions and attitudes through questionnaires of university teachers and students from eight Libyan higher education institutions, representing a range of locations and types of institution. A comparison was also made to UK geography teaching, using published information to indicate possible alternative approaches.

The results from students were to a large extent consistent with the results of teachers, although there were some differences between the newly established institutions and the others. Respondents showed dissatisfaction towards many issues related to the teaching of geography at this level, notably the lack of specialized degrees; the inclusion of non-geography modules in courses; the integration of environmental issues within the curriculum; educational resources; the current conditions of laboratories; the teaching methods used by teachers; lecture presentation methods; the illustrative aids used by teachers; and the current fieldwork strategy. This study highlights the need for revision of current pedagogic approaches to geography teaching in Libyan universities, in which the UK's model may be a useful guide.

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CHAPTER 1: INTRODUCTION

1.1 Background

It is generally accepted that improving the performance of an education system is necessary for socioeconomic development, economic competitiveness, equality among different group in societies, better functioning of governmental institutions, democracy and human rights (Baskan & Erduran, 2008).

In recent years, there has been an increasing evaluation of higher education in terms of the academic content of courses and the subject of evaluation has attracted increasing interest throughout the world (Hurworth, 1995; Figueroa, 1996). Mizikaci (2006) noted that in recent years a need for a renewed focus on higher education has been felt and many universities in the world seek more effective systems to address increasing dissatisfaction with the performance of the higher education system.

Calderon *et al* (1996) indicate that teaching, research and service have traditionally been viewed as the primary roles of institutions of higher learning and many professors and college administrators have called for a renewed emphasis on teaching. These three dimensions of evaluation are also adopted by most of the European universities (Betoret & Tomas, 2003). According to Shao *et al* (2007) the above three distinct performance areas are evaluated by many factors. The first area of concern is evaluated by student rating forms, written comments, peer classroom visits, teaching portfolios, teaching awards

and student learning outcomes. A second area of concern for administrators involves factors used to measure the effectiveness of scholarship activities. A third area of concern involves measures used to evaluate university service.

In the present work the evaluation of pedagogic approaches to geography teaching in Libyan universities is being studied. It can be categorized within the framework of the first distinct performance area but will be evaluated by using a different measurement tool, namely, by surveying a sample of students and teachers in some Libyan universities.

The purpose of this evaluation was not to make a ranking list of the best Libyan institutions, but in order to investigate the types of obstacles and problems in the field of teaching geography which are considered a part of the same problems that have been addressed in many national and international events and occasions by the Libyan educational authorities. In addition to that, critical geography education depends on a critical pedagogy that empowers students by providing them with the knowledge and skills they will need to function in the wider society as critical agents, to engage in social change to create a truly democratic society (Morgan, 2002).

As will be discussed later in chapter 3, Libya has realized that the higher education sector is still facing many obstacles and challenges of various types. Therefore reform of higher education should be done from time to time to reach the best desired goals (Lagga *et al*., 2004).

The realization of the Libyan government of the importance and need of reforming the higher education sector has risen according to the fact that reforming education has been a major challenge for the politicians, academicians and business world in many countries as well as many national and international organizations, especially in the last two decades of the 20th century, and major capitalist countries like the USA and UK started reforming their educational system in line with the market economy and education as a source for human capital development (Baskan & Erduran, 2008).

The interest of the researcher in evaluating the teaching of geography in Libyan universities has stemmed from three important reasons. The first reason was that higher education in Libya suffers from considerable problems which prevent it from achieving its desired goals and the widest evidence of this comes from the several reports arranged by many Libyan experts and presented to UNESCO to be presented in many international conferences. This has led the researcher to investigate these problems in one particular higher education discipline in order to contribute to sorting out such problems as much as he can.

The second reason is as a result of the experience of the researcher in teaching geography in three Libyan institutions from 2000 to 2005. In this period the researcher noticed that the teaching of geography in Libyan universities was done under difficult circumstances which needed to be evaluated.

The third important reason was that many students have frankly expressed their dissatisfaction with many issues concerning the way in which geography has been taught in their departments and have called for solutions to be made as soon as possible to reform the current situation of teaching geography.

1.2 The purpose of the study

The purpose of this study is to evaluate different aspects of the way geography is taught in some Libyan universities and make brief comparison with the approaches in UK universities. There are some logical aims and objectives behind this study as follows

1.2.1 Aims of the study

1. To evaluate the current pedagogic approaches to geography teaching in Libyan universities.

2. To compare the attitudes of students and teachers to current geography teaching in Libyan universities.

3. To investigate the perceptions of students and teachers for future changes to geography teaching in Libyan universities

4. To compare the current teaching of geography in Libyan universities with that in the UK.

1.2.2 Objectives of the study

1. To use information from the Libyan Ministry of Education and the universities to determine current structures for geography degrees in Libyan universities.

2. To use a questionnaire for a sample of students, and a similar questionnaire for their teachers.

3. To obtain factual information on pedagogic approaches used in Libyan universities.

4. To explore the current use of laboratory classes and fieldwork in the geography programmes.

5. To seek the views of students and their teachers about current geography teaching, both content and pedagogical approaches, and about possible future changes.

6. To obtain information on degree structures, curriculum and pedagogy in a sample of UK universities for comparison with those in Libya.

1.3 Limitation and scope of this study

This study was limited to surveying the students and teachers in eight Libyan institutions in the 2007/2008 academic year, so the results are based on the attitudes and perceptions of students and teachers in those Libyan universities at that time. The time frame for conducting the study and gathering the data was spring 2008.

This study is an attempt to answer five questions. The first research question is about the students' and teachers' perceptions and attitudes regarding the

current geography course program offered in Libyan universities and the modules taught. This question investigates many issues with regard to the academic interest of students, the possibility of establishing new geography courses, teaching non-geography modules, the syllabuses of geography modules taught, the optional modules, the extent of embedding environmental education within the geography subjects, the availability of geography resources (books) as well as the extent of availability of access to computers and the internet to teachers.

The second question is about the students' and teachers' perceptions and attitudes with regard to the current teaching methods used by teachers in teaching geography in Libyan universities. This question deals with many issues regarding the extent of availability of a laboratory and its condition, the kind of teaching methods used by teachers, the descriptive illustration tools used by teachers, assessment methods adopted by teachers, the way of lecture delivery adopted by teachers in the classroom and the possibility of getting a job after students' graduation.

The third question is about the students' and teachers' perceptions and attitudes towards the current application of fieldwork in Libyan universities in terms of its importance in supporting the theoretical concepts, types of fieldwork undertaken and the system of its application, the current strategy of application of fieldwork and reforming the current program of fieldwork.

The fourth research question is about the students' and teachers' perceptions and attitudes towards final year dissertations in terms of the ways they are selected, the subject area of final year dissertations and the difficulties faced by students related to data collection.

The fifth research question deals with the main features of teaching geography in the UK universities in terms of the course programs offered and their structure, the students' perception and attitudes towards various aspects of how geography is taught.

1.4 Significance of the study

This study will make a contribution to development the teaching of geography in Libyan universities since its results will be obtained and inferred directly from the perceptions of students and teachers. El-Hawat *et al*. (2001) state that the expected Libyan curricula for the 21st century will be based on the learner and his needs and abilities, and the society and its future ambitions, as well as it being centred on the teacher who is considered a guide, a supervisor and source of knowledge and experience.

The significance of the study is that it will determine how the effectiveness of teaching of geography in the Libyan universities can be increased by the educational planners in Libya taking the perceptions of surveyed students and teachers into account. Therefore, decision makers in the Libyan Higher Education Ministry will gain significant insights and points of view about the

students' and teachers' needs and they will become more familiar with such needs for consideration in any reform process which would be made in the future.

Educational researchers will also gain valuable knowledge as a result of this study. Results of this study may stimulate Libyan researchers in the field of education to deal with this issue giving their suggestions that may improve the teaching of geography in the Libyan universities. Also, much of the current literature on geography teaching in higher education relates to the English-speaking developed countries, and the results from this study will therefore provide an alternative perspective to these issues.

The sincere hope of the researcher is that the results of the study will be used by the decision makers in Libya especially those in charge of designing the structure of geography courses in the Libyan Higher Education Ministry.

Overall, the answers to research questions should help provide not only evidence for what is currently carried out in teaching geography in Libyan universities, but a framework for suggestions of changes that might be made to improve provision in this area. Although the focus of this study is on the particular discipline of geography, the results are likely to have wider relevance to other areas of university teaching in Libya and elsewhere

1.5 Structure of the thesis

In order to investigate these issues and get desired results, it is important to review relevant literature on geography teaching in higher education and how it is taught, which is explored in chapter 2.

It is also necessary to review the relevant research literature on higher education in the Arab world and Libya in particular, as well as the current strategy of teaching geography in Libyan universities, and chapter 3 will address this area. Chapter 4 describes the methodology used in this study, chapter 5 presents the results of the students' questionnaire, while chapter 6 gives the results from the teachers' questionnaire. The brief comparison study between Libyan and UK universities in terms of how geography is taught is given in chapter 7. Finally, chapter 8 discusses the findings from the study and presents the recommendations and suggestions for future research arising from the work.

CHAPTER 2: LITERATURE REVIEW OF GEOGRAPHY TEACHING IN HIGHER EDUCATION

2.1 Introduction

This chapter is the first of two that reviews the academic literature regarding geography teaching in higher education in general. It presents the range of studies and views of geography teaching in higher education by addressing briefly the following elements and issues:

1- Teaching geography in higher education in the developed countries.

2- Learning and teaching of geography in higher education (teaching methods)

3- Geography and sustainable development.

4- Teaching geography in and for the 21 century

Chapter 3 will focus on the state of higher education in the Arab world in general and Libya in particular

2.2 Geography teaching in the Developed Countries (UK as an example)

It should be noted that it is difficult to cover the position of geography in higher education in all developed countries in this short chapter. Therefore, the UK has been chosen as an example. The reason for choosing the UK is that geography is considered a major subject within the educational system, at secondary and tertiary levels. In other countries it is either less important (e.g. the USA) (Johnston, 1985), or it is suffering from a substantial decline in enrolments (e.g.

Australia) (Thrift, 2002). Furthermore, according to QAA, (2000) in the higher education (HE) system of the UK, Geography is a major discipline. In 1997-98, there were approximately 21,000 students registered for honours programmes, and many students in other programmes taking modules that were either explicitly Geography or else derived directly from the discipline. Therefore the focus of the themes discussed will be on geography in higher education in UK,

So the purpose of this section is to discuss two matters with regard to geography teaching in higher education in the UK. The first one is to trace the emergence of geography as a discipline in UK universities, in order to know its long history. The second purpose was to present a summary of the current system of geography teaching, in terms of the kind of geographical courses that are offered for study by students, the main foundations of the geography teaching process, and the aims that it is hoped to achieve with students.

2.2.1 The history of the emergence of geography as a discipline in UK Universities

Geography was recognised as a separate academic discipline in the UK at the end of the nineteenth century, which also saw the foundation of the Royal Geographical Society (RGS) in the 1830s. But before that it was taught in the country`s universities in the form of teaching elements of geography, so it could be said that geography as a subject has a long history in the UK.

The development of geography in higher education in UK is linked to the foundation of the universities, which started with the establishment of new universities in the first half of the nineteenth and early twentieth century.

The RGS played a significant role in terms of the allocation of a place of geography in the nineteenth century in Cambridge and Oxford universities, although the first established geography teaching in these universities was not in full degree courses. In 1893 the Geographical Association (GA) was established and played an important role together with the RGS, in stimulating the discipline to occupy a central place within the British school curriculum and in developing public examinations in the subject system. Furthermore, many geographers played central roles in the association`s affairs for much of the twentieth century, and ensured strong links between the discipline in schools and the discipline in universities (Johnston & Sidaway, 2007)

Given the strength of geography in the country`s schools this led to the need to provide teachers with degree-level qualifications, accordingly many initiatives were made by the RGS and others in order to expand and enhance the position of geography at universities. Geography initially was established as a subsidiary course for students of other disciplines, such as economics, geology and history. Afterwards it became an independent department in many universities namely: Oxford in 1887, Cambridge in 1888, and Manchester from 1892. By the 1920s, departments of geography were established in all of the Redbrick Universities. By the end of the 1930s there were geography departments in

every UK University at that time, offering a full honours degree (Johnston & Sidaway, 2007)

The UK higher education witnessed from the 1950s an increase in the number of UK students enrolled in universities, which led to the expansion of departments. Geography became a relatively well-established discipline on the one hand, and also there was an increase in the establishment of new institutions in the last third of the twentieth century. Geography was present as a separate discipline/department in many universities; moreover students chose to study in it, so much that there were over 7000 places available annually on undergraduate degree programmes throughout the country by the end of the century (Johnston & Sidaway, 2007)

The concern of geography at UK universities until the 1960s was focusing on the regional studies. After that there was a considerable shift towards different specializations. This trend was initially strongest among physical geographers with human geography following the same trend later. Accordingly geography as a discipline was divided into several specialist sub-disciplines (such as economic geography, hydrology etc), and the concept of the regional synthesis virtually disappeared from the curriculum (Johnston & Sidaway, 2007)

The late 1950s saw the beginnings of the ‘quantitative and theoretical revolution’ within geography in North America, which had a significant impact on adding new features on geography in the UK, and the biggest impact was with

regard to adoption of scientific methods in both physical and human geography. This method had two elements, the first one concerned with spatial imprint of human societies on the environment; the second one was the use of quantitative methods for analysing data. This impact had an important reflection in degree programmes, with courses on the philosophy of geography (Johnston & Sidaway, 2007)

The breadth of concerns and scope of geography and its development has been met with application of specialism by UK universities. The concept of specialism aims to enable students to be specialized in a particular subject area on the one hand and to produce informed critical professionals for a range of geography and environment related careers on the other hand. This might be also because geography in the UK since the mid 1980s witnessed a growth in interest in global systems and environmental issues (Gardener and Hay, 1992)

2.3 Understanding the learning and teaching of geography (principal methods)

To deliver effective teaching and provide helpful feedback to students in the teaching process there is a definite need for appropriate pedagogies which should be used to achieve this aim. Therefore Chalkley *et al.* 2000 point out that good teaching generally has some or all of the following main features:

- Clear goals and objectives;
- A base of knowledge and understanding;
- Qualities that motivate and engage students;

- Clear organization
- Use of a wealth of learning resources;
- It presents increasingly complex challenges;
- A focus on the student;
- Links to appropriate forms of formative and summative assessment;
- It achieves deep rather than superficial learning.

All the points mentioned earlier apply generally to all disciplines of higher education, with some differences from one discipline to another, according to the nature of each one. Every discipline includes, implicitly or explicitly, some value commitments about what is worth studying and how it should be studied (Gold *et al.,* 1991).

Shafritz *et al* (1988) defined teaching methods as: "An approach to instruction that has been systematically described and that can be applicable to a number of subject areas and teachers, examples include the lecture method, the tutorial method, and more recently, such technological approaches as computer-assisted and learning telecommunication". The value of teaching methods was explored by Joyce & Weil (1980) who indicate that teaching method is a procedure of guiding experiences of students so that they learn; and by Ediger (2005) who points out that an important factor in learning is for the geography teacher to both master subject matter but also to use appropriate methods of teaching. Thus, he/she needs to engage students actively in ongoing learning activities.

In the field of teaching geography, Gold (1991) poses significant questions regarding the philosophical nature and purpose of geography education which should be discussed. Some of these questions could be summarized as the following:

1-Why is this course being taught?

2-What new knowledge, skills or attitudes could be developed by students during the course? And what experiences need to be provided to students by teachers?

3- What resources are available for teaching the course? What material and methods should be used?

4- How would it be known whether the course is progressing satisfactorily?

5- How would it be known whether this course has been successful and whether certain changes would improve it for future groups of students?

6- If students need to be offered a range of experiences, what variation is possible?

According to what has been mentioned above the aim of this section was to answer the fundamental question, how are geography courses taught at university? Rather, what are the methods and the conventional approaches used to teach geography at university? The answer to this question is considered very important since it will be compared with the approach used for geography teaching in Libyan universities, in order to investigate the extent of correspondence of the methods used in Libyan universities with the core methods that are used in the UK.

Geography courses in the UK are usually taught through the approaches outlined in the following sections.

2.3.1 Lecture

The lecture method is preferred by most professors. It relies on a prepared and structured presentation by teachers for oral transmission to their student audience on a particular subject. Gold *et al.* (1991) point out the lecture has certain advantages: firstly the time of teachers and students can be effectively organized by both of them. Second, lecturers have the comfort of knowing that the teaching experience is almost entirely under their own control, in terms of planning the lecture, and organizing the contents. Third, the lecture is an efficient use of the lecturer`s time. Finally, good lecturing is an art that can be very satisfying for everyone involved: for the lecturer the satisfaction of a job well done; for the audience the stimulus and sense of occasion of a lecture well and enthusiastically delivered.

In order to achieve maximum benefit from the lecture, it should be organized and structured well by teachers to enable students to understand the material and supported by use of verbal and non-verbal communication to stimulate the student`s interest in the topic of the lecture, along with involving students in it by asking them to complete the information needed of the notes that are given during it to investigate the extent of their understanding of it (Gold *et al.,* 1991).

A lecture should be given including the use of some teaching aids that have become a common feature in academic subjects. It is sometimes claimed that they create an atmosphere and an authentic environment (Mitchell, 1993).

In clarifying what is meant by teaching aids, it may be convenient to adopt Ralph Cable's classification of instructional materials into Visual, Aural and Audio-visual (Cable,1979) which is Visual Materials such as the dimensional materials (Objects and Models), Printed materials, Boards and pictures, and Aural Materials.

The importance of teaching aids has been asserted by a number of writers. For example Gold *et al* (1991) suggest that the lecture should be supported by use of visual aids to enliven it. There is a wide range of visual aids which can be used such as: television, film, videotapes, overhead projector transparencies, computer linked displays, slides, blackboards and whiteboards, wall maps and hardware models.

According to Rowntee (1974), Bloom (1956) and Green (1998), the use of instructional materials in the teaching-learning process presents some educational benefits for both the teacher and the student. For example; students learn faster, the materials encourage active learning; they save the teachers' time, and enhance learning and bridge time and space.

2.3.2 Practical classes

Undertaking practical classes is considered an essential method in many geography courses/modules. In some geography modules they are regarded as the prevalent method of teaching, such as physical geography and teaching of methods of geographical research (e.g. statistics, computer-based methods and GIS). Practical study is usually implemented in a laboratory of some kind, rather than a lecture theatre or seminar.

According to Clark & Wareham (2003), the application of practical work has many positive features. It can illustrate a theoretical study, show students how to do research, trains them in specific skills, and finally it can be fun and strengthens the relationship between students and teachers. Accordingly, the practical classes have been given more special attention in higher education in the developed countries, for example Smith (1995) points out that the current climate in UK Higher Education requires that Life Sciences courses must include a balanced and stimulating practical class provision which takes account of the rapid expansion in the theory and practice of an intrinsically expensive subject. He also states that there is a need to provide graduates with appropriate transferable skills which they can apply in a variety of careers.

2.3.3 Seminars

A seminar is a session where a large group of students meets to listen to one or more students giving a presentation on some aspect of a course, and they are sometimes required to use presentation aids such as data display devices or

handouts. The student who gives the presentation will be assessed by the tutor. Seminars are considered of great importance for students, such as for keeping students updated with technology, and providing the latest information about what is happening in the field of geography. Seminars also help students to convey their own ideas to their friends and teachers, by taking seminars the students will be more able to talk before other audiences later in their life; finally seminars help students to improve their language.

2.3.4 Tutorials

A tutorial is a small group of students which meets with a member of staff for an hour, often weekly or fortnightly. It has two functions, first is the pastoral function for discussing and resolving academic and personal problems. The second academic, function is to help students learn more effectively about geography and to develop new skills through small group or individual work. Students can gain many benefits from the tutorials, such as: active learning, developing oral skills, gaining practical skills, generating self-confidence, learning to work in groups, and promoting understanding.

2.3.5 Fieldwork

Fieldwork is widely regarded as an essential part of undergraduate education in geography. Lecturers generally agree that it represents one of the most effective and enjoyable forms of teaching and learning for both staff and students (Fuller, 2006; Kent, 1997).

Much has been written on the use of field work. This reflects its importance as a mode of geography teaching: Carl Sauer for example, in his presidential address to the Association of American Geographers has declared that “the principal training of the geographer should come, wherever possible by doing fieldwork. Gold *et al*. (1991) and Jones (1968) point out that it offers the best opportunity to demonstrate physical processes, to aid understanding of geographical cause and effect by students, and most importantly to inspire them to travel always with seeing eyes.

2.3.5.1Definition of fieldwork

According to Gussenhoven & Warner (2002), a definition of fieldwork can be approached from two viewpoints. The broader perspective considers any kind of data collection outside the laboratory to be fieldwork. The latter view is traditional among ‘linguistic fieldworkers’ in remote areas. And according to Kent *et al.* (1997, 314, 315), ‘the field’ is any place “where supervised learning can take place via first-hand experience, outside the constraints of the four-wall classroom setting”. The same definition was given by the Quality Assurance Agency (QAA) (2002) which is “active engagement with the external world”.

2.3.5.2The foundation of fieldwork (planning and preparation)

Many important things should be considered by teachers and students when they plan their field work, in order for it be successful field work. Jones (1968), Kent (1997) and Gold (1991) suggest that to gain and achieve the aim and goal of fieldwork, several aspects should be planned well and various matters should

be considered before doing the fieldwork, these aspects could be summed up as the following:

- Planning by the teacher: there are two kinds of preparation which should be done by teachers. The first is the academic planning which includes literature research, analysis of cartographic and remotely sensed information, internet, physical reconnaissance of the field site and assessment of its suitability, and safety. The second one involves the logistics which include issues relating to arrangements of travel and accommodation and briefing of bus drivers, hostel wardens, hoteliers and guides for the requirements of the field course.
- Briefing the students: it is advantageous for students to have a special field work exercise book to include information about the fieldwork that will be undertaken.
- Students should understand what will be required of them in the field and gain the knowledge and skills to enable them to carry out their tasks in an efficient way.
- Preparatory class work: students undertake some active preparation about the field area perhaps combined with internet research, before the start of the field excursion; by doing that, students can prepare themselves better.
- Undertaking a formal and documentary risk assessment is considered of critical importance, including the weather forecast, locations of emergency routes, public telephone, a route and estimated time of return, and so on.

2.3.5.3Types of fieldwork activity

According to Gold *et al.* (1991) the most common types of field work are:

1- Limited travel plus limited time, e.g. short field excursion

2- Limited activity plus extended travel, e.g. Cook`s Tour

3- Extended travel and time, e.g. typical UK residential course

4- Multi-location activity, e.g. study tours

5- Learner-practitioner and participant observation, e.g. project work

Generally speaking a range of these activities could be achieved by undertaking a single fieldwork component of a degree program, such as a residential course (Fuller *et al.,* 2006)

2.3.5.4The value of fieldwork (its aims and objectives)

Internationally, fieldwork is generally seen as intrinsic to the very nature of geographical education (Fuller *et al*., 2003). Furthermore, for most geographers fieldwork is a key component of their enthusiasm for the subject and one of the strongest elements of their own personal biography (Daniella & Foskett, 1997). Therefore fieldwork has become a central theme in the educational curriculum planning in many countries in the world. For example Daniella & Foskett (1997) point out that the first national geography curriculum in England and Wales, indicated that 'fieldwork should not be an optional extra, for pupils are entitled to…regular, purposeful and integrated fieldwork. The revised geography National Curriculum that came into effect in 1995 requires that all pupils

undertake fieldwork making it a statutory obligation on all schools in the state sector.

According to Higgitt (1996), Kent *et al.,* (1997) the objectives of fieldwork could be summarised as the following:

(a) 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' material 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

(b) Transferable/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.

(c) Socialisation and personal development (the `hidden agenda' of fieldwork)

Fieldwork has significant impact on students to develop in several social and personal respects. It stimulates students for study along with enhancing their enthusiasm; it also contributes to develop the social integration of a student cohort by allowing them to know each other and strengthening their relationship with their teachers. Fieldwork has a considerable role to increase the environmental awareness of students. Finally, it plays an important role in marketing the course.

The above objectives and aims are outlined by McEwen (1996) and Hope (2009) who point out that fieldwork in geography aims to introduce, reinforce and develop both general and subject-specific skills (such as mapping or data collection and analysis) and transferable skills, such as independent learning and problem-solving. In addition fieldwork can usually encourage the development of interpersonal skills. Fieldwork facilitates transferring the knowledge to students by clarifying the knowledge derived from a textbook and integrating the fragmented knowledge into a coherent whole as well as explaining the tacit or intuitive knowledge. Furthermore, fieldwork provides the opportunity for experiential learning and allows a response to the challenges of different environments.

On the strength of what has been mentioned, some important recommendations have been suggested by Fuller *et al*. (2006) in order to maximize the effectiveness of fieldwork. These recommendations can be summarised as the following:

- Fieldwork should be clearly incorporated within the course, as a programmed module of study; it gives students opportunities for deeper learning in which they are building upon a foundation of previously acquired theory.
- Deeper learning (knowledge and understanding) will be facilitated where fieldwork enhances students' interest, enjoyment and recognition of importance.

- Residential fieldwork provides opportunity for learning to be reinforced during ‘evening conversation’ and in less formal lecture –student and student- student interactions.

- Students respond positively to ‘hands-on’ data acquisition. Field use of technical instrumentation and research design and data analysis are valued.

2.3.6 Other methods of teaching geography

2.3.6.1Foreign exchange

Some departments give students licence to spend part of their degree studying geography at a university in another country. Exchanges between the UK, North America and Europe are the most common examples.

2.3.6.2Work-Based Learning

Work-Based Learning (WBL) programmes have been developed at many universities. They aim to help students to improve their employability, so students can undertake a sandwich year or short placement with an appropriate business in order to increasing partnership between employers and higher education (Brennan & Little, 1996).

2.4 Conditions Influencing the UK higher education and GEES teaching in the last few years

This section explores the most important changes which have occurred in UK higher education in the last few years and address in brief their effects on

teaching and learning process. According to Greenaway & Haynes (2003) and Albrecht & Ziderman (1993) , the higher education (HE) marketplace in the UK over the last 40 years of the twentieth century changed profoundly, with the pace of change accelerating dramatically over the last decade and the major systemic changes included:

- Increasing demands for skilled labour (employability skills) which is as regarded one of the most fundamental changes in higher education policies throughout the world.
- A threefold increase in the number of universities since the 1960s: partly as a consequence of new entry, with around 20 new universities created in the 1960s; and partly as a result of the abolition of the so-called 'binary divide' in the early 1990s, which resulted in over 40 former polytechnics gaining university status. There are now almost 100 universities in the UK.
- A growth in consumers which outstripped the growth in providers. In the early 1960s there were just 400,000 (full-time and part-time) students at British higher education institutions; in the year 2000 there were over 2,000,000. After that and across the UK undergraduate enrolments in higher education institutions have increased by 25 percent overall in the 10- year period from 1998/99 to 2007/08 (Crossick, 2009).
- An irrevocable change in the balance between public and private funding: in the 1960s universities in the UK were almost entirely publicly funded, now direct public subventions account for on average only around two thirds of total income.

- Changes in the mechanisms for disbursing public funds, both to providers and consumers: for the former there has been a shift away from block grants to fund teaching and research, to earmarked funding which is partly formulaic, partly performance based; for students there has been a shift from income support transfers to student loans.
- Despite a trend of a decline in public funding, there has been a dramatic increase in regulation and compliance requirements, with formal performance appraisal of teaching and research now well embedded; in the case of the former, with periodic 'Subject Reviews' and 'Research Assessment Exercises'.

As for the first change relating to employability skills, the importance and value of enhancing the employability skills within the higher education curricula in producing qualified employed and then its importance to the national economy and the reasons for improving the employability in the UK higher education and *Geography, Earth and Environmental Sciences* GEES disciplines was explored and addressed by Gedye & Chalkley (2007), and York & Knight (2003).

According to York and Knight (2003, p3), the definition of employability is "A set of achievements skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy".

In the UK, government-funded initiatives and programs have emerged from the late 1980s onwards, designed to support the development of employability skills: for example, Higher Education for Capability (1988) and Enterprise in Higher Education (1989) and the Dearing Report (National Committee of Inquiry into Higher Education, 1997) which brought the debate to a close, in policy terms at least, by concluding that the development of key skills should become a central aim of higher education (Cranmer, 2006 and York & Knight, 2003). For example and according to Stephenson & Challis (1997 p3) Recommendation 17 of the Dearing Report states: “We recommend to institutions of higher education that, over the medium term, their admission procedures should develop to value good levels of competence in communication, numeracy and the practical use of information technology”.

With regard to which key skills should be included within the curriculum, Stephenson & Challis (1997 p3) note that the Dearing Report in paragraph 9.17 states “we believe that four skills are key to the future success of graduates whatever they intend to do in later life. These four are: communication skills; numeracy; and capability in communications and information technology; those in work increasingly need to be able to be flexible and adaptable, to work in teams, and to manage their own development and career”. Furthermore, Washer (2007) proposes a practical framework for key skills that can be used or adapted for use in any discipline at university.

Moreover, the effect of introducing employability skills on students was addressed by Gedy & Chalkley (2007) who indicate that the employable graduate will have:

1. A ‘good’ degree
2. A life outside of university (interests, activities, responsibilities)
3. Work experience, preferably in high quality employment.
3. The qualities and skills employers are looking for (such as communication skills, teamwork, initiative, business awareness, etc)
4. The ability to articulate their talents.
5. Skills in career planning and management
6. Self-awareness and direction

The most important other change that has occurred in the UK higher education was the increase in number of enrolled students. For example, across the UK, undergraduate enrolments in higher education institutions have increased by 25 percent overall in the 10- year period from 1998/99 to 2007/08. Enrolling more students in the universities provides a source of additional revenue for universities, and has led universities to spend more on additional instructional costs to be able to educate their students and to cover the average instructional expenditures per enrolled student (John & Parsons 2005)

The changing of the funding system has also been considered one of the fundamental changes that has occurred in UK higher education. According to Hubble (2010) the Further and Higher Education Act 1992 created the regional

higher education funding bodies: the Higher Education Funding Council for England (HEFCE), Scottish Funding Council for Further and Higher Education (SHEFCE), and Higher Education Funding Council for Wales (HEFCW). It is the duty of these funding councils to distribute Government money to higher education institutions (HEIs) across the UK. These bodies allocate core funding to individual HEIs in the form of a 'block grant', which is calculated in part on the number of students attending an institution and the type of courses offered by the institution. Universities also receive income for research from HEFCE research grants and Research Councils grants; this arrangement is known as the 'dual support' system.

Since 1998 HEIs have had their teaching grant supplemented by funding from tuition fees (Hubble, 2010). This proposal has been built on the fact that the current levels of funding teaching and learning were insufficient to enable universities to achieve society's aspirations for maintaining and enhancing quality, to compete successfully in the global markets and to create a socially inclusive system in which traditionally under- represented groups participate in HE (Foskett *et al*, 2006). Provisions in the Teaching and Higher Education Act 1998 introduced an annual upfront tuition fee of £1,000 and subsequently the Higher Education Act 2004 allowed HEIs to charge variable deferred fees of up to £3,000. Since September 2008 HEIs with approved access agreements have been able to charge undergraduate home and EU students variable deferred tuition fees of £3.000, fees increase annually in the line with inflation

so fees for 2010/11 are £3,290. Students are eligible to take loans to cover the cost of the fees and additional funding is available for low income students.

Increasing fees led to an increase in student debt particularly for disabled students and for students who did not receive financial support from their families, and a decline in student satisfaction. Furthermore, full-cost fees have impacted to reduce UK applications to undergraduate programs which reached a 4% in decline 2006 (Metcalf, 2008).

The effects of the new system of the students' fees was addressed by Foskett *et al* (2006) who indicated in their report that students do not support the loan system and one of its negative effects is that it does not provide full funding, which will force students to make degree choices based on cost. As of 2012, the fee situation is set to change again, increasing the life time costs to students, although not payments required at the point of studying. With the introduction of students fees, students have become more demanding in terms of their experience of university education, and this is likely to increase further after 2012students as 'customers'. The collection of data on students' experiences through the National Student Survey has been an expression of this trend, and is likely progressively to direct the attention of university managers towards course delivery and student experience more.

The other important change has been relating to establishing the Research assessment exercise (RAE) which is an exercise undertaken approximately

every 5 years on behalf of the four UK higher education funding councils (HEFCE, SHEFC, HEFCW, DELNI) to evaluate the quality of research undertaken by British higher education institutions.

The effects of the RAE have been seen throughout the research system at the level of academic disciplines, institutions, departments, and individuals. The RAE is seen as a tool for making universities accountable and ensuring the best use of public money. Furthermore the positive aspect of the exercise has been that it represents a successful attempt to sustain academic values and academic control in a context where the state was making new demands on research and higher education and seeking to impose its own structure and quality assurance upon them (Georghiou *et al.,* 2000). However, its impact on teaching has been to divert resources and prestige away from teaching, since staff careers and financial rewards have largely come from success in research rather than from undergraduate teaching.

The availability and accessibility of ICT in the UK has also made a significant contribution to teaching and learning at all stages and across all areas of the curriculum. According to New Zealand Trade and Enterprise (NZTE, 2010), the European Information Technology Observatory estimates that the UK is now the largest market for ICT in the European Union, overtaking Germany in 2008, with an estimated spend of €70 billion on technology products and services. The UK Government spends £17 billion pa on ICT products and services – more than any other European government. Main areas of spending are: Education,

Healthcare, e-government and Transport. Therefore accessibility and availability of technology in the UK has led to ease and the possibility of introducing technology into the curriculum without difficulties. A novelty in formal education only a few years ago, GIS has become a major part of the curriculum today. For example, the discipline of geography has offered cartography and air-photo interpretation for decades, but now GIS and digital remote sensing have become the standard courses. Other disciplines also use and teach GIS, such as geology, sociology, computer science, and numerous others (Bruce & Davis, 2001).

A further important factor that has positively influenced the teaching of geography in the last few years was the subject benchmark statements which are published by the Quality Assurance Agency for Higher Education (QAA). They provide a means for the academic community to describe the nature and characteristics of programmes in a specific subject or subject area. They also represent general expectations about standards for the award of qualifications at a given level in terms of the attributes and capabilities that those possessing qualifications should have demonstrated. And According to Chalkley (2006) the most important developments in HE geography which might perhaps influence the geography benchmark statements are:

- Increased focus on major issues e.g. sustainability, climate change, globalisation
- Changes in the subject e.g. cultural geography, GIS

- Fieldwork goes global
- Employability, work-based learning and embedded careers education
- Developments in learning technologies
- Inclusivity (disability, gender, race etc.)
- Linking teaching and research
- The requirement for Personal Development Planning (PDP)

There are a number of organisations and agencies that have developed over the last 10 years or so in order to improve the quality of teaching and learning, and to co-ordinate the development of projects to research and develop good practice. The Higher Education Academy (HEA) is one of these organisations that was created in 2004 through merging three organisations which were: the National Co-ordination Team, the Institute for Learning and Teaching in Higher Education and the Learning and Teaching Support Network. The influence of HEA in teaching and learning can be investigated from its mission that was addressed by Airey and Tribe (2005, p427) " to work with the higher education community to enhance all aspects of the students experience" and the key aim is to deliver "a co-ordinated and coherent UK- wide approach to: curriculum and pedagogic development and increasing the professional development and recognition of all staff in HE; and disseminating and embedding policies and practices that enhance the student experience"

The other important factor has fundamental influence on teaching geography was the Subject Centre for Geography, Earth and Environmental Sciences

(GEES) which is one of 24 subject centres within the Higher Education Academy of the UK**,** and each engages in a wide variety of activities to support academics, departments and institutions. The aims of the GEES Subject Centre is to support and enhance learning and teaching in the GEES disciplines in UK Higher Education and to improve the learning and teaching experiences of everyone in these disciplines in Higher Education Institutions in the UK and is a national and international hub in the exchange of knowledge on learning and teaching across the three disciplines. It provides a voice for these communities, contributing to government consultations and policy developments (www.gees.ac.uk). The Centre has a national UK-wide brief and this is reflected in the locations of its activities and events. According to Fraser (2005) and (www.gees.ac.uk) the core activities of each subject centre included:

- Collation of information on all aspects of teaching, learning and assessment within the discipline area;
- Provision of training opportunities;
- Advisory service to practitioners, such as academics, learning technologists and staff that support the student experience within the discipline area;
- Support through maintenance of networks and effective contacts;
- Liaison with relevant professional bodies and subject associations;
- Advice on the implementation of technology in learning and teaching;
- Ensuring that all practitioners are aware of current and future developments in learning and teaching;

- Collaboration with cognate subject centres to support interdisciplinary and multidisciplinary activity;
- Collaboration with the Generic Centre to ensure that subject centre staffs are aware of broader issues.

2.5 Geography and Sustainable Development (SD)

2.5.1 The roots of the notion of sustainable development

Sustainable development has become a significant matter on international, regional, and national agendas regarding education policy over the past few years. It was discussed for the first time on an international level at the UN conference on Human Environment, held in Stockholm in 1972 and several conferences have been held after that (Wright, 2002). The environmental concern was put on the international political agenda in this meeting. In 1987 the UN World Commission on Environment and Development published a report entitled ‘Our Common Future’ (also called the Brundtland Report). Kalliomaki (2007) presents the definition of sustainable development as it is defined in this report: “Sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs”.

The most important shift that happened in this context was at the UN Earth Summit, held in Rio de Janeiro, Brazil, in 1992. The conference led to a declaration and a comprehensive action plan; moreover the notion of sustainable development was further popularized in agenda 21, chapter 36 of

this conference which focused on the role of education towards implementation of sustainable development. It stressed the following points

- Reducing adult illiteracy by facilitating the access to education for all children
- The educational curriculum must incorporate environmental and development learning.
- Nations should seek to introduce environment and development concepts into all educational programs, with analysis of the causes of the major issues

In order to strengthen the role of education in the implementation of the concept of sustainable development on the one hand, and to make this concept a global goal on the other hand, the United Nations General Assembly, through its Resolution 57/254, declared a Decade of Education for Sustainable Development (DESD) (2005-2014). It also designated UNESCO as the lead agency for the promotion of this Decade. UNESCO (2007, 5) states that “The aims of DESD are to integrate values, activities and principles that are inherently linked to sustainable development into all forms of education and learning and help usher in a change in attitudes, behaviours and values to ensure a more sustainable future in social, environmental and economic terms”. In order to attain the sustainable development, the DESD sets up several concrete things which should be done. For example; fostering peace, fighting against global warming, reducing North/South inequalities and fighting against poverty, fighting against the marginalization of women and girls, and improving

everyone`s quality of life, including that of future generations, by reducing economic growth, social development and enhancing environmental protection.

In order to attain the objectives mentioned above, the Decade focuses on:

- Promoting and improving quality education
- Reorienting educational programmes
- Building public understanding and awareness
- Providing practical training

Furthermore, to strengthen the link between sustainable development and higher education, and playing an effective role in implementing this notion, over one thousand university presidents and vice-chancellors have signed the Halifax Declaration (1991), the Swansea Declaration (1993) the Copernicus Charter (1994), the Talloires Declaration (1999), the Kyoto Declaration (1993) and the Lunenburg Declaration (2000), committing their institutions to change towards sustainability.

2.5.2 Geography in Higher Education and Sustainable Development

This section aims to understand the overlap between geography and environmental education in order to find out the extent of its role that it can play in developing and achieving the objectives of sustainable development and environmental education on the one hand, and also how the idea of sustainable

development can be introduced in geography as an academic discipline on the other.

According to Hopkinson *et al* (2004), higher education (HE) has three main forms of environmental impacts:

1- the direct impacts of its activities, such as the use of energy and water in buildings or staff and student travel to and from their places of learning and teaching;
2- the indirect impacts on students' knowledge about, and behaviour with regard to, environmental issues;
3- the indirect impacts of research about environmental issues

Accordingly, this section discusses the second impact. This impact is linked to answering this question: how can these impacts be achieved or gained? Answering this question depends on the extent of integrating and embedding the sustainable development concept within the curricula taught that provides students with adequate knowledge regarding environmental issues, in order to create a generation capable of achieving the best solutions to these issues.

This section argues that geography can play a main role to implement the sustainable development concept and it can make strong links between environmental and development education. Jha (2007) points out that the contemporary global problems such as climate change, deforestation, land degradation and desertification, depletion of natural resources, loss of

biodiversity, overpopulation, food security, drought, poverty, and urban decay are primary concerns for both environmental and development education. Such matters as environmental deterioration and human development are also central to geography. Moreover, McManus (2004) stresses that geography is an ideal discipline for the academic advancement and promulgation of the concept of sustainable development. This is due to the long historical involvement of geographers in investigating environmental processes and nature-society relations.

To add further clarification in terms of the strength of relationship between geography and sustainable development (SD) and environmental education, it could be useful identifying the dimensions of SD and the extent of presence of these dimensions in the content of geography curriculum. Gough and Scot (2007) point out that the SD concept integrates all the ecological problems, social problems and economic problems. Moreover Pawlowski (2007) adds another three dimensions which are: technical, legal, and political dimensions. All of these dimensions are considered within the remit of geography. Accordingly there is a strong relationship and apparent overlaps between geography and environmental education (Jha, 2007). In this respect, Haigh (2005) points out that geography could play a significant and essential role in achieving the sustainable development concept and enhancing environmental education by means of ‘greening’ the geographical curriculum.

Geography as an important discipline of the higher education sector has a high flexibility in terms of potential and possibility of introducing sustainable development within its curriculum. An example can be given from the Higher Education sector in the UK, where the report published by Dawe *et al.* (2007) explains the extent of introducing SD within the curricula of higher educational disciplines. The report identifies three categories of response to SD by subject disciplines:

a) Subject disciplines that have adopted a major process of embedding SD curricula into undergraduate and post-graduate programmes. Examples include Engineering and Materials subjects which are dealing with the day to day realities of industrial processes, English with its strong tradition of 'eco-literacy' and Geography, Earth and Environmental Sciences.

b) Subject disciplines that have made some limited progress in embedding SD into their curricular although acknowledging that these disciplines have some significant curricular content opportunities to do so. Examples include Biosciences, Economics, Hospitality, Leisure, Sport and Tourism, Philosophy and Religious Studies.

c) Subject disciplines that have an interest in SD, but have found it much more difficult to embed SD widely or deeply into their curricula. Examples include Information and Computer Sciences and Mathematics, Statistics and Operational Research, Performing Arts and Psychology.

Two further examples can be given in this context from Russia (Verbitskaya *et al.,* 2002). The first is from the Faculty of Geography of Kaliningrad University, which includes the establishment of new environmental courses which are: ecological education, ecological tourism, and ecological planning. The second example is from St Petersburg State University which includes the creation of a new Department of Ecological Safety and Sustainable Development within the Faculty of Geography, which had its first graduates in 2002, who are specialists in ecological management.

Based on the above mentioned points, geography is placed in prime position in terms of implementation of SD in the educational curriculum.

McManus (2004) and Jha (2007) outline a framework for planning SD through geography. This framework is based on integrating the following key components into geography programmes of study:

a) Teaching environmental problems

It includes teaching students the major environment and development problems to explore how these issues relate to their lives, (e.g. climate change, deforestation).

b) Skills in critical evaluation

These skills are needed to trace the root causes of environmental problems and to examine personal and political contributions to change. They are also

required to challenge bias and support rational decision-making. Students should be encouraged to give their perceptions of the environment and development issues.

c) Education of values

It includes teaching values for sustainable living including those of social responsibility, looking after all the elements of the environment and commitment to work with and for others, in order to develop their environmental awareness.

d) Involvement and Action

Geography education must concentrate on involving students in real or simulated processes of environmental decision-making and action, as the most effective way that produces and develops the skills needed to investigate, evaluate and implement solutions to problems. In order to achieve this orientation, students must be taught through participatory learning directly by participation in practical conservation projects (Leeder, 2006).

Leeder (2006) addresses the same approaches to these given above, but he also adds another significant way which should be implemented in order to integrate the SD into the geography curriculum, by stating that the international perspective should not be forgotten. SD can be the ideal context for students to link with schools abroad. International links are the ideal way of further developing knowledge and understanding in many important respects such as: different viewpoints regarding global issues such as global warming (cause,

effect and solutions); interdependence, particularly the way in which trade, aid and consumption interrelate; and sustainable issues in weaker parts of the world where SD in not just about choices and options but about survival.

2.6 Teaching Geography in and for the 21 century

Nobody can ignore that humankind is living through an Information Revolution including an upsurge of scientific developments and inventions. This revolution of information and changes in technology has clearly affected the nature of education and pervaded the pedagogy and methodology of all of the educational disciplines including that of geography. This theme will be discussed in this section.

2.6.1 Changes in geography teaching

In recent years there have been many changes in geography, both in the conceptual structure of the subject and in the instructional techniques and equipment (Singh, 1982). Graves (1980) poses an important question regarding the future of geography teaching and the nature of this teaching in the 21st century. He points out that the world has changed and subsequently the nature of geography teaching has changed in terms of:

2.6.1.1Changes in the teaching environment

This change concerns the educational tools and visual aids which were used thirty years ago such as: maps, photographs, television. Today potential

resources seem almost unlimited in number, from census data to computerized data banks.

2.6.1.2Sources of information

This change is in the sources of information that have become available to the student. Previously these were represented by the teachers, the textbook and teaching aids; in more recent times numerous channels of information have become available and used outside the school, particularly the internet which can provide students each day with a mass of information.

2.6.1.3Changes in geographical knowledge

This matter is related to the change of concept and task of geography. Geography seeks to understand the problems of spatial relations on earth which are made manifest by overpopulation, underdevelopment, urban sprawl, regional planning, and how human societies can solve these through agrarian reform and land-use policies. The task of geography has been expanded, in other words geography as a discipline of higher education tries to make a significant contribution towards teaching for social transformation and resolving the global problems, to achieve these goals, teaching aims to promote skills and values amongst all students and fosters and neo-liberal goals such as the production of the labour force through vocationally-oriented education (Wellens *et al.*, 2006)

In response to the above changes, geography teaching has been trying to integrate the modern transformation of the Information Revolution. As a result, new educational techniques have been integrated into the field of geography teaching especially in the developed countries, as outlined below.

a) Use of Information and Communication Technology (ICT) in teaching geography

According to Jackson (2000), information and communications technology (ICT) refers to the computing and communications that support teaching and learning, where the focus is on the curriculum subject being taught, not on the technology skills. ICT is not just about computers: it also covers the use of faxes, tape recorders and cameras. ICT is commonly used to deliver course documentation, to host formative and summative assessment, and to provide links to other academic and practitioner websites and it can also provide more than passive information; indeed, its strengths lie in the opportunities it provides for students to benefit from interactive and virtual environments (Fletcher *et al*., 2007)

Many studies emphasize the importance and need for integration of technology into pedagogy of all disciplines of higher education in order to increase and improve the technology literacy. According to Georgina and Olson (2008), technological literacy means that an individual should have the capacity to "design, develop, control, use and assess technological systems and

processes”. Therefore teachers need to have an understanding of the way in which ICT can enhance teaching and learning within their subjects and enable students to benefit from ICT in their study (Jha, 2007).

During the last decade, technological developments in computer hardware, software and networks, combined with increasing pressure on staff and students, have led to a proliferation of ICT within the Geography, Earth and Environmental Sciences (GEES) disciplines (Fletcher *et al.,* 2007). Therefore students should be given opportunities, where appropriate, to develop and apply information technology capability in their study of geography (Freeman, 2003).

Geography is considered an appropriate subject in which ICT can make a genuine and worthwhile contribution. Lemberg and Stoltman (2001) point out that technology has revolutionized geography as a profession and has a significant impact on the teaching of the subject in higher education. Furthermore, Fisher and Binns (2000) point out that the relationship between the study of geography and the use of computers is uncontrived and uncontroversial because geography provides a rich and varied context for the use of new technologies to enhance both learning in the subject and to reinforce existing ICT skills (Becta, 2004).

According to Freem (2003) and Jha (2006) there are three key stages which should be implemented to enable students to apply and develop their ICT capability through the use of ICT tools to support their learning in geography.

- Key stage 1

Students should be taught to use secondary sources such as CD-ROM encyclopaedia, to obtain geographical information

- Key Stage 2

Students should be taught to use IT to gain access to additional information sources and to assist in handling, classifying and presenting evidence, e.g. recording fieldwork evidence in spreadsheets, using newspapers on CD-ROM, using word processing and mapping packages.

- Key Stage 3

Students should be taught to use IT to gain access to additional information sources and to assist in handling presenting and analysing geographical evidence, e.g. automatic weather stations to collect weather data, spreadsheets to record environmental impact scores, CD-ROMs to obtain census data, desktop publishing packages to produce a leaflet on a local issue, simulation packages to investigate a flood hazard.

Fisher and Binns (2000) and Becta (2004) show that the use of ICT can help students to gain many features such as enhancing their geographical knowledge and skills; gaining access to a range of geographical knowledge and information sources; deepening their understanding of environmental and

spatial relationship; communicating with other people and increasing awareness of the impact of ICT in the changing world.

b) Innovative Technologies in Geography

There are two main aspects of new technology in geography – remote sensing and GIS (Geographic Information Systems) - and use of the internet in classrooms to help geographical understanding which are at the forefront of innovative uses of ICT.

c) Remote Sensing

Geography has traditionally been eclectic. It has borrowed concepts, skills and data from a range of cognate disciplines. It has also absorbed new technology. In this kind of spirit it has borrowed satellite remote sensing (Hilton, 1991).

The use of remote sensing in teaching geography enables students to understand more about several geographical and environmental subjects and issues. According to Hill (1991) the use of satellite remote sensing in science can be broken down into the following major areas:

1- Atmosphere physics including meteorology and climatology;
2- Ocean and polar ice physics;
3- Land applications including geology, hydrology, agriculture, land use planning and civil engineering;
4- Solid earth physics including geodesy and geodynamics.

Under each of the above four areas, a host of measurements can be made, with many potential applications: mineral exploration, earth dynamics, crop production, environmental monitoring, soil survey, agriculture, civil engineering, land use, water resources management, climate studies, topographic mapping, fisheries, off-shore operations, weather forecasting, etc.

d) Geographical Information Systems (GIS)

Geographical Information Systems is one of the fastest growing software applications in the world. Geographical Information Systems or GIS have a history that goes back in one form or other to the 1950s, but their expansion on a large scale was a phenomenon of the later 1980s and early 1990s (Lindsay, 1997). According to Lindsay (1997) and Freem (2003) there are a growing number of different GIS packages which process maps and data, but they all have these main features:

• Data input—loading maps in computerized form from surveys or remote sensing. Some GIS can also use information from surveys and census that link to places on the maps.

• Data management—asking questions about the maps and data, and selecting what to show on the maps.

• Data transformation and display—making new maps from the selected data or showing data in diagrams on maps

In terms of fitting and introducing ICT into geography curricula, the Geographical Association indicates that GIS is ideal for doing this as it provides techniques and opportunities to further pupils' geographical learning by:

- Overcoming mechanical aspects of mapping to give students the opportunity to produce a professional result.
- Improving students' visualisation of the landscape through aerial overlays on maps.
- Enabling access to up to date mapping and on the internet through, for example, search engines, local and national government sites
- Allowing more time to achieve higher level thinking by replacing tedious mapping operations with interactive manipulation of large sets of digital maps and data to select, display and interpret spatial patterns and relationships.
- Enabling pupils to experiment with cartography by choosing colours, graphical techniques and methods of selecting and presenting data on maps.

e) Using the Internet

The Internet is one of the most exciting and significant developments in computing of the recent past. Use of the internet in the field of education has many advantages as it is considered as a valuable information resource that can provide unprecedented information to students which can be quite quickly and easily reached. Furthermore, it has the ability to engage students in "active

learning" and supports active, hands-on learning which can provide students with practical real-life experience. On the other hand it contributes to develop students` skills and personal interaction (Lindsay, 1997).

2.7 Methods of assessments

During the last decade, higher education has been changing substantially. In today's higher education, new teaching methods are used to emphasise the importance of the learning process and the construction of knowledge. Assessment plays a major role in these innovative processes. Moreover, assessment is increasingly becoming central to the whole process of higher education in enhancing the quality of educational provision (Brown & Glasner, 1999).

The assessment strategy of a particular course has a major impact on student activity. It influences the approach students adopt towards their learning, how much time they spend on their studies, how widely they study the curriculum, and whether they grasp the key concepts of the subject (Bloxham and Boyd, 2007). There is also evidence of a significant, negative effect on students' learning and achievement from a poorly conceived assessment strategy (Biggs, 2003). Others, like Van de Watering & Van de Rijt (2006) acknowledge that assessment plays a crucial role in the learning process and on the impact of teaching methods, particularly new methods. Consequently, high quality assessment should assess the desired performance standards, academic

standards or the students' levels of competence in such a way that students' knowledge, skills, abilities and aspects of professional expertise can be judged.

There are a variety of methods of assessments used by teachers to assess the academic progress of their students. The common assessments methods used in teaching geography in higher education are: examinations, essays, oral presentations, field and laboratory notebooks, dissertations and projects and poster assessment. These methods have been given detailed explanation by Bryan & Clegg (2006), Gold *et al.*, (1991) and Miller *et al.,* (1988). Three of the aforementioned methods are outlined below.

2.7.1 Objective tests

Tests are still a favoured method of assessment among many staff because they have several advantages some of them being: the teacher can guarantee who wrote each answer; everyone has exactly the same amount of time to answer the questions; the examination ensures students revise widely across the subject; and students need to know the subject area well and have an agile mind to construct an answer quickly.

Heywood (1977) and Gold *et al*., (1991) classify the objectives test into six types that have at least some value for higher education. The first three (short answer, completion, true-false) can be very useful for classroom feedback-indicating to the teacher and students themselves how well they understood material. The fourth one, called 'matching' provides an accurate test of factual knowledge. The remaining two types are variants of multiple choice questions.

2.7.2 Essays

Miller *et al*. (1988) indicates that essays are popular methods of assessment, at least among teachers in some universities, if not among their students. In this type of method students are given a set of topics from which they select one on which to write within a word limit, often between 1500 and 3000 words. And they may be given a list of references of books and articles to help them to produce a better essay (Clark and Wareham, 2003).

A useful summary of the major types of essays used in geography and undergraduate education is given by Gold *et al*. (1991) and Miller *et al.* (1988). Their categorizations are reproduced here.

1. Short answer essays (Expository Essay) (to examine mastery of facts, principles, and single concepts)

2. The Persuasive Essay (to examine the ability to construct coherent arguments)

3. Standard essays (to examine the ability to describe and to analyse the relationship between ideas and events).

4. Extended time essays (allow students to present a solution to the main problematic situation without time constraints)

5. Dissertations (examine the ability to make an integrated study in depth over a wide field)

6. Essays that allow complete freedom of response examine the ability to reach independent conclusions.

2.7.3 Oral presentation

In recent years many departments have included oral presentations in their teaching and assessment repertoires (Clark & Wareham 2003). In this type of method students are given a subject or asked to select a topical issue related to the area under study and then to give talks in order to assess their performance.

2.7.4 Dissertations

A dissertation is a significant part of many geography degree programmes (Kneale, 1999). In most geography departments students are required to produce a project or dissertation, and it is considered a compulsory part of the geography degree. The dissertation is a major piece of work which all final year students undertake. It provides students with the opportunity to put together the various skills that they have learned in the course of their degree, and allows them to demonstrate their acquired skills in studying a substantive geographical topic, using appropriate concepts and theories, producing original research through the application of an appropriate social science method, undertaking data analysis, and presenting their results in writing. There are certain elements of a dissertation which are considered as standard, and will appear in all dissertations in one form or another. The most common standard elements are discussed in detailed by (Pritchard, 2008)

2.8 Discussion

From the review of the literature given related to geography teaching in higher education, it is clear that among the hundreds of geography departments around the world (UK Universities were used as a case study) there is a range of degree programmes. This feature allows a student to select the course that he/she would like to study according to his/her desire, and to be a specialist in a particular area. Moreover, new courses have been established in some universities. These courses deal with the current international issues which have emerged in recent years, especially with regard to environmental problems, which mean that geography in higher education attempts to embed and incorporate these issues within its curriculum.

Adding to what has been mentioned, it is clear that geography in higher education is taught by using a relatively large number of teaching methods. Each kind of teaching method used is characterised by its own specific features which enable a student to understand the course. Some of the methods are given more attention by teachers and they are considered essential methods in teaching geography such as field work and the practical classes.

The literature presents a strong relationship between geography and sustainable development, in other words there is considerable overlap between the dimensions of sustainable development and the dimensions of geography. Therefore geography programs could play an effective role in embedding and introducing the sustainable development concept in their curricula whether by

teaching the environmental issue within the subjects taught or by establishing related but separate environmental degree courses.

The literature review argues that the teaching of geography has changed in recent years. This change includes three aspects which are: changes in the teaching environment, changes in information sources and changes in the geographical knowledge. Moreover, it discusses the most important recent educational techniques which have been embedded into the field of geography teaching which are the use of Information Technology (ICT) and in particular Remote Sensing, Geographical Information Systems (GIS) and using the Internet.

CHAPTER 3: LITERATURE REVIEW OF HIGHER EDUCATION IN THE ARAB WORLD AND LIBYA

3.1 Overview of Higher Education in the Arab World

The aim of this section is to identify the most important problems of higher education in the Arab world, to identify obstacles that hinder its development, for comparison with their counterparts in Libya, to find out similarities and differences in this regard.

There is no doubt that education is considered a key factor in building economies and welfare of nations. Bone (2006) indicates that higher education is seen as being of key importance in the creation and transfer of knowledge to the UK economy through its teaching. Thus, efforts have been made to restructure and develop this sector, especially in advanced countries, so that it can track and adopt the global transformations, and to achieve the best goals of education in developing their society, such efforts being addressed and summarized by Manicas (1998) and Eckel (2001). To achieve these targets the problems and obstacles that arise must be diagnosed and resolved on an ongoing basis so as not to accumulate on top of each other. Therefore, many studies have been made in many countries of the world calling for the need to continue the evaluation process of all educational aspects in order to understand and consider even the simplest kinds of problems and sort them out, for example the study of Varela (2006) evaluates the higher education in

Mexico and diagnoses its problems suggesting that the current situation needs to be restructured.

The evaluation and reform process of the education sector in the developed countries has led to several positive results being achieved in terms of solving the educational deficiencies and therefore significant progress being made in this sector in countries such as Estonia and Mexico (Figueroa, 1996; Tomusk, 2001)

The situation is quite different in the Arab world, where there is a lack and scarcity of evaluation studies of the education sector, resulting in the accumulation of problems, which are difficult to solve easily (Abou-Chacra, 1991). Consequently, the gap between the Arabic countries and the developed countries with regard to quality and features of higher education, already enormous, has become wider (Bashshur, 2004).

The Arab World consists of 22 countries. Although the countries share a common language, and to a large extent a common religion and cultural heritage, they differ in matters of geography, demographics, wealth, governance and educational system, however many of the issues and trends in education are similar (UNESCO, 2003).

Higher education institutions are a fairly new development in the Arab world. The first two universities were established in Beirut city in Lebanon at the end of

the nineteenth century, and then were followed by the establishment of another two universities in Egypt in 1908, and in Syria in 1923. In 1950, there were more than 10 institutions in the region. The latest edition of the Guide of Arab Universities' Association (2003), lists a total of 233 universities in 21 Arab States, 156 of them are identified as state institutions, and the remaining 77 as private or non-governmental (Bashshur, 2004). Three quarters of Arab universities were established in the last 25 years of the 20th century. Fifty-seven per cent of them are no more than 15 years old. This observation is important: higher education institutions, universities in particular, take a long time to consolidate their institutional structure and to perfect their role in the dissemination and production of knowledge (UNDP, 2003).

Because higher education in the Arab world is newly established it is not surprising that it suffers from several problems and obstacles. These problems have been very seriously discussed on the Arabic regional level by the regional authorities on many occasions. For example, the Arab Regional Conference on Higher Education, held in Beirut, Lebanon in March 1998, suggested strongly that higher education in the Arab States was under considerable strain, due to high rates of population growth and increasing social demand for higher education, which lead states and institutions to increase student enrolment, often without adequate allocated financial resources, which prevents it from achieving the desired targets. Furthermore the United Nations Development Programme (UNDP) in its report published by the Regional Bureau for Arab States entitled 'The Arab Human Development 2003' points out that the general

condition of education is still unfavourable compared to the achievements of other countries, both developing and developed, and as a result Arab education falls far short of human developments needs.

It is difficult to present all the problems of Arabic Higher Education and discuss it in detail, but it is useful to address and refer to the most important general educational aspects that suffer from problems, since these problems will be discussed in detail when studying higher education in Libya. Because all Arab countries have similar problems, therefore a majority of issues and trends in education are similar (UNESCO, 2003).

Based on various studies (Abou-Chacra, 1991; Qasem *et al*., 1998) the most important aspects that are suffering from problems are:

1- Soaring demand, due to a rapid growth of population.
2- Insufficient funding
3- Problems related to the curriculum and its inability to meet students` needs
4- Low-quality research with unclear goals
5- The weak relations between different universities both within a single country and with international universities
6- Adopting and relying on traditional teaching methods
7- Little or no academic freedom
8- Lack of interaction of Arab universities with society
9- Inadequate academic resources

10- Inflexible and centralized management
11- Lack of diversification of institutions and programs
12- Weakness of the links between the higher education institutions, general and secondary education institutions, local communities and social and human development needs.

The aforementioned literature proposes a number of suggestions to reform higher education in the Arab world. They stressed the need for new teaching and learning skills, methods and processes along with inclusion of new technology and promotion of scientific and analytical thinking skills. Furthermore, they called for enhancing cooperation in the field of higher education with international universities and linking higher education with Sustainable Development.

3.2 Overview on Libyan higher education and teaching geography in higher education in universities

3.2.1 Background

This section deals with several issues relating to Libyan higher education. The first issue that will be discussed is the history of Libyan higher education, which is divided into three stages. Secondly the topic of evaluation of the current reality of Libyan higher education will be addressed, combining the strategy and aims of Libyan higher education, obstacles that are facing it and the proposals set out for its development.

3.2.2 History of Libyan higher education

It is useful to divide the history of Libyan higher education into three stages. The first, from 1955 to 1972, begins with the establishment of the first Libyan university in the city of Benghazi (later called Garyounis University), with a branch of it established in Tripoli in 1957 (which subsequently became independent as Al-Fatah University in 1973). The period is marked by the gradual increase in the number of faculties and subjects covered. Stage two (1973-1985) only saw the construction of two more universities, Elnajem Elsateah University in the city of Al-Breega (mid-northern Libya) in 1982, and Sabha University (southern Libya) in 1984. During this time, the number of university students increased from 11,243 (1975-6 academic year) to 34,118 (1983-4 academic year) (Elshebani, 1989), with the larger increases in the later years possibly linked to the earlier opening of many more secondary schools in the country allowing a significant expansion of higher education provision.

The third stage (1985 – present) arose from the realisation that there was excessive concentration of development in major cities, resulting in internal migration from other cities to Tripoli and Benghazi. Therefore, a policy of opening new universities throughout the country was adopted, which resulted in a total of 25 universities being created: nine main universities; seventeen described as ‘Department Universities’ (branches of the nine main universities); and three universities of special nature. These universities are listed in table 3.1 (modified from Bashir, 2004). However, despite the establishment of these new

universities, this has been achieved by taking over old buildings (e.g. former secondary schools), without providing extra facilities or new buildings.

Table 3.1: A list the universities existing in Libya in the academic year 2003-2004, together with their designation and geographical location in the country.

	Name of University	**Educational Interface**	**District**
1	Seventh of April University	Faculties	Zawia
2	University of Al-Fateh	Faculties	Tripoli
3	University of Garyounis	Faculties	Benghazi
4	University of Sabha	Faculties	Sabha
5	El-Tahadi University	Faculties	Sirt
6	Omar El-Mukhtar University	Faculties	Baida
7	Al-Mergib University	Faculties	Khoms
8	University of Darna	Departments	Darna
9	Gouba University	Departments	Baida
10	Marag University	Departments	Marag
11	Wahat University	Departments	Adgdabia
12	Kofra University	Departments	Kofra
13	Bani Waled University	Departments	Bani Waled
14	Musrata University	Departments	Musrata
15	Sakar Africa University	Departments	Nalut
16	Subrata and Surman University	Departments	Subrata
17	Ghyrian University	Departments	Ghyrian
18	Yefran University	Departments	Yefran
19	Nikat Kams University	Departments	Zwara
20	Al-Hizam Al-Akter University	Departments	Gydabia
21	Mizda University	Departments	Mizda
22	Al-Masera Al-Kubra University	Departments	Boutnan
23	The Open University	Faculties	Tripoli
24	Al-Asmaria University	Faculties	Zliten
25	Naser University	Faculties	Tripoli

More recently (2004) the universities listed in Table 3.1 were reorganised to become the 12 named universities listed in Table 3.2 ; this table also provides information on the number of teaching staff of Libyan and non-Libyan origin; and the male, female and total number of students in each university (General

Authority for Information, 2006). It may be noted that most, but not all, of the universities are predominantly staffed by Libyan nationals; that there are generally more female than male students; and that the two oldest universities (Garyounis and Al-Fatah) account for nearly half of the total student numbers.

Table 3.2: The number of students and the teaching staff at Libyan universities, (2006-2007).

Name of University	**Number of teaching staff**			**Number of students**		
	Libyan	**Non-Libyan**	**Total**	**Male**	**Female**	**Total**
Al-fateh	2441	54	2495	25795	35117	60912
Garyonis	1119	355	1474	18737	31318	50055
Sabha	468	273	741	3605	6760	10365
Naser	239	5	244	570	230	800
Omar Moktar	550	566	1116	9063	14772	23835
Mergeb	516	166	682	12412	9544	21956
Open University	2	1	3	1606	2113	4719
7th April	444	284	728	7768	13865	21633
Tahadi	189	229	418	4135	3471	7606
Jabel Gharbi	426	231	657	5157	9102	14259
Asmarya	16	35	51	1060	367	1427
7th October	481	228	709	5624	8571	14195
Total	6891	2427	9318	96532	135230	231762

3.2.3 The financing system of Libya's higher education

Libyan law emphasizes that study is considered free of charge for Libyan students at all stages of education (excepting postgraduate education), for this reason the higher education sector is financed by the public budget. Accordingly the government allocates approximately 20% yearly of the general budget of the country for education.

3.2.4 The educational systems of Libyan university education

Two educational systems are implemented in Libyan university education, there are:

- **Academic year system**

The study period in accordance with this system ranges between four years in most specializations and six years in others such as medical specializations. The study year starts in the month of October and finishes in June or July, comprising a number of compulsory modules determined by university administration. In this system there are no optional modules offered, although the number and kind of modules taught in similar departments and specializations vary among universities. The system of exams divides into two types, the first one is a mid-year test for all modules, the second one is a final test, in which the student has to obtain fifty percent overall in each module to pass it. Students who are not able to pass all of the modules are given a second chance by doing supplementary exams and they are allowed to refer two modules to be completed in the following year.

- **Semester system**

The study period of this system is three years and four years in some departments. Each year is divided into semesters each consisting of compulsory modules. A student can transfer two modules to the following semester if he/she could not pass them, otherwise he/she can repeat the exam

of modules which have not been passed in the next semester without attendance.

3.2.5 Evaluation of reality of Libyan higher education

Although higher education in Libya has witnessed a significant development in the last twenty years in terms of expansion in the establishment of universities, and increasing the number of students enrolled, this quantitative expansion came at the expense of quality (Bashshur, 2004). Therefore higher education in Libya faces many problems that hamper its ability to catch up with and meet modern demands, and fails to meet the society`s needs.

Accordingly, Libya has realized that the most important way to accomplish the goals intended for higher education is by evaluating its reality, so as to investigate its related strengths and weaknesses. To draw more light on this matter, it is useful to discuss the following aspects:

1- Strategy and aims of Libyan higher education
2- Barriers and obstacles in Libyan higher education and its solutions
3- Recommendations and proposals to develop higher education

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3.2.5.1Strategy and aims of Libyan higher education

Based on a report carried out by a committee of Libyan experts and presented to The International Conference of Education, held in Geneva, Session 47, 2004, titled ‘the development of education in Libya’, the strategy and goals of Libyan higher education are represented in the following:

1- Higher education is considered free of charge for all Libyan students, as the financial support for education is considered to be the country`s responsibility
2- The Arabic language is the basic language for academic programmes, though using foreign languages in some specializations.
3- Members of staff should be encouraged by supporting them both materially and morally.
4- Work on the use of modern educational technologies and methods should be performed, such as communication means, educational illustrations, study groups, workshops, self education, and so on.
5- Higher education should contribute to solving social problems by means of linking the higher education institutions with society in order to enhance cooperative relationships between each other, and work to strengthen this relationship should be undertaken.
6- The educational system should be reviewed, not only the higher education system but at the various stages of education in order to design a new educational environment which is able to meet the needs of society, and face the challenges of the twenty-first century.
7- The higher education sector should be linked with the requirements of national development in order to increase compatibility and harmony between the higher education sector and future development plans.
8- Reforming and developing the educational curricula in order to reflect and respond to international trends.

9- The enhancement of environmental awareness of students, in order to motivate them to care and maintain the safety and integrity of the environment and its various resources, and encourage students to contribute and play a fundamental role in solving environmental problems.

10- Support private higher education institutions to be a main part of the education system by means of adopting their curricula and certificates, encouraging them to make links with the public institutions, and following up their work to ensure they conform to public higher education institutions. Also to ensure they meet generally accepted standards, furthermore to motivate them to develop educational process by providing new areas of education.

11- Work on the distribution of higher education institutions in accordance with the geographical distribution of population on one hand, and the requirements of quality on the other hand, in order to meet the society`s demand for higher education.

12- Enable students to gain the skills of thinking and scientific analysis to go with the contemporary international transformations in the field of technology and science.

13- Enable and encourage students to connect with the different cultures in the world so they are able to integrate into the international community

3.2.5.2Barriers and obstacles in Libyan higher education

As noted above the number of higher education institutions has increased and distributed more evenly throughout the country, and the number of students enrolling in higher education has increased significantly in recent years, both of which are positive indicators in educational development. However, the criterion of quality and efficiency of performance of Libyan higher education is extremely low and weak (Bin Saeed, 2007), accordingly a lot of weaknesses which are considered as obstacles and barriers are still existing and threaten to prevent this sector from accomplishing its mission and function.

According to several national reports prepared by the Libyan National Commission for Education, Culture and Sciences, regarding the development of education in Libya, and presented to the International Conferences on Education, held in Geneva, in Session 46 (2001), provide session numbers for (2004) and (2008), the main obstacles and barriers that face higher education can be outlined as the following:

1- Weaknesses of development of inputs to the educational process, due to their not being based on evaluative field studies which could reveal the strengths and weaknesses to be taken into account in planning education programs, especially the educational inputs
2- The large increase in the number of students, where the current proportion of 37% of the population consists of students in various stages of education due to the high rate of population growth which reached 4% per year in 1996 (El-Hawat, 1996), and this increase has not been offset

by a tangible increase in human and material resources. There is also a limitation of capacity of some Libyan higher education institutions to accommodate the increased numbers of students, as can be seen in the overcrowding of students in classrooms, laboratories, and universities' corridors.

3- A lack of integration and harmonization between the educational and the economic planning, especially in terms of the correlation between the curricula and the labour market (Alzubedi, 2000)

4- The teaching strategies adopted by higher education institutions in Libya are still restricted to the traditional teaching methods such as the traditional lecture where often the method of dialogue and discussion are not used (Alzubedi, 2000)

5- Lack of scientific coordination and cooperation among Libyan Universities on the one hand, and between them and the international universities on the other hand.

6- The inability of the current system of teaching in some specializations to enable students to get a job after their graduation, except in the field of teaching.

7- Lack of availability of modern sources of information in Libyan universities and limitations on the books which are available at libraries, due to lack of introducing and use of information technology in the field of higher education, which makes it difficult to trace and keep abreast of the latest educational developments in this field (Chafchouni, 2002).

8- Lack of encouragement of scientific research and lack of encouragement of teachers to participate in the international and Arabic scientific events and to publish their researches in Arabic and international journals.

3.2.5.3Proposals of Libyan Higher Education Ministry for reforming university education

The aim of this section is to outline the proposals recently put forward by the Libyan Higher Education Ministry to improve and develop Libyan university education which are based on the existing obstacles.

a) General solutions (Remedial Reforms)

General proposals mean the suggestions and recommendations that have been made or been implemented by responsible authorities or that have been suggested by specialized people who take care of the development of university education. These suggestions have been made in order to tackle the aforementioned problems of this sector. Therefore they focus on improving the current situation of the higher education sector. The aim of this section is:

1-1- To identify these suggestions in order to compare them with the suggestions those have been given by students and teachers in geography departments later in this thesis.

1-2- To find out to what extent these suggestions can be considered appropriate solutions to the problems identified.

The most important solutions that have been suggested can be set out as below:

1. The task and mission of Libyan university education must not be limited to the traditional pedagogic process, but must also give special attention to the scientific research and knowledge production, in addition to providing national institutions with scientific, technical, and advisory services, since these institutions contribute to support universities financially.

2. Planning of university education must be linked to the development planning of society so that education meets the future needs of the community.

3. Universities must be supported by government and local authorities for the purpose of promoting and encouraging scientific research on the one hand, as well as supporting researchers to participate in the activities of international organizations and bodies concerned with higher education on the other hand.

4. Reforming the educational curricula for the 21st century, these curricula should be based on the needs and abilities of students on the one hand, and to meet the future needs of society on the other hand. Accordingly these curricula must provide students with skills, knowledge and experience in order to enable students to face the future, and to take part in building the society in future. Such reforms should take the global revolution in the field of communications and information, and its influence on the life of students and society into consideration, and also should not ignore the economic and social developments in the world and its effects on knowledge, moreover balancing the need for both theoretical information and its practical application in order to

increase the comprehension of students. Furthermore, national and global environmental issues should be given a place within the reformed curricula.

5. Encouraging universities to contribute to implementation of the sustainable development concept, and to work to achieve recommendations of international declarations. Sustainability should become an integral part of university life, as one of the aims of education must be to sustain the possibility of a good society of right living (Corcoran & Wals 2004)

6. Committees should be established within the higher education sector consisting of specialized people for each discipline to be responsible for determining the modules taught and their syllabuses, and to develop and evaluate educational curricula periodically (Bin saeed, 2007)

7. The need to pay more attention to university libraries and provide them with up to date books and references material, furthermore they should be provided with necessary equipment such as a copy machines, computers, printers and so on.

8. The need to pay more attention to the establishment of laboratories in each department and supplying them with modern equipment in order to support the theoretical information with practical application.

9.New specializations should be established within the higher education sector in the light of the development needs of society on the one hand, and international transformations on the other.

b) Developmental reforms

The implementation of the national project for the use of information and communication technologies in the higher education sector

The Libyan Higher Education Ministry has expressed its intention to improve the higher education sector regarding the technology available. As a result, in June 2007 a cooperation agreement was signed between the Director of the Libyan Higher Education Ministry and the headquarters of the United Nations Education, Scientific and Cultural Organization (UNESCO) with regard to the implementation of the national project for the use of information and communication technologies (ICT) in the Libyan higher education sector. The agreement aims to provide the higher education institutions with computer laboratories and classrooms for education and training in addition to the creation of digital libraries, and also the establishment of a local information network linking the universities with each other. This project consists of 450 workshops and laboratories comprising more than 600 computers, as well as the creation of rooms for digital presentation in each university consisting of computers along with display screens. The project costs 72 million US dollars and needs five years to be implemented. The main components and the timetable for completion of the project are shown in Table 3.3.

Table 3.3: the national project for the use of information and communication technologies in the higher education sector

Phases of the project		**Years**				
		1	2	3	4	5
1	Libyan national network among universities	*	*	*		
2	The local networks in each university	*	*	*		
3	Computer Networks		*	*	*	
4	Computer Labs			*	*	*
5	E-learning Classrooms			*	*	*
6	Infrastructure Applications		*	*	*	
7	Video on Demand					*
8	Major Applications System	*	*	*		
9	Online Educational Content	*	*	*		
10	Digital Libraries				*	*
11	Multimedia Educational			*		

Source: Libyan General Authority for Information (2007)

Establishment of new universities

The development plan of the higher education sector for the years 2008-2012 proposes establishment of 24 universities distributed throughout the country instead of the system which created and opened faculties and departments as branches of the main university in the cites that are located around it.

However, at the time of writing, there are no indications that the proposed development reforms mentioned above have actually been implemented.

3.3 Teaching geography in higher education

Geography occupies 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 (QAA, 2000). Geography as a subject doesn't have a long history in Libya, as it was only clearly recognized as a separate academic area with the establishment of the first university in the country in 1955. The establishment of new geography departments has been associated with the establishment of new universities. Therefore, departments of geography are established as a branch of the Arts and Sciences Faculties in all Libyan universities. Although the establishment of geography departments has witnessed noticeable increase, however they have not witnessed the launching of any new geography programs.

3.3.1 The current strategy of teaching geography in Libyan universities and the structure of the geography program

Geography in Libyan universities is taught as an independent subject, it is not taught as part of a group of allied subjects (like the social sciences or environmental studies) as it is taught in most universities of the developed countries such as the UK. A geography department is one of others in the faculty of arts and sciences which contains subjects such as philosophy, history, psychology and sociology.

Departments of Geography in all Libyan universities offer one course program which is a BA in geography, in other words the geography discipline is not divided into sub-disciplines in order to allow a student to choose his/her preferred specialization, even though one of the Libyan educational goals is to give students freedom to choose their field of study (Bashir, 2004). Also,

students are required to study all the set geographical modules during the study period within one mixed program without optionality. Accordingly, students have to study a combination of compulsory geographical modules over four years to obtain the degree. The details of the modules taught vary slightly from one university to another. Tables 3.4 and 3.5 show the structure of the geography course in two universities.

Table 3.4: Structure of the geography course in the Geography Department of Institution F

First year	Second year	Third year	Fourth year
Geography of Africa	Geomorphology	Geo Cities	The Dry Lands
The History of Arab World	Cartography	Environmental pollution	Urban Geography
Introduction to Psychology	Aerial Photography	Transportation Geography	Geography of Libya
Principles of Area	Biogeography	Geography of Hydrology	Tourism Geography
The History of Geographical thought	The Climate Geography	Industrial Geography	The seas and Oceans Geography
Principles of Physical Geography	Geography of the Old World	Agricultural Geography	The Political Geography
Human Geography	Economic Geography	Population Geography	Regional Planning
Geographical texts and terms in English language	Research Methods	Soil Geography	Behavioural Geography
Arabic World Geography	Arabic Language (B)*	Political Geography	Geography of Europe
Political Culture (A)**	Political Culture (B)**	GIS	Research Project
Islamic culture		The Geography of the New World	Political Culture (D)**
The Arabic Language (A)*		Political Culture (C)**	

Source Geography Department Institution F, 2008

*This is non-geography module and it is divided into more than one part

**This module is a non-geography module and it teaches the principles of the Al-Fatah Revolution of Libya.

Table 3.5: Structure of the geography course in the Geography Department of Institution A

First year	**Second year**	**Third year**	**Four year**
The Arabic Language	Geography of Transportation	Biogeography	Industrial Geography
The Political culture (A)*	Earth'Physical Features Geography	Urban Geography	Economic Development
Introduction to Psychology	Geographical Research Methods	Geomorphology	Environmental issues
Geographical texts and terms English Language	Geography of Population	Agricultural Geography	Regional Planning
Geography of Africa	Climate Geography	Political Geography	Management of resources of dry lands
Arabic World Geography	Cartography	Medical Geography	Geography of Seas and Oceans
Principles of Human Geography	Geography of Tourism	Meteorology	Fieldwork
Principles of Physical Geography	Geography of Libya	Political Cultural (C)*	Political Cultural (D)*
Principles of area	Statistical Geography	The History of Geographical Thought	Air photography and Remote Sensing
	political l culture (B)*		Fieldwork

Source Geography Department of Institution A, 2008

*This module is a non-geography module and it teaches the principles of B Al-Fatah Revolution of Libya

As explained above it can be noted that all modules are compulsory without offering any optional modules to students, there are also five non-geographical subjects being taught in all universities along with the geographical subjects which are: (a) Arabic History (b) Arabic Language (C) Islamic Religion (d) Political Culture (e) Introduction to Psychology. The structure of the courses pays more attention to modules of Regional Geography such as Geography of Libya, Geography of Africa, Arabic World Geography, New World Geography, European Geography, and Geography of the Old World. But in contrast the program does not pay special attention to environmental issues; as such issues are dealt with in only one or two subjects in each university. Furthermore, fieldwork is implemented in just the final year and only in Institution A of the two indicated in Tables 3.4 and 3.5.

3.3.2 New plan of geography course designed by Libyan Higher Education Ministry

As part of the process of reform of higher education in Libya, the Libyan Higher Education Ministry designed a new plan for the structure of geography courses that must be adopted by Libyan universities teaching geography. This plan was designed by 12 Libyan experts in the educational sector and issued in 2008, and distributed to Libyan universities at the end of 2008 to be considered and implemented for the academic year 2009-2010. The most important thing to note regarding the preparation of this plan is that there were no geographical experts involved in preparing it. The scheme explains the way in which the

geography discipline should be run. Table 3.6 shows the structure of the proposed course.

Table 3.6: Structure of new geography course designed and proposed by Ministry of Libyan Higher Education in 2008.

First year	**Second year**	**Third year**	**Fourth year**
Physical Geography	Climate Geography	Hydrology	Geography of the seas and oceans
Human Geography	Geomorphology	Dry Lands	Environmental Pollution
Principles of area	Biogeography	Physical Geography	Geocities
The History of Geography Thought	Agricultural Geography	Urban Geography	Geography of Tourism
Geographical texts and terms by English language	Population Geography	Transportation Geography	Industrial Geography
World Arabic Geography	Remote Sensing	Geographic Resources and Energy	Regional Planning
Statistics	Geography Research Methods	Maps	Geography of New World
computer	Geography of Africa	Eurasia Geography	Geography of Libya
Arabic language (A)*	Arabic language (B)*	Political Geography	Final Year Dissertation
Islamic Civilization	Islamic Culture	English Language (C)*	Political Culture (D)**
English Language(A)*	English Language (B)*	Political Culture (C)**	Soil Geography (optional)
Psychology	Political Culture(B)**		Geographic Resources and Energy (optional)
Political Culture (A)**			Medical Geography
			Behavioural geography (Optional)
			Meteorology (Optional)

Source: Sallah et al, (2008)

- And ** See the previous two tables.

Unfortunately, the researcher was not able to take into account the perspectives and views of teachers and students regarding the advantages and disadvantages of this plan, since it was produced after the field study was undertaken by the researcher at the end of academic year 2007-2008. However, through analysis of this plan a number of negative points can be explored and should be reconsidered by the Libyan higher education ministry. These points can be summarized as follows

1- The new course has just one mandatory program which is the B.A. Geography Degree, with no other geography degrees. Thus, there is still no opportunity for students to choose a more specialized program.
2- There are six non-geographical modules which must be taught which are: A- Arabic Language B- Political Culture C- Islamic Civilization D- Islamic Culture E- Introduction in Psychology. Consideration should be given to replacing with new geography modules.
3- Field study has been completely removed from the course structure. Accordingly, and in the light of this structure the educational process in geography degrees will be run without undertaking any kind of fieldwork.
4- The new structure does not have any indications in respect of doing practical study in the various modules. Accordingly, the teaching process will be done by reliance on the application of theoretical study only.
5- Although a considerable number of universities worldwide during the last decade were integrating and incorporating the principle of environment

education and sustainable development into their curricula responding to the Rio declaration (Capdevila *et al*., 2002; Lozano, 2010), it seems that no new environmental modules have been added to the new program in this regard

6- The single environmental module that has been identified within the course structure is Pollution of the Natural Environment in the fourth academic year.

7- The resources identified for deriving the data needed have been restricted to using books only.

8- The new structure is still paying more attention to the theme of Regional Geography, as there are five such modules within the structure which are: Geography of Libya, Geography of Africa, Arabic world Geography, New World Geography, and Eurasia Geography. Such modules could be reduced into two modules which are Geography of Libya and World Geography.

On the other hand, there are some significant positive features which should be mentioned namely:

1. The new structure gives more attention to English Language modules which are core modules in the first three years.

2. Computer usage will be taught to students within a core module in the first academic year.

3. There are four geography modules offered as optional modules in the final academic year.

In summery the General people's committee for Education in Libya (Higher Education Ministry) through the Assistant Secretary for Service Affairs is the responsible authority for implementation of educational policies for the higher education institutions. The Higher Education Ministry established The National Academy for Scientific Research and Research Centres in 1999 which is subdivision of National Centre for the Planning of Education, and the General Administration for Curricula is among the centre's most important administrative offices. This administration deals with the educational curricula and follows up their developments and forms technical committees for curricula revision and to sign contracts with authors to write textbooks. The only role of higher education institutions in designing the curricula is offering a number of experts to serve on the committee (if they have them) from their teaching staff members.

As mentioned above, it could be said the role of higher education departments in terms of structuring their curricula is limited to some aspects such as choosing to be included in the modules and determining the references for them, as this can be done by the lecturers and heads of departments. For example in 1999 the Higher Education Ministry took action with regard to standardisation of the modules and their components of first year programmes at all departments, offering university professors only the freedom to determine the subject's references and details of its themes and determining one reference book as a main source for each module (El-Hawat *et al*, 2001) The

following modules were determined to comprise the first academic year for geography departments:

- Geography of Africa
- Geography of the Arab World
- Principle of Natural Geography
- Principle of Area
- Arabic Language
- Al-Jamahiry Intellect (Political Culturae)
- Introduction to Psychology
- Arabic Islamic Civilization
- English Language

In addition to this procedure, the Libyan higher education ministry designed a new structure for geography courses in 2008 that must be adopted by Libyan universities teaching geography (see Chapter 3 section 3.3.2). These structures of courses have not been developed from the suggestions of the heads and lecturers of geography departments or designed by them, and the biggest proof of that the fact that fieldwork has been as an ignored essential component of this structure as well as other weaknesses (see Chapter 3 section 3.3.2).

Although, insufficient funding is often considered the most important challenge facing higher education in many Arab countries, this problem is not considered so in Libya as the Libyan government allocates 20% of its general budget annually on education (Rashdan, 2008). However, the most important challenge

facing the heads and lecturers of geography departments is a lack of funding allocated indirectly to the departments by the administration of their universities, mainly because other academic disciplines are given greater priority in terms of funding resources, making difficult to support educational processes such as fieldwork and providing laboratories with the equipment needed. The problem lies in that geography or any other departments do not have their own budget to manage the teaching process according to their perception of need (as a number of teachers have stated).

3.4 Discussion

It is clear that the literature focuses most attention on addressing two important themes. The first one concerns the aims and problems of Libyan higher education including several solutions which the Libyan Higher Education Ministry seeks to be implemented by the higher education institutions; the second one concerns the proposed changes to the program for teaching geography in higher education in Libya.

The emphasis on the first theme is a very important point for this study for two reasons. The first reason is that the problems identified will be compared with what emerges in relation to teaching geography from the data collected of the perceptions of students and teachers, to identify the extent that these problems affect the teaching of geography in Libya. The second reason is to compare the solutions suggested by the Libyan higher education ministry with the

suggestions of students and teachers to identify to what extent they are consistent with each other.

The literature points out that the higher education has witnessed a noticeable quantitative development at the expense of qualitative development. Consequently, many problems accrued as a result of this procedure, which have been realised later by the Libyan government and addressed by many Libyan experts. The most troubling circumstance regarding these problems that they are not limited to one or two educational aspects but include almost all aspects such as the use of traditional teaching methods or the lack of use of technology.

Furthermore, it seems from the literature that the Libyan Higher Education Ministry has realised the aforementioned problems which has led it to formulate a set of solutions in order to reform this situation by reconsidering many aspects such as the teaching methods, educational resources, and use of technology. The question posed in this context is ‘Are such solutions being implemented in teaching geography or not? The answer to this question will be identified later according to the perceptions of students and teachers.

Finally, the literature indicates that a noticeable initiative was made by the Libyan Higher Education Ministry in 2008 as an attempt to reform teaching geography in Libyan universities by designing its course program that should be implemented in geography departments. Although this initiative is a concrete

indication of the desire to reform the current situation of geography teaching, it has not taken into account several important points related to teaching geography, such as the use of fieldwork, practical study and modules which deal with environmental issues.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

This chapter will present and justify the methodology to be used in this study concerning the evaluation of pedagogic approaches to geography teaching in Libyan universities.

4.2 Methods used in this study

The aim of this study is to find out and explore the attitudes and perceptions of students and teachers with regard to four important issues forming significant parts of the geography curriculum in Libyan universities namely: modules taught, teaching methods, field study and the final year dissertations. For this purpose, a questionnaire was used to collect the data needed from the population of study, as Jackson (1974) mentions that if you want to know something, then the best way is to ask the people who are directly involved, interested and affected.

4.2.1 Reasons for choosing use of a questionnaire

The reasons for using the questionnaire can be attributed to the following:

1. Survey research has been an important tool in geography for several decades as it enables the acquisition of adequate information about the characteristics, behaviours and attitudes of a population by administering a standardized questionnaire, or a survey to a sample of individuals (McLafferty, 2003). Furthermore, Kent (1993) points out that asking people questions and

systematically noting their responses has been a method of conducting social research in Britain since the 1790s.

2. Brace (2004) points out that asking the same questions in the same way to different people is key to most survey research. If the same question were asked differently of different respondents, it would be impossible for the survey researcher to interpret the answer.

3. There are several kinds of information that can be investigated by using a questionnaire such as opinions, attitudes, views, beliefs, preferences, etc (Denscombe, 2007) and these kinds of information are very important to study.

4. The questionnaire allows anonymity of students, encouraging their willingness to answer the questions, provides sufficient time to help students think and answer accurately, and enables the researcher to gather data from a large number of respondents (Henerson, 1987).

The researcher did not use another method for collecting the data needed, such as the method of interview, due to many reasons (Denscombe, 1998). The first reason was that the population of study was distributed too widely across a large geographical area which would have required the researcher to travel at least four times to each destination to interview the appropriate number of respondents, which would have incurred prohibitive costs. Therefore, a questionnaire has two advantages over interviews for collecting research data: it costs less in time and it covers more respondents over a wider area. The second reason was that the researcher did not believe that the necessary

people can be accessed for interview, but they were more likely to be available to complete a quick questionnaire. Although an interview is used to get the opinions, feelings, and experiences of respondents the questionnaire used by the researcher gave a chance to respondents to express such aspects by providing space at the end of the questionnaire to add their suggestions with regard to each statement and to elaborate on any of the answers they have given already. The third reason was that the researcher did not want to find out sensitive or personal issues which require using interview.

4.2.2 The questionnaire design

Two types of questionnaires were given out, one for teachers and one for students. Both of them included the same sections with some different questions according to the nature of data needed from the two groups of respondents.

Each questionnaire was composed of six parts, with questions addressing the following:

Part one (general information)

For students this part included two questions regarding their age and gender. With regard to teachers it consisted of questions dealing with: age, gender, qualifications, teaching experience, specialization, attendance at conferences, publishing articles and the extent of availability of educational resources such as the computers and access to the internet.

Part two (the modules taught): included questions with regard to modules taught in terms of: preferred geographical specialization of students, establishment of new geography programs, non-geographical modules taught, the number of modules in each academic year, environmental issues, syllabuses of modules and geographical sources.

Part three (teaching methods): included questions with regard to the extent of availability of equipment in the lab, the current application of practical study and the kind of teaching methods used by teachers.

Part four (field study): included questions regarding the kinds, ways and times of its application, the respondents` satisfaction concerning its current application, and the importance of its application to support the theoretical study in different modules.

Part five (final year dissertation): included questions regarding the research project undertaken by students in the final academic year in terms of its area and the difficulties faced by students.

Part six (suggestions): respondents were asked to write their suggestions regarding the aforementioned issues by providing spaces at the end of each questionnaire, and to elaborate on any of the answers they had given already. The aim of this section was to elicit and gather some important qualitative data. The results obtained in this part were very important, as respondents wrote freely about their views and recommendations.

4.2.3 The type of questioning questionnaire

According to Cohen & Manion (1985) the ideal questionnaire should be clear, unambiguous and uniformly workable. It should help the respondents to be willing in answering and encourage them to be more co-operative in giving the real answer. Furthermore, a questionnaire should contain a set of questions or items about the subject matter and some open-ended questions derived from more rigidly constructed scales, this encourages respondents to answer them and gives them more opportunities to express their viewpoints freely (Bynner *et al*., 1979; Marshall, 2005). Accordingly the questions of the questionnaire were divided into two types, closed and open questions

According to Denscombe (2007) and Kent (1993), there are two main sorts of research questions which can be asked in a questionnaire namely, closed and open questions. Furthermore there are two types of closed questions; a closed question can be answered with either a single word or short phrase. For example a question such as ‘does your department have a laboratory?’ could be answered with a ‘yes’ or ‘no’. Another type of closed question is when the researcher gives respondents a list of options and asks them to choose one answer, or rate the questions with numbers as answers according to their priority. This could be a question relating to the name of the academic year, or place from which a qualification was obtained for teachers. Open questions were asked of respondents in order to express their thoughts or experiences. For example, respondents were asked ‘what kind of new modules should be

added?' 'What are your suggestions with regard to the modules taught, teaching methods, fieldwork, and the research project?' and so on.

Brace (2008) indicates that the most common way to measure attitudes is to use a particular form of closed question, namely rating scales, whether it is to measure attitudes to brands, products, social issues or lifestyle. The Thurstone scale in psychology was the first formal technique for measuring an attitude. It was developed by Louis Leon Thurstone in 1928, as a means of measuring attitudes towards religion. It is made up of statements about a particular issue, and each statement has a numerical value indicating how favourable or unfavourable it is judged to be. People check each of the statements to which they agree, and a mean score is computed, indicating their attitude (Leon, 2008).

The Thurstone scale was developed by Likert (1932) which is regarded now as a psychometric scale commonly used in questionnaires, and is the most widely used scale in survey research (Heding *et al*., 2008). The Likert scale was introduced as a scale of attitudes in Likert's "A Technique for the Measurement of Attitudes," It was a bipolar scale running from one extreme through a neutral point to the opposite extreme. The Likert technique presents a set of attitude statements. Respondents are asked to express agreement or disagreement of a five-point scale. Each level of agreement is given a numerical value from one to five. Thus a total numerical value can be calculated from all the responses (Ary, 2006).

The format of a typical five-level Likert item is:

1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4.Agree 5. Agree Strongly

Accordingly, the five above scales were used to identify the respondents` attitude towards the issues related to the present study.

4.2.4 The study population and the sample size

A population is the group to which the researcher would like the results of the study to be generalized (Gay, 2006). The target population for the present study comprised eight Libyan Institutions, chosen to be the places where the sample was selected from, namely: A, B, C, D, E, F, G, and H.

The reasons for choosing the above mentioned institutions can be attributed to two reasons. The first one is that they include the new and old established institutions. The second reason is that these institutions are distributed widely across a large geographical area throughout the country.

A question that often plagues researchers is their sampling decision and just how large their sample for the research should be. Cohen *et al*. (2000) mentions that there is no clear cut answer, for the correct sample size depends on the purpose of the study and the nature of the population under scrutiny. Thus, a sample size of thirty is held by many to be the minimum number of cases if researchers plan to use some form of statistical analysis on their data. 30% of

teachers and 30% of students were chosen as the sample size for study from these eight Libyan institutions, which considerably exceeds the minimum size.

Accordingly, three hundred and thirty three questionnaires were distributed to students and seventy seven to teachers. The questionnaire was returned by 257 students (77%) and by 46 teachers (59.7%), (Tables 4.1, 4.2, 4.3)

Table 4.1: The number of distributed and returned questionnaires of students from the various institutions sampled.

Category	A	B	C	D	E	F	G	Overall
Distributed questionnaire	49	30	32	115	26	45	36	333
Returned questionnaire	32	26	29	81	22	34	33	257

Table 4.2: Gender of students responding to the questionnaires at the different institutions.

Category	A	B	C	D	E	F	G	Overall
Male	18	11	14	43	9	15	14	124
Female	11	14	14	35	12	17	18	121
Not mentioned	3	1	1	3	1	2	1	12
Total	32	26	29	81	22	34	33	257

Table 4. 3: The number of distributed and returned questionnaire of teachers.

Category	A	B	C	D	E	F	G	H	Overall
Distributed questionnaire	11	11	9	7	10	10	9	10	77
Returned questionnaire	2	6	7	3	8	7	6	7	46

4.2.5 Type of sampling design

As for the selection of the respondents during the process of distribution of the questionnaire, the researcher has followed random sampling techniques; this

approach is considered an essential need for all geographers who wish to collect their own data (Jackson, 1974). A systematic sampling process based on a random statistics part was used as the method for selecting the respondents; this method is a statistical method involving the selection of elements from an ordered sampling frame. The most common form of systematic sampling is an equal probability method, in which every skip element in the frame is selected, and the equation below explains the way in which the skip element can be selected (Babbie, 2007; Collis & Hussey, 2003):

K (sampling interval) = N/*n*

Where *n* is the sample size, and N is the population size

For example, if 24 students are to be selected from a class of 80 students, 80/24=3, so every 3rd student is chosen after a random starting point between 1 and 3, to get the 24 students.

Random sampling was also used on some occasions, particularly in choosing the sample from teachers. Random sampling is used for small population and the numbers needed are chosen in a random way by numbering each sample and putting them in a box then drawing the number of the sample required out of the box (Collis & Hussey, 2003).

4.2.6 Confidentiality and Anonymity

According to Cohen *et al*., (2000) the maintaining of confidentiality and anonymity in social research is very important. In this research, the participants' identities were kept confidential for the entirety of the study. The researcher

guaranteed to participants that he would keep all the information confidential. The essence of anonymity means the researcher should in no way reveal participants' identities and so pseudonyms were used instead of actual names during the collection, transcribing, analysis and reporting of the data (Saunders *et al*., 2000). Any comments or responses in this study are not identifiable to individual respondents.

4.2.7 The piloting process

Before a questionnaire is put in use, it should be carefully tested to make sure that it will meet the needs and fit the requirements of the project and at the same time will work in the field to produce appropriate results, therefore the piloting stage is essential to check the reliability and validity of the questionnaire (Lindsay, 2001; Youngman, 1978).

The questionnaire was piloted in April 2008 in order to test a preliminary form of its wording and structure by giving it out on a relatively small sample consisting of twenty five students and four teachers in the Geography Department of Institution C. This pilot study enabled the researcher to determine whether the proposed study was feasible, to identify problems with the design of the questionnaire, determine whether the sampling technique was effective, and to examine the reliability and validity of the research instruments (Grove & Burns, 2005; Efans, 1978). In order to make sure that no unforeseen difficulties were likely to turn up, the researcher asked respondents to consider the following:

- What are most important comments that you have about the questionnaire? Are there any other questions that you would like particularly to see added, or any removed?
- If you found one of the questions unsatisfactory, please tell me what is wrong about it, plus any suggestions for fixing the problem.
- Which, if any, items on the questionnaire were unclear to you? Please explain.
- Which, if any, items did you find difficult to answer? Please explain.
- This questionnaire uses a 5 point Likert type scale, 1 (strongly agree), 2 (agree), 3 (uncertain), 4 (disagree), 5 (strongly disagree). During completion of the questionnaire, did you feel that this scale adequately allowed you to express your opinion? If not, please explain.
- Please do not forget to write your comments with regard to the time needed to complete answering all the questions.

Twenty three students and four teachers returned the questionnaire with significant comments. The comments given by respondents were taken into account by the researcher within four days and the amended questionnaire was returned to the same sample to identify to what extent their comments were considered. Twenty student and three teachers reported that their comment were successfully and completely taken into account by the researcher, while three students and one teacher stated that there were still a few comments that should be reconsidered by the researcher, which was done in a second stage of revision.

In general it could be said that the results of the pilot process were very successful in terms of improving the academic quality of work by modifying, excluding and including many questions. The original questionnaires are shown in appendices (1 and 2)

4.2.8 Data analysis

The analysis of data collected by the questionnaire was performed using the Statistical Package for Social Science (SPSS) for Windows, Version 16, which is one of the most popular computer programs in the social sciences (Howitt & Cramer 2008). The use of a package like SPSS helps a researcher to score and analyze data very quickly and in several different ways.

As for coding data, at this stage all answers were organized to make it easy to enter them into the software program for further analysis, therefore each type of answer was given a particular code. For example, for all positive statements such as ‘satisfaction questions’, the response was coded as following ‘ Strongly agree’ scored as number 1, ‘Agree’ as number 2, ‘Uncertain’ as number 3, ‘Disagree’ as number 4, and ‘Strongly disagree’ as number 5.

The next stage was entering the data collected into a spreadsheet of software by following the structures of some SPSS books, such as Howitt & Creamer (2008). The checking of data was the third stage in order to investigate any errors that might distort the results of data, so all the data entries were manually checked, by re-reading them from the package and checking them against the

original data. A percentages and frequencies of responses of respondents were obtained and represented in tables and charts.

4.2.9 Problems encountered while collecting the data.

Two problems were encountered during the data collection process. First, the teachers in the Institution A generally refused to answer the questionnaire without giving any reason and only two teachers from this institution answered it with insufficient answers, which made the researcher look for an alternative to this institution; it was replaced with Institution H. The second problem was related to the comparison study between the Libyan universities and British universities which the researcher intended to do by giving out the same questionnaire that was disseminated in Libyan Universities in a number of UK Universities in order to conduct a comparison study relying on the results of questionnaires. But unfortunately the universities that were selected to be the study sample in Britain and contacted to obtain permission refused this request, which has led the researcher to conduct a brief comparison study relying on published information sources only for UK institutions.

CHAPTER 5: RESULTS OF STUDENTS` QUESTIONNAIRE

5.1 Introduction

This chapter responds to the research questions posed by the study with regard to identifying the attitudes of students and their opinions with regard to the course programs offered and modules taught, the teaching methods used by teachers, the current strategy of fieldwork applied and the final year dissertation in the Libyan universities.

This chapter presents the results of the analysis of the students' questionnaire. The findings are reported in the following sequence. The first section presents the findings regarding the courses program offered and geography modules. The second section provides the attitudes and views of students regarding the teaching methods used by teachers. The third section deals with the strategy of application of fieldwork. The fourth section explores some findings relating to the final year dissertation.

5.2 Opinions and suggestions of students about the courses program offered and modules taught

The aim of this section is to present results relating to eight issues relevant to the geography courses program offered and modules taught. Thus, this section seeks to explore the opinions and attitudes of students towards their academic interests, the establishment of new geography courses, teaching non-

geography modules, the number of modules taught in each academic year, the syllabuses of geography modules taught, the optional modules, the extent of embedding environmental education within the geography subjects, and the availability of geography resources (books). These issues were organized as follows:

5.2.1 The academic interests of students

In order to investigate the academic interests of students, they were asked to specify which broad areas of geographical interest they prefer. The environmental modules were ranked as the most frequently preferred by students with an overall proportion of 36.3% across all universities (Table 5.1). This preference also ranked first in each individual university; while an overall 24.2% and 20.5% of students reported that they preferred modules of Physical Geography and Human Geography respectively (Table 5.1). There was only a modest amount of variation in the ranking in the different universities, indicating consistency in preferences in all parts of the country and all institutions.

Table 5.1: Percentage of students' responses regarding their preferred broad academic interests, listed in order of overall percentage across all institutions

Category	A	B	C	D	E	F	G	Overall
Environmental subjects	34.4	34.6	31	35.8	40.9	44.1	33.3	36.3
Physical Geography	28.1	26.9	27.6	22.2	22.7	17.6	24.2	24.2
Human Geography	21.9	19.2	17.2	22.2	18.2	20.6	24.2	20.5
All of them	15.6	19.2	24.1	19.8	18.2	17.6	18.2	19
N	31	26	29	81	22	34	33	257
Total	100	100	100	100	100	100	100	100

5.2.2 Students' opinions of the idea of offering and creating specialized Geographical and Environmental courses

As stated in chapter 3 all Libyan universities offer just one geography degree course which is Bachelor of Arts in Geography and they do not offer specialized geographical and environmental courses. As a result students were asked to specify the extent of their agreement with regard to the idea of establishing several geography and environmental degree courses. Also, five geographical degree course titles were listed for students to select one of them namely: Bachelor degrees in Geography, Geography and Environmental Management, Physical and Environmental Geography, Environmental Sciences, and Human Geography.

A large majority of students (89.6%) welcomed this idea (Figure 5.1), and some of them said that establishment of these degrees courses would attract more students to study. On the other hand 10.4% of students reported that they do not accept this idea. The results were broadly consistent across all universities (Figure 5.1)

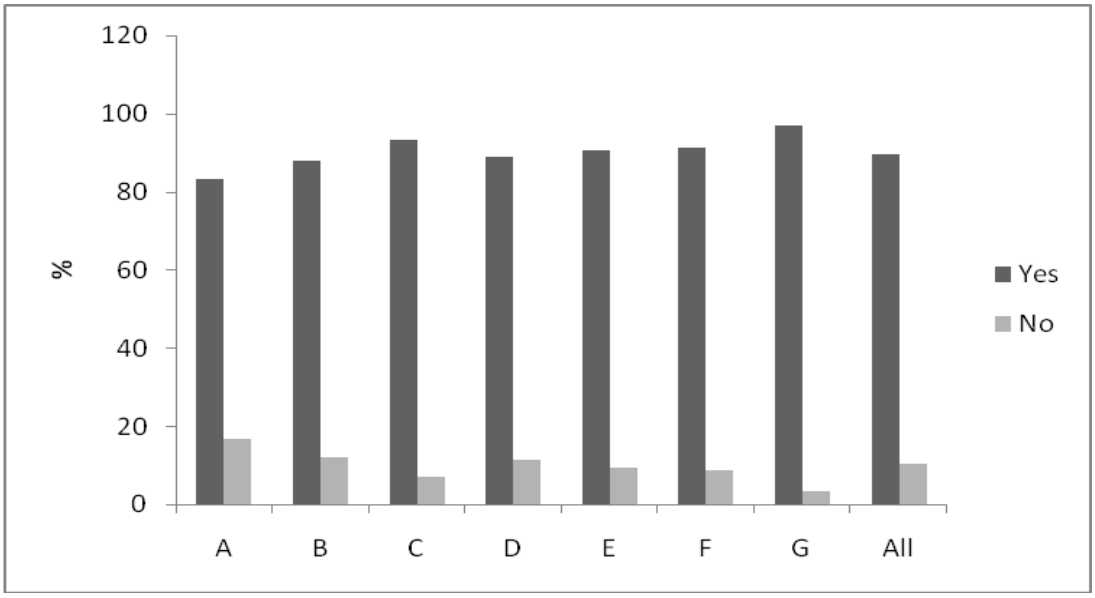

Figure 5.1: Percentage of responses to the question of whether students supported the establishment of various separately titled geographical and environmental courses, for each institution

Students were asked which of the aforementioned course degrees they would most like to study if they were offered by their university. The degrees which combine geographical subjects with environmental subjects ranked as the three which were most attractive to students namely: Physical and Environmental Geography, Geographical and Environmental Management, and Environmental Sciences, with percentages of 27.8%, 27%, and 21.3% respectively. In addition, 17.2% of students expressed a preference to study a Bachelor of Arts in Geography, and 11.7 preferred the BA of Human Geography (Figure 5.2). These preferences are similar among all universities (Table 5.2).

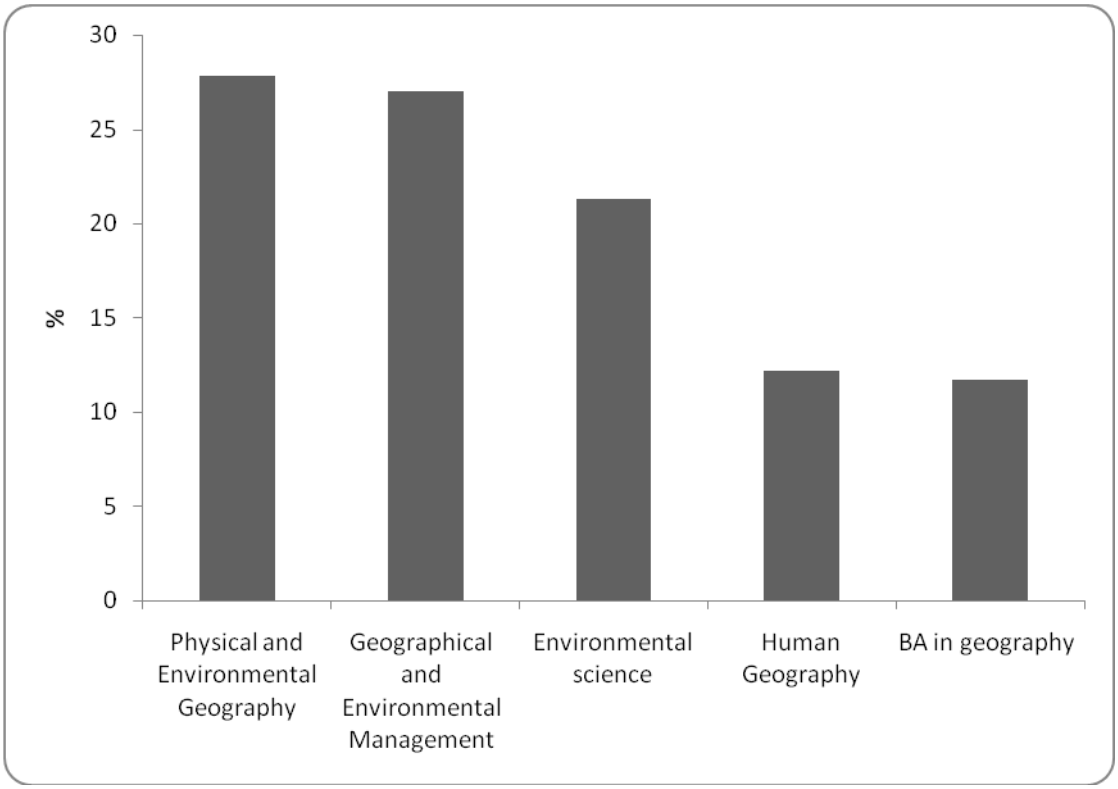

Figure 5.2: Percentage responses to the question "If the following courses were offered for study, which of them you would prefer to study, for each of the five suggested degree titles"

Table 5.2: Percentage of students` answers regarding their preferred geography degree programme titles, and sample size for each university separately.

Category	A	B	C	D	E	F	G	Overall
Physical and Environmental Geography	32.1	26.1	25.9	30	35	25	20	27.8
Geographical and Environmental Management	35.7	26.1	22.2	24.3	25	28.1	30	27
Environmental science	7.1	21.7	22.2	27.1	20	25	16.7	21.3
Human Geography	10.7	17.4	14.8	7.4	10	15.6	13.3	12.2
BA in geography	14.3	8.7	14.8	10	10	6.2	20	11.7
Total	100	100	100	100	100	100	100	100
N	28	23	27	70	20	32	30	230

5.2.3 Students' opinions on the inclusion of non-geographical modules

As has been explained the structure of geography courses includes five non-geographical modules, namely: Arabic History, Arabic Language, Islamic Religion, Political Culture and Introduction to Psychology. Students were asked if studying such modules causes further pressure on them and reduces their degree of attention towards the principal geographical modules. The results show that 34.4% and 26.6% respectively of students agreed strongly and agreed that studying such modules causes further pressure on them and they should be excluded from the structure of the course because these modules were already taught in the secondary school and it would be useful if they were replaced with new geographical modules. In contrast, 15.6% of students said that studying such modules does not cause any kind of pressure (and a further 12.9% stated strong disagreement), because these modules can increase their general cultural awareness. And 10.5% of students stated that they were uncertain in relation to this issue (Table 5.3). Thus the responses are not wholly for or against this point.

It should be noted, however, that the results were markedly different from the different institutions. Most had responses agreeing or strongly agreeing totalling over 60%, but Institution B only reached 54.2% supporting the statement, while the Institution C had only 14.1%.

Table 5.3: percentage of students attitudes with the statement of "Teaching non-geographical modules causes further pressure on students", for each institution separately and the overall average.

Category	A	B	C	D	E	F	G	Overall
St-ag	51.6	12.5	7.1	47.5	52.4	29.4	40.6	34.4
Agree	29	41.7	7.1	27.5	14.3	38.2	28.1	26.6
Uncertain	3.2	12.5	7.1	8.8	14.3	8.8	18.8	10.5
Disagree	12.9	20.8	39.3	8.8	9.5	14.7	3.1	15.6
St-dis	3.2	12.5	39.3	7.5	9.5	8.8	9.4	12.9
Total	100	100	100	100	100	100	100	100
No	31	24	28	80	21	34	32	230

5.2.4 Students and the number of geographical modules taught

It is clear from the tables below (Tables 5.4-5.7) that approximately half of the students in each year thought that the number of geographical modules taught in each year is appropriate to them, and there is no need for this number to be reduced. However, these general results do not reflect the situation in certain universities and faculties and specific years of study. For example over 60% of students in all academic years in the university of Al-Fatah disagreed or strongly disagreed with the number of geographical modules taught and indicated that the number in each academic year should be reduced. For instance 44%, 33.3%, 45%, and 41.7% of students in the first, second, third, and fourth academic year respectively of this university expressed their disagreement in this regard, because they consider that they are overloaded with a high number of modules each year (ranging between12 to 13). Moreover, half (50%) of students in their first academic year in the Institution E disagreed with the number of modules taught which reaches 14 geographical modules, and over 38% of students in the second and third years in the same university expressed their strongly disagreement

Table 5.4: Percentage of students` answers regarding whether the number of geographical modules taught in the first academic year at the different institutions is too large.

Category	A	B	C	D	E	F	G	Overall
St-ag	45.5	16	28.6	33.8	0.0	40	6.5	26.8
Agree	9.1	8	46.4	26	12.5	32	3.2	22.4
Uncertain	27.3	12	7.1	19.5	12.5	12	9.7	14.6
Disagree	18.2	44	10.7	13	50	12	29	20.5
St-dis	0.0	20	7.1	7.8	25	4	51.6	15.6
Total	100	100	100	100	100	100	100	100
No	11	25	28	77	8	25	31	205

Table 5.5: Percentage of students` answers regarding whether the number of geographical modules taught in the second academic year at the different institutions is too large.

Category	A	B	C	D	E	F	G	Overall
St-ag	50	16.7	14.3	15.4	28.9	26.7	7.4	22.8
Agree	15	12.5	57.1	-	34.2	33.3	3.7	23.4
Uncertain	25	8.3	4.8	7.7	28.9	26.7	7.4	16.5
Disagree	5	33.3	9.5	38.5	5.3	13.3	29.6	17.7
St-dis	5	29.2	14.3	38.5	2.6	0.0	51.9	19.6
Total	100	100	100	100	100	100	100	100
No	20	24	21	13	38	15	27	158

Table 5.6: Percentage of students` answers regarding whether the number of geographical modules taught in the third academic year at the different institutions is too large.

Category	A	B	C	D	E	F	G	Overall
St-ag	52.9	12.5	14.3	35	4.8	45.5	30	26
Agree	23.5	12.5	50	30	9.5	36.4	50	28.3
Uncertain	17.6	8.3	21.4	25	19	9.1	15	16.5
Disagree	5.9	45.8	7.1	5	28.6	9.1	5	16.5
St-dis	0.0	20.8	7.1	5	38.1	0.0	0.0	12.6
Total	100	100	100	100	100	100	100	100
No	17	24	14	20	21	11	20	127

Table 5.7: Percentage of students` answers regarding whether the number of geographical modules taught in the fourth academic year at the different institutions is too large.

Category	A	B	C	D	E	F	Overall
St-ag	35	12.5	20	50	50	10	27.3
Agree	35	8.3	60	30.3	16.7	10	23.4
Uncertain	20	12.5	20	8.3	33.3	10	15.6
Disagree	10	41.7	0.0	8.3	0.0	50	23.4
St-dis	0.0	25	0.0	0.0	0.0	20	10.4
Total	100	100	100	100	100	100	100
N	20	24	5	12	6	10	77

In this context, some of the students in Institution A justified their disagreement by stating that some of the modules studied deal with the same subject, for example two modules deal with geography of Population, two modules deal with Agricultural Geography, also they study Industrial Geography and Transportation Geography, and then they study Economic Geography which covers similar material. Moreover, the Physical Geography is repeated twice in the first and third year.

5.2.5 Students' opinions on the idea of offering optional modules

As has been mentioned, the structure of geography courses in all Libyan Universities does not include studying any sort of optional geographical modules. Accordingly, students have to study and pass all the compulsory modules. Therefore, and in order to identify the attitudes of students towards not teaching such modules, they were asked if they accept or do not accept the idea of creating some geographical modules which would be optional. The

results show that a large majority (84%) of students accepted this idea, while a small proportion (16%) of students did not accept this idea (Table 5.8).

Table 5.8: Percentage of students` answers regarding whether they accept the idea of offering optional geographical modules to study, indicated separately for the different institutions.

Category	A	B	C	D	E	F	G	Overall
Yes	80.2	75	84	86.8	75	84.4	93.5	82.7
No	20	25	16	13.2	25	15.6	6.5	17.3
Total	100	100	100	100	100	100	100	100
N	30	24	25	76	20	32	31	238

In this context students were asked to suggest the appropriate numbers of options and also some titles of modules that they would like as optional modules. A majority of students suggested between 2 to 3 modules each year, and suggested: Behavioural Geography, Medical Geography, Military Geography, Tourism Geography, Historical Geography, Political Geography, and Arab World Geography.

5.2.6 The integration of environmental issues within the curriculum

It is an undeniable fact that human beings are having a significant impact on the natural environment. As the global population continues to rise, humans place more and more pressure on a finite number of resources. Human environmental impacts can largely be attributed to consumption patterns. The best way to promote awareness for environmental issues and promote environmentally responsible behaviours is through increased access to environmental education (Samuel, 2007). According to Carleton-Hug and Hug (2010) Environmental

education (EE) strives to engage the global citizenry in new ways of thinking and acting in, with, and for the environment-contributing to a more environmentally literate population. Environmental education is often delivered through an educational program and seeks to change the learner's cognitive, affective and participatory knowledge, skills and behaviour.

Accordingly students were asked to indicate their level of agreement as to whether the current integration and embedding of environmental issues within the current geographical modules is satisfactory. The results combining those that disagree and strongly disagree show that over half (54.6%) of student do not think that such issues are satisfactorily integrated (Table 5.9). However, these results were not consistent among universities, as 60% of the students in Institution B and 60.6% of students in Institution A thought that these issues are satisfactorily integrated. This might to some extent be attributed to the number of environmental modules which are taught in these two universities, as there are two environmental modules in the first mentioned university which are Environmental Issues and Management of Resources of Dry Lands, and two in the second university namely Environmental Geography and Environmental Pollution. Students at all other universities thought the integration of environmental issues within the current modules taught was unsatisfactory (Table 5.9).

Table 5.9: Percentage of students` answers regarding the extent of satisfactory embedding of environmental issues within geographical modules, for each institution separately

Category	A	B	C	D	E	F	G	Overall
St-ag	26.7	36.6	7.1	10.8	10	6.5	6.2	13.8
Agree	33.3	24	7.1	9.5	15	3.2	12.5	13.8
Uncertain	13.3	12	10.7	23	5	25.8	21.9	17.9
Disagree	20	16	32.1	24.3	40	45.2	25	27.9
St-dis	6.7	12	42.9	32.4	30	19.4	34.4	26.7
Total	100	100	100	100	100	100	100	100
N	30	25	28	74	20	31	32	240

Students who reported their disagreement in this context listed several environmental modules that must be given more attention and must be integrated within the geography course for example Environment Resource Management, Global Warming, Environmental Law and Policy, Management of Libyan Natural Resources, Geography of Peace, Environmental Conservation, Introduction to Environmental Hazards and Disasters, Geography of Poverty and Introduction to Environmental Education.

5.2.7 Students' views on geographical resources (books)

An important point must first be clarified regarding the kinds and natures of geography resources intended in this question. As has been mentioned, Libyan Universities suffer from a lack of electronic resources and the only educational source material available is the books. In spite of the development of new modern learning resources the importance of textbooks has not diminished and they still remain a major learning resource (Singh, 1982), (Verspoor, 2008).

Thus students were asked for their viewpoint on the extent of availability of books in the library and whether this meets their satisfaction or not.

In reply to the question about whether they thought there were sufficient books in the library to meet their needs, over half of students in total replied that they disagreed or disagreed strongly (31.3% and 27.3% respectively) that there were sufficient such resources available. Nevertheless, the noticeable observation can be shown from the results (Table 5.10) that students in the old universities had contrary viewpoints, as 71.9% of students in Institution A, and 54.1% of students in Institution B agreed or strongly agreed with the statement about the level of availability of books in the library being sufficient. This can be attributed to the old origin of these universities as a result they had been given special attention by the government since their establishment.

Table 5.10: Percentages of students` answers regarding whether there were sufficient geography sources (books) available in the library

Category	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**Overall**
St-ag	28.1	20.8	7.4	9.2	19	6.1	3.1	12.7
Agree	43.8	33.3	7.4	7.9	14.3	3	15.6	16.3
Uncertain	9.4	20.8	3.7	11.8	14.3	6.1	21.2	12.7
Disagree	15.6	12.5	37	34.2	38.1	48.5	31.2	31.3
St-dis	3.1	12.5	44	36.8	14.3	36.4	28.1	27.3
Total	100	100	100	100	100	100	100	100
N	5	3	10	26	8	16	10	76

Comments by some students, not just in the new universities but also in old universities, were made, especially in terms of modernity of books in the libraries. Most students said that such books are not up to date, and some of them date back to between the 1950s and the 1970s. Such books do not

include the global and international subjects that have arisen in the last few years, in particular those which relate to environmental problems and political issues. Moreover, the number of multiple copies of books is few and sometimes does not exceed two or three copies of any one title. Furthermore, the libraries do not have an on-line computer catalogue system that could help students to know where the needed books are shelved.

5.2.8 Students' opinions of the syllabuses of individual modules taught

This section deals with the contents of individual modules, but it does not include the application of practical study or fieldwork as these issues will be discussed in another place (sections 5.3 and 5.4). It was not possible to take opinions of students in terms of their attitude towards the syllabuses of all modules taught. Instead, four modules were chosen as examples namely: Geomorphology, Physical Geography, Regional Geography, and Environmental Geography.

Students who study the aforementioned modules were asked if the syllabuses of the modules taught were or were not appropriate to enable them to understand these modules in a satisfactory way and the results are presented in Tables 5.11-5.14. In summary, the results of students of the first three modules were quite similar, in terms of the syllabuses of Geomorphology, Physical Geography, and Regional Geography, around three- quarters (71.7%), over half (66.6%) and over three-quarters (68.4%) of students respectively, agreed and

strongly agreed that these syllabuses enabled them to understand the modules, and these replies were mostly consistent among all universities. In contrast, over half (55.9%) of students disagreed and disagreed strongly that the syllabuses of environmental geography enabled them to understand these modules in a satisfactory way, and it can be seen here that these answers regarding this module varied from one institution to other, as a large majority (85.9%) of students in Institution E were satisfied with the syllabuses, as were over half (58.3%) of students in Institution A, while students in the other institutions mostly disagreed regarding this point (Tables 5.11-5.14).

Table 5.11: Percentage of students` answers with regard to the statement that "the syllabuses of Geomorphology module are appropriate to enable you to understand this module"

Category	A	C	D	E	F	G	Overall
St-ag	40	12.5	12.5	57.1	28.6	57.1	30.4
Agree	20	50	62.5	14.3	42.9	14.3	41.3
Uncertain	10	25	12.5	14.3	0.0	14.3	8.7
Disagree	20	12.5	12.5	0.0	28.6	0.0	15.2
St-dis	10	0.0	0.0	14.3	-0.0	14.3	4.3
Total	100	100	100	100	100	100	100
N	10	8	8	7	7	7	46

Table 5.12: Percentage of students` answers with regard to the statement that "the syllabuses of Physical Geography module are appropriate to enable you to understand this module"

Category	A	B	C	D	E	F	G	Overall
St-ag	71.4	30.8	12.5	22.7	14.3	18.8	14.3	27.5
Agree	14.3	46.2	50	43.2	14.3	37.5	42.9	39.2
Uncertain	0.0	0.0	25	15.9	0.0	6.2	28.6	12.7
Disagree	14.3	15.4	12.5	11.4	57.1	31.2	14.3	14.7
St-dis	0.0	7.7	0.0	6.8	14.3	6.2	0.0	5.9
Total	100	100	100	100	100	100	100	100
N	7	13	8	44	7	16	7	102

Table 5.13: Percentage of students` answers with regard to the statement that "the syllabuses of Regional Geography module are appropriate to enable you to understand this module"

Category	A	C	D	E	F	G	Overall
St-ag	33.3	14.3	14.5	21.4	57.1	28.6	19.7
Agree	66.7	57.1	52.6	35.7	14.3	42.9	48.7
Uncertain	0.0	14.3	18.4	21.4	14.3	14.3	17.1
Disagree	0.0	14.3	5.3	21.4	14.3	14.3	8.5
St-dis	0.0	0.0	9.2	0.0	0.0	0.0	6
Total	100	100	100	100	100	100	100
N	6	7	76	14	7	7	117

Table 5.14: Percentage of students` answers with regard to the statement that "the syllabuses of Environmental Geography module are appropriate to enable you to understand this module"

Category	A	B	D	E	F	G	0verall
St-ag	25	7.7	8.3	14.3	0.0	0.0	10.7
Agree	33.3	15.4	8.3	71.4	0.0	14.3	16.1
Uncertain	25	23.1	8.3	14.3	0.0	14.3	14.3
Disagree	8.3	23.1	33.3	0.0	60	57.1	33.9
St-dis	8.3	30.8	41.7	0.0	40	14.3	25
Total	100	100	100	100	100	100	100
N	12	13	12	7	5	7	56

Students made the comments that there are a number of contemporary environmental problems which should be given special prominence and which should be embedded into the contents of modules, for example, depletion of energy resources, global warming, deforestation, environmental degradation, population explosion, poverty, overconsumption, public health issues, land management, and energy.

5.3 Opinions and attitudes of students about the teaching methods used

This section presents the results of the students' questionnaire in terms of their attitudes and opinions with regard to several issues related to teaching methods used by their teachers. The first section dealt with several issues relating to the laboratory in terms of its availability in each institution, its condition, the extent of availability of equipment; the second section explores the kinds of teaching methods used by teachers; the third section investigates the descriptive illustrations tools used by teachers; the fourth section finds out the kinds of assessment methods used by teachers for assessing the progress of students; the fifth section focuses on the way of lecture delivery adopted by teachers in the classroom; the last section deals with the subject of getting a job after students' graduation.

5.3.1 Students` attitudes towards the conditions of laboratories

As has been mentioned in the literature review, there were just three institutions which had a geographical laboratory, namely: A, B and D. In order to investigate their condition in terms of whether or not the students think them satisfactory, students were asked three questions. The first one was whether or not there was equipment missing in these laboratories; the second one concerned the suitability of types of equipment available in supporting the theoretical study; in the third one they were asked to comment on how sufficient they consider the quantity of equipment relative to the number of students.

In terms of the first issue, an overwhelming majority (78.3%) of students reported that there was equipment missing in the laboratories. This percentage was highest in Institution D (81.4%), followed by Institution A (78.6%), while the Institution B was lower at 75% (Table 5.15).

Table 5.15: Percentage of students' responses regarding whether there was equipment missing in the geographical laboratory for the three institutions that have such a laboratory

Category	**A**	**B**	**D**	Overall
Yes	78.6	75	81.4	78.3
No	21.4	16.7	18.6	18.9
I do not know	0.0	8.3	0.0	2.8
Total	100	100	100	100
N	28	24	70	122

Regarding the suitability of types of equipment in the laboratories in supporting their theoretical studies, there was a considerable proportion disagreeing or strongly disagreeing with this statement across all institutions (47.5%). There were notable differences in answers among institutions with the B and A showing considerable uncertainty (44% and 22.6% respectively). The highest proportion of responses either disagreeing or strongly disagreeing with the statement was registered in Institution D (73.3%) (Table 5.16).

Table 5.16: Percentage of student' answers with regard to the statement that "The existing equipment and apparatus in the laboratory are suitable in terms of supporting the theoretical concept"

Category	A	B	D	Overall
St-ag	22.6	16	8	15.5
Agree	9.7	16	8	11.2
Uncertain	22.6	44	10.7	25.8
Disagree	38.7	24	44	35.6
St-dis	6.5	0.0	29.3	11.9
Total	100	100	100	100
N	31	25	75	131

There were a considerable percentage of the students expressing disagreement (38.5%) and strong disagreement (28.5%) to the statement that there was sufficient equipment available, this response being consistent across all three institutions, but was somewhat higher in the Institution D where 73.3% of students expressed disagreement or strong disagreement with this statement (Table 5.17)

Table 5.17: Percentage of student' responses with regard to the statement that "the existing equipment and apparatus are sufficient to the number of students"

Category	A	B	D	Overall
St-ag	16.7	4.2	5.3	7.7
Agree	16.7	16.7	5.3	10
Uncertain	13.3	12.5	17.1	15.4
Disagree	43.3	37.5	36.8	38.5
St-dis	10	29.2	35.5	28.5
Total	100	100	100	100
N	30	24	76	130

Taking these results overall, it could be said that the laboratories institutions A and B are relatively better than the Institution D, and clearly will be better than other institutions which do not have a dedicated geographical laboratory at all.

5.3.2 Types of teaching methods used by teachers as reported by students

Ediger (2005) points out that an important factor in learning is for the geography teacher to both master subject matter but also to use appropriate methods of teaching. Thus, he/she needs to engage students actively in ongoing learning activities.

This section considers the information presented by students on the kinds of teaching methods used for geography in Libyan Universities, and the opinions of the students on the extent to which these methods help students to understand the geographical modules taught and whether they were satisfied with them. Students were asked to identify how many times each teaching methods was adopted by their teachers.

It is clear from the below results that the teaching strategies adopted by teachers across all institutions were restricted to the traditional teaching methods, principally the traditional lecture which was reported as used frequently by all respondents. Other techniques in teaching involving dialogue and discussion, namely tutorials and seminars were not reported as being used at all, and nor was use of the internet (Table 5.18)

Although the use of essays is found in all institutions, it was only reported as being used sometimes by about one third of students, the rest stating it was never used. The greatest usage was reported from Institution A and E (about

60% each). Practical classes were adopted some times by teachers in just three institutions namely A, B and D (Table 5.18). This might be due to the availability of labs in the three of them, and also the considerable experience of such teaching by teachers in the first two institutions (see chapter six).

Table 5.18: Students responses regarding extent of use of each type of teaching method in the class room (Key: FRQ= Frequently, SOM= Sometimes, NEV= Never

Category		**A**	**B**	**C**	**D**	**E**	**F**	**G**	**Overall**
Lecture	**FRQ**	100	100	100	100	100	100	100	100
	SOM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NEV	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	100	100	100	100	100	100	100	100
	N	32	25	27	76	20	33	32	245
Tutorials	**FRQ**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SOM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NEV	100	100	100	100	100	100	100	100
	Total	100	100	100	100	100	100	100	100
	N	31	25	27	80	20	33	31	247
Seminars	**FRQ**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SOM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NEV	100	100	100	100	100	100	100	100
	Total	100	100	100	100	100	100	100	100
	N	30	26	28	78	21	33	30	246
Learning with internet	**FRQ**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SOM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NEV	100	100	100	100	100	100	100	100
	Total	100	100	100	100	100	100	100	100
	N	31	26	28	79	20	32	32	28
Practical classes	**FRQ**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SOM	24	28	0.0	13.9	0.0	0.0	0.0	10.6
	NEV	76	72	100	86.1	100	100	100	89.4
	Total	100	100	100	100	100	100	100	100
	N	31	25	29	79	20	32	31	245
essays	**FRQ**	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.4
	SOM	58.3	40	34.5	20.3	61	18.2	34.4	34.1
	NEV	41.7	60	65.5	79.7	33	79.4	65.6	65.5
	Total	100	100	100	100	100	100	100	100
	N	30	25	29	79	21	33	32	249

Students made various comments regarding this theme. A majority of students reported that the lectures were displayed by teachers without using technical means and devices such as displays, probably due to the lack of such devices in most of the Libyan universities. Also, some students expressed their frustration and disappointment concerning the non-use of modern techniques in teaching which might help them to gain the skills required for their future. The following quotes illustrate this theme:

"Our educational institutions must take into account that the world has changed in terms of acquiring knowledge because the world is connected with the internet. Therefore, a network internet centre should be provided in each university to achieve maximum benefit from international organizations and their publications on the international information network (Internet)"

"Our teachers, in co-operation with our institutions, must discuss how we gain skills and how these skills can be improved for instance: thinking, oral presentations, discussion, dissertations, field class, posters, writing practical reports, using the internet in the educational process, and so on"

According to what has been outlined above it could be said that the current teaching methods adopted by teachers fail to provide students with transferable skills, this might be the reason why students expect that getting a job after their graduation would be very difficult (see section 5.3.7)

5.3.3 Students' attitudes towards the teaching methods used

Questions that deal with this theme have four major dimensions. Firstly students were asked to define the extent of importance of practical study to the teaching of a sample of four modules namely: Geomorphology, Physical Geography, GIS, and Soil Geography. Secondly, they were asked to indicate their satisfaction with the current application of practical study in these modules. Third they were asked to define the extent of use of each kind of teaching method used by teachers in the class room. Fourthly, they were asked to define the extent of their agreement with a statement about the diversity and efficiency of such methods.

The first question about the perceived benefits of practical work was asked to all students without exception, whether they study these modules or not, in order to determine the extent of their knowledge about practical study. In general, more than half of students agreed and agreed strongly with this statement, in particular for the first three modules. The module of Physical Geography received the highest level of strongly agrees and agrees with 81.2%, the module of Geomorphology received 81%, and module of GIS received 71.4%. These high values indicate that the students know in advance the importance and value of the application of practical study in supporting the theoretical material in these subjects. However, there was clearly greater uncertainty about this statement with regard to Soil Geography (only 51.2% agreement). This probably was due to this module only being taught in just three institutions so that many students were uncertain as to what it involved (Table 5.19).

Table 5.19: Percentage of students' attitudes with regard to the statement that" The application of practical study concept is very important in supporting the theoretical material or illustrating the lecture to the following modules"

Category		A	B	C	D	E	F	G	Overall
Geomorphology	St-ag	38.7	44	50	42.3	52.4	65.6	46.9	47.4
	Agree	45.2	40	28.6	35.9	33.3	21.9	28.1	33.6
	Uncertain	16.1	12	7.1	12.8	9.5	9.4	15.6	12.1
	Disagree	0.0	4	10.7	6.4	0.0	3.1	6.2	4.9
	St-dis	0.0	0.0	3.6	2.6	4.8	0.0	3.1	2
	Total	100	100	100	100	100	100	100	100
	N	31	25	28	78	21	32	32	247
Physical Geography	St-ag	62.5	29.2	46.4	46.8	57.1	52.9	59.4	50.4
	Agree	15.6	33.3	35.7	35.4	23.8	41.2	21.9	30.8
	Uncertain	15.6	16.7	10.7	12.7	9.5	2.9	9.4	11.2
	Disagree	6.2	16.7	3.6	5.1	4.8	2.9	6.2	6
	St-dis	-	4.2	3.6	0.0	4.8	0.0	3.1	1.6
	Total	100	100	100	100	100	100	100	100
	N	32	25	28	79	21	34	32	250
GIS	St-ag	50	30.8	10.5	36	44.4	39.3	48.4	37.6
	Agree	33.3	38.5	31.6	44	22.2	17.9	35.5	34.8
	Uncertain	12.5	23.1	47.4	12	16.7	25	16.1	19
	Disagree	4.2	7.7	10.5	6.7	11.1	17.9	0.0	7.7
	St-dis	0.0	0.0	0.0	1.3	5.6	0.0	0.0	0.9
	Total	100	100	100	100	100	100	100	100
	N	24	26	19	75	18	28	31	221
Soil Geography	St-ag	50	33.3	20	18.2	0.0	19.4	16.1	23.7
	Agree	14.3	33.3	44	36.4	0.0	19.4	16.1	27.5
	Uncertain	17.9	14.3	24	18.2	80	25.8	48.4	25.6
	Disagree	17.9	14.3	12	15.2	20	32.3	6.5	16.4
	St.dis	0.0	4.8	0.0	12.1	0.0	3.2	12.9	6.8
	Total	100	100	100	100	100	100	100	100
	N	28	21	25	66	5	31	31	207

In terms of, the current application of practical study, students who were taking these modules were asked to define their agreement level concerning this application to these modules. Results suggested (Table 5.20) that a majority of students for each module disagreed or disagreed strongly with the current

application of practical study in terms of supporting the theoretical material or illustrating the lecture, and the highest level of disagreement was 68.8% for Geomorphology, followed by 64.8% for Physical Geography. Nevertheless, variations across institutions were apparent in the responses to the question. In the Institution B 61.5% and 66.7% of students agreed or agreed strongly with the current level of application of practical study in Physical Geography and GIS modules, respectively, while in the Institution A 55.5% of students expressed their agreement or strong agreement to the statement for the Physical Geography module (Table 5.20), in contrast to the general trend of disagreement with the statement about the amount of practical study.

Table 5.20: Percentage of students' attitudes with regard to the statement that" The current application of practical study concept is satisfactorily implemented in terms of supporting the theoretical material or illustrating the lecture to the following modules"

Category		A	B	C	D	E	F	G	Overall
Geomorphology	St-ag	11.1	0	14.3	0	14.3	0	0	4.2
	Agree	11.1	0	0	0	0	0	0	4.2
	Uncertain	11.1	0	14.3	40	14.3	37.5	14.3	22.9
	Disagree	44.4	0	57.1	20	42.9	25	57.1	39.6
	St-dis	22.2	0	14.3	40	28.6	37.5	28.6	29.2
	Total	100	0	100	100	100	100	100	100
	N	9	0	7	10	7	8	7	48
Physical Geography	St-ag	44.4	7.7	12.5	9.3	0	5.9	0	10.5
	Agree	11.1	53.8	0	4.7	0	0	14.3	10.5
	Uncertain	33.3	15.4	12.5	11.6	12.5	11.8	14.3	14.3
	Disagree	11.1	15.4	25	32.6	12.5	47.1	28.6	28.6
	St-dis	0	7.7	50	41.9	75	35.3	42.9	36.2
	Total	100	100	100	100	100	100	100	100
	N	9	13	8	43	8	17	7	105
GIS	St-ag	0	16.7	0	0	0	0	0	3.8
	Agree	0	50	0	11.8	0	0	22.2	19.2
	Uncertain	100	8.3	0	0	14.3	20	0	9.6
	Disagree	0	16.7	0	41.2	42.9	40	55.6	36.5
	St-dis	0	8.3	0	47.1	42.9	40	22.2	30.8
	Total	100	100	0	100	100	100	100	100
	N	2	12	0	17	7	5	9	52
Soil Geography	St-ag	0	0	0	5.9	0	0	10	5.1
	Agree	0	0	0	0	0	0	10	2.6
	Uncertain	100	0	33.3	5.9	0	0	10	20.5
	Disagree	0	0	55.6	52	0	0	60	51.3
	St-dis	0	0	11.1	35	0	0	10	20.5
	Total	100	0	100	100	0	0	100	100
	N	3	0	9	17	0	0	10	39

In the light of the above results, it could be said that the current application of practical study of selected modules applied in the old institutions was relatively better than that applied in the newly established institutions. This might be associated with the condition of their laboratories which was relatively better in the former places, and also perhaps to the greater range of qualifications of the teachers in these institutions.

In order to find out the extent to which the teaching methods used met students' expectations, students were asked to indicate their agreement level towards the methods being satisfactory. The replies to this question revealed that there was a high proportion of disagreement (63%) of students with this statement, with a further 21.9% strongly disagreeing. Only 11% of students agreed or agreed strongly that the current teaching methods were to their satisfaction, but there also were slight but noticeable differences of student answers regarding this issue in different institutions (Table 5.21). The reason for such differences in level of agreement may be because some students did not have an adequate idea of other teaching methods that could be applied in the teaching except for the lecture method, especially those studying in the first academic years as some of them state

Table 5.21: Percentage of students 'attitudes with the statement that "The teaching methods used by teachers meet your satisfaction"

Category	A	B	C	D	E	F	G	Overall
St-ag	9.7	4	7.1	3.8	10	6.2	6.5	6.1
Agree	6.5	8	3.6	2.5	5	6.2	6.5	4.9
Uncertain	0.0	8	3.6	5	5	6.2	0.0	4.9
Disagree	67.7	76	64.3	52.5	65	68.8	67.7	63.2
St-dis	16.1	4	21.4	36.2	15	12.5	19.4	21.9
Total	100	100	100	100	100	100	100	100
N	15	25	28	80	20	32	31	247

5.3.4 The descriptive illustration tools used by teachers and attitudes of students towards them

It is clear from the results (Table 5.22) that the use of maps as a descriptive illustration tool was much the most commonly used with a proportion of 40% of answers of students, followed by the use of figures and tables 19.8%, and followed by the use of an atlas 16.3%. It seems that teachers did not focus on the use of other types of illustrations, as the rest of the types of illustration were given very small proportions by students in terms of their use (Table 5.22; Figure 5.3).

Table 5.22: percentage of student responses regarding the most important descriptive illustrations tools used by teachers in the class room

Category	A	B	C	D	E	G	H	Overall
maps	34.4	28	44.4	43.2	28.6	58.8	37.5	40.9
Figures& Tables	12.5	16	18.5	22.2	19	23.5	21.9	19.8
atlas	9.4	16	14.8	19.8	14.3	17.6	15.6	16.3
Photographs	3.1	16	3.7	7.4	14.3	0.0	6.2	6.7
objects	6.2	8	7.4	7.4	0.0	0.0	6.2	5.6
Satellite picture	6.2	8	11.1	0.0	9.5	0.0	6.2	4.4
Field trips	9.4	8	0.0	0.0	14.3	0.0	6.2	4
Experiments	18.8	0.0	0.0	0.0	0.0	0.0	0.0	2.4
Reports about voyages of discovery	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100
N	32	25	27	81	21	34	32	252

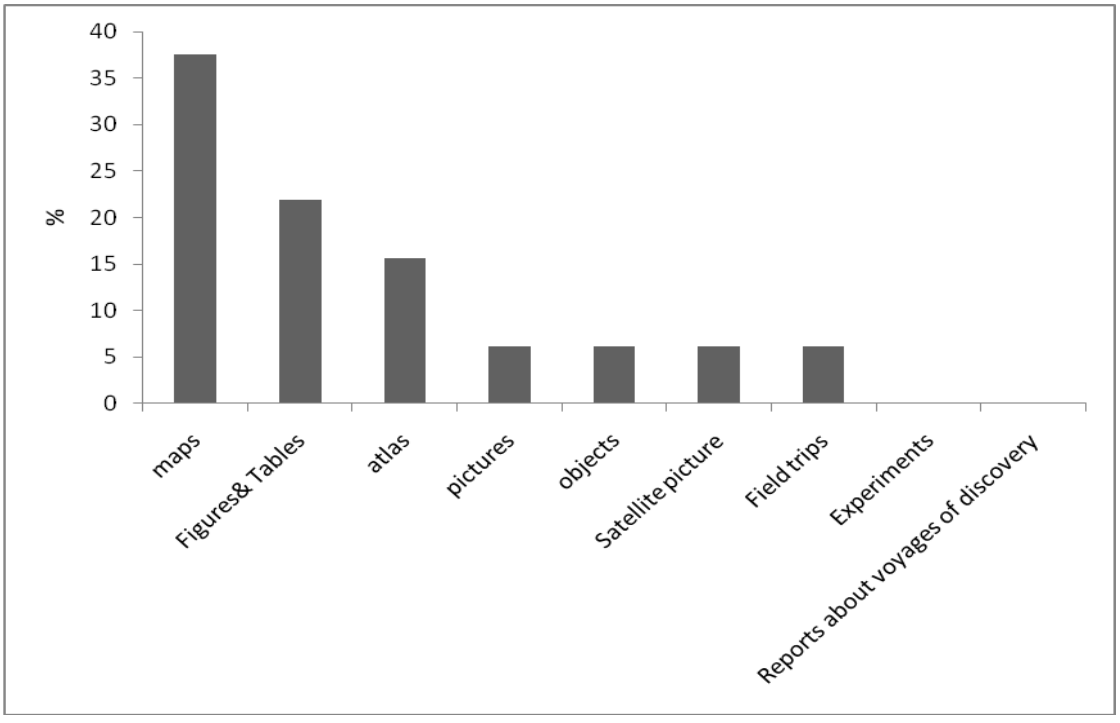

Figure 5.3: percentage of responses to the question of the most important descriptive illustrations tools used by teachers in the class room

For the purpose of knowing the types of illustrations preferred by students and which they would hope to be used by teachers, students were asked to rate the order of priority of the following nine descriptive illustrations: maps, figures& tables, atlas, photographs, objects, satellite picture, field trips, experiments, and reports about voyages of discovery.

The replies to this question (Table5.23) revealed that the category of field trips came first where over a quarter (31.3%) of students said that it should be given priority in terms of use, followed by use of experiments, then use of satellite pictures & photographs with percentages of 20.3% and 15.2% respectively.

In summary, it was no surprise that the majority of students in each institution ranked the field trip, experimental work, and satellite pictures and photographs as the three most important tools they would like to be used and given a high priority by teachers (Table 5.23).

Table 5.23: Percentage of students answers regarding their preferred illustrative tools

Category	A	B	C	D	E	F	G	Overall
Field trips	40.6	26.9	28.6	32.1	22.7	41.2	21.2	31.2
Experiments	21.9	19.2	25	18.5	22.7	23.5	15.2	20.3
Satellite pictures and Photographs	12.5	19.2	10.7	12.3	18.2	17.6	21.2	15.2
Objects	12.5	15.4	0.0	9.9	13.6	8.8	9.1	9.8
Reports about voyages of discovery	0.0	0.0	17.9	12.3	13.6	5.9	12.2	9.4
Videos	6.2	11.5	10.7	14.8	0.0	0.0	9.1	9
Maps	3.1	7.7	7.1	0.0	9.1	2.9	12.1	4.7
Atlas	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Total	100	100	100	100	100	100	100	100
N	32	26	28	81	22	34	33	256

Concerning the extent of students' satisfaction towards the descriptive illustrative tools used by teachers, over two-thirds (68.9%) of students disagreed, or disagreed strongly, that overall they were satisfied with the quality of use of such tools. There was also a noticeable variation of distribution of percentage response among institutions, where the highest percentage of disagreement and strong disagreement with this statement were in Institutions, D (76%), G (75.8%), C (71.4%), E (66.7%) and F (64.7%). This percentage was relatively low in Institutions (B 58.3%, and A 56.2% of students) (Table 5.24).

Table 5.24: percentage of students' attitudes with regard to the statement that "The illustrative tools used are satisfactory for you in terms of enabling you to understand the lecture"

Category	A	B	C	D	E	F	G	Overall
St-ag	18.8	8.3	7.1	5.3	0.0	14.7	15.2	9.7
Agree	9.4	16.7	17.9	10.7	28.6	5.9	3	11.7
Uncertain	15.6	16.7	3.6	8	4.8	14.7	6.1	9.7
Disagree	40.6	37.5	25	44	23.8	41.2	36.4	37.7
St-dis	15.6	20.8	46.4	32	42.9	23.5	39.4	31.2
Total	100	100	100	100	100	100	100	100
N	32	24	28	75	21	34	33	247

In this context some students commented that they recognized that the biggest challenge facing teachers in non-use of field trips and experiments is due to the lack of facilities and financial support, but they did expect tools that do not need substantial financial costs, such as photographs to be used due to their great benefit in illustrating geographic phenomena. This comment coincides to a large extent with the viewpoint of Rose (2008, p1) who indicates that:

"Photographs have played a major role in geographical studies. Ever since the invention of photography in the 1830s, it has been assumed that photographs are perfectly suited to helping us answer the eminently geographical question 'what is this place like? And it can convey a great deal of information about the appearance of a place far more succinctly than words."

5.3.5 Students` attitudes towards the methods of assessing their progress adopted by teachers

The ways whereby the academic progress of students was assessed by teachers will be focused on in chapter six; however, here feedback was sought

from responses to two questions. The first question asked them to state the method that they would most like to be used by teachers to assess their progress. The second question asked them to identify their level of agreement towards the statement that current assessment methods used by teachers were satisfactory.

As for the first question, in general, answers varied slightly across institutions but in all cases the majority (65%) of students tended to prefer doing both a test and a written assignment, with the two approaches chosen singly by an average of 17.5% for each (Figure 5.5)

Where teachers adopted a wider variety of assessment methods, students stated that such methods enabled them to reflect their individual interests and offered more latitude for them to display their knowledge.

Some students who indicated their teachers adopted a variety of assessment methods were happy that such approaches were used and they stated that such methods enabled them to reflect their individual interests that could be enhanced by teachers, and integrate them into activities with other students, and also offered more latitude for them to display their knowledge.

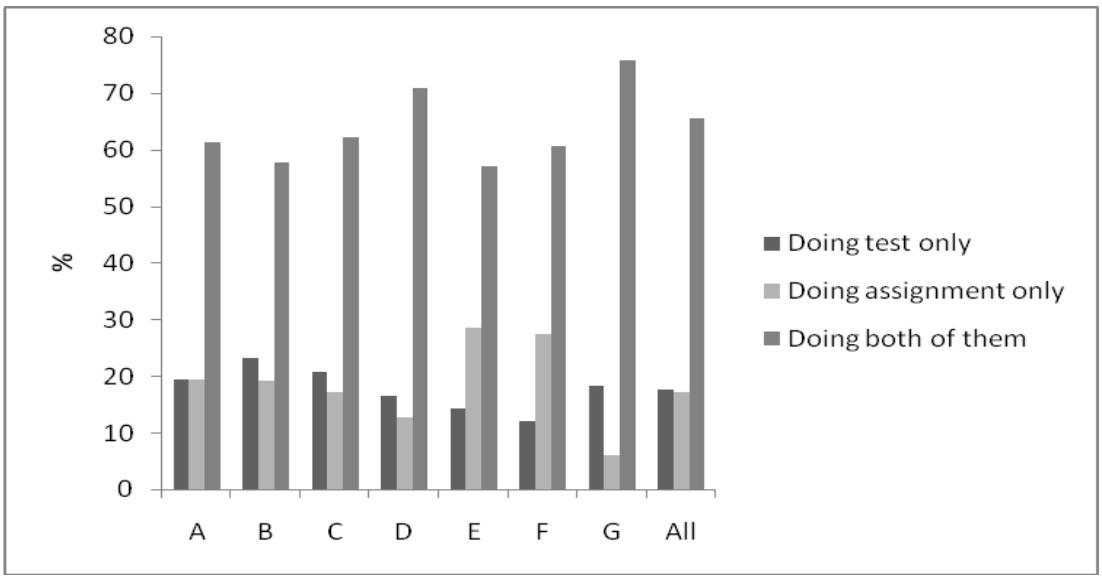

Figure 5.4: Percentage of responses to the question of which kind of method for assessing their academic progress they would like to be applied by teachers

Concerning the level of satisfaction with current methods used, the students' opinions were fairly equally divided; 40.9% of students agreed strongly and agreed with the current methods of assessment used by teachers, whereas, 40.4% of students disagreed strongly and disagreed with this statement (Table 5.25). Some of the students appeared to have very little information about the nature of the research project, and they imagined that the completion of such a research project would be much more difficult, as some of them stated.

Table 5.25: Percentage of students' attitude towards the statement that "The current methods used by teachers for assessing the academic progress of students is satisfactory for you"

Category	A	B	C	D	E	F	G	Overall
St-ag	40	0.0	6.9	5.3	19	18.8	15.6	13.8
Agree	33.3	50	27.6	18.4	47	21.9	18.8	27.1
Uncertain	10	20	20.7	10.5	19	15.6	9.4	13.8
Disagree	16.7	25	17.2	42.1	9.5	21.9	28.1	27.1
St-dis	0.0	5	27.6	23.7	4.8	21.9	28.1	18.3
Total	100	100	100	100	100	100	100	100
N	30	20	29	76	21	32	32	240

5.3.6 Students' attitude towards the lecture delivery

The ways in which lectures were delivered by teachers to students are addressed in the next chapter, so the purpose of this question was to identify the extent of suitability of these kinds of methods from the viewpoint of students. Accordingly, students were asked to define their attitudes relating to this theme, in general, and although over one-third (37.2%) and over one-quarter (26.4%) of students disagreed and strongly disagreed with this statement, 25% of students agreed, or strongly agreed, that overall they were satisfied with the methods of lecture delivery (Table 5.26).

Table 5.26: Percentage students' attitudes towards the statement that "The current methods of lecture delivery are appropriate for you"

Category	A	B	C	D	E	F	G	Overall
St-ag	13.3	25	7.7	9.1	9.5	9.1	6.5	10.7
Agree	0.0	41	26.9	9.1	14.3	6.1	22.6	14.9
Uncertain	13.3	8.3	11.5	13	4.8	12.1	6.5	10.7
Disagree	46.7	25	26.9	35.1	38.1	51.5	35.5	37.2
St-dis	26.7	0.0	26.9	33.8	33.3	21.2	29	26.4
Total	100	100	100	100	100	100	100	100
N	30	24	26	77	21	33	31	242

5.3.7 Students' viewpoints on access to work after their graduation

In view of the strong relationship between higher education and the world of work (Little, 2003; Robley, 2005; Gedye, 2004), students were asked if they thought the current geography teaching will qualify them to get a job relevant to their subject area except for teaching after their graduation. The answers given in response this question were similar among all universities as almost three quarters (73%) of students stated that they will not get a job, only a small proportion (15.5%) replying yes to this question (Table 5.27)

Table 5.27: Percentage level of agreement level of students regarding the possibility of getting a job after their graduation

Category	A	B	C	D	E	F	G	Overall
Yes	17.9	26.9	10.7	20.5	9.5	21.9	9.4	15.5
No	64.3	61.5	78.6	79.5	71.4	59.4	71.9	73.5
I do not know	17.9	11.5	10.7	0.0	19	18.8	18.8	11
Total	100	100	100	100	100	100	100	100
No	28	26	28	78	21	32	32	245

Many students (especially those in their third and fourth academic year) thought that they were not qualified to get a job after their graduation in one of the governmental sectors such as economics, planning, or related to environmental management except for teaching due to the lack of relationship between the quantity of graduates from geography and the labour market requirements, and because the input of current teaching in geography was based on the pedagogy of theoretical teaching which does not meet the needs of society. Furthermore, some students indicated that they might face problems when they start their

work as teachers in secondary school because they had not been taught any modules on teaching methods which would teach them how to teach. The following quotes illustrate this theme:

"The current geography course is not structured to qualify students to get a job; each module contains only theoretical teaching with no application of practical study or fieldwork. *Furthermore, the geographical modules that we are taught have not been changed for a long time. Therefore, they must be changed from time to time in accordance with global changes, international transformation and the local society needs".*

"There has not been development of employability skills within the curricula, in other words the skills required for employment have not been introduced well whether by means of introducing modules developing these skills, or specific programs in this context such as information communication technology (ICT)".

5.4 Opinions, attitudes, and suggestions of students about the current application of fieldwork

5.4.1 Brief Review

Considering students' answers concerning the current application of fieldwork, it is very important to highlight first the results from students being asked to identify whether the fieldwork was undertaken during their academic year or not. Just 23.1% of students said that fieldwork was undertaken in their academic

year, while, 76.9% said that it was not undertaken at all (Table 5.28). Two important points arise from these results: firstly, fieldwork was undertaken in just four institutions namely A, B, E and G, while it was not undertaken in the rest of the institutions. Furthermore, its application was limited to the final academic year and it was not undertaken within the earlier academic years. That means that fieldwork was not regarded as an essential element within the structure of geography courses across all institutions, and was not given special attention either from the geography departments or other educational authorities.

Table 5.28: students' answers with regard to implementing the fieldwork during their academic years.

Category	A	B	E	G	Overall
Yes	34.4	23.1	31.8	36.4	23.1
No	65.6	76.9	68.2	63.6	76.9
Total	100	100	100	100	100
N	32	26	22	33	257

5.4.2 Recognition by students of the value of fieldwork in supporting theoretical concepts

The purpose of this question was to reveal the extent to which students thought fieldwork was important for a sample of geographical modules. For this reason, students were asked to indicate the extent of their agreement or disagreement level with the statement "undertaking fieldwork is very important to support the theoretical concepts in the modules of Geomorphology, Physical Geography, and Environmental subjects. The replies to this question revealed that a clear majority of students across all institutions value the importance of fieldwork. The following quote illustrate this theme:

"From my own personal point of view I believe that it is impossible for us as students to develop a satisfactory understanding without doing fieldwork because it can provide us with an opportunity to apply knowledge gained in academic courses and allow us to bridge the gap between theory and practice; so the current strategy of fieldwork must be reformed and should be implemented through all our academic years to be able to get a proper understanding of geography subjects."

The highest percentage of agreement or strong agreement was given by students to the modules of Physical Geography, and Geomorphology, and then with a somewhat lower percentage, Environmental subjects (84%, 83.5, and 68.3% respectively of students). The answers given in response to this question were quite similar among all institutions (Figures 5.5- 5.7).

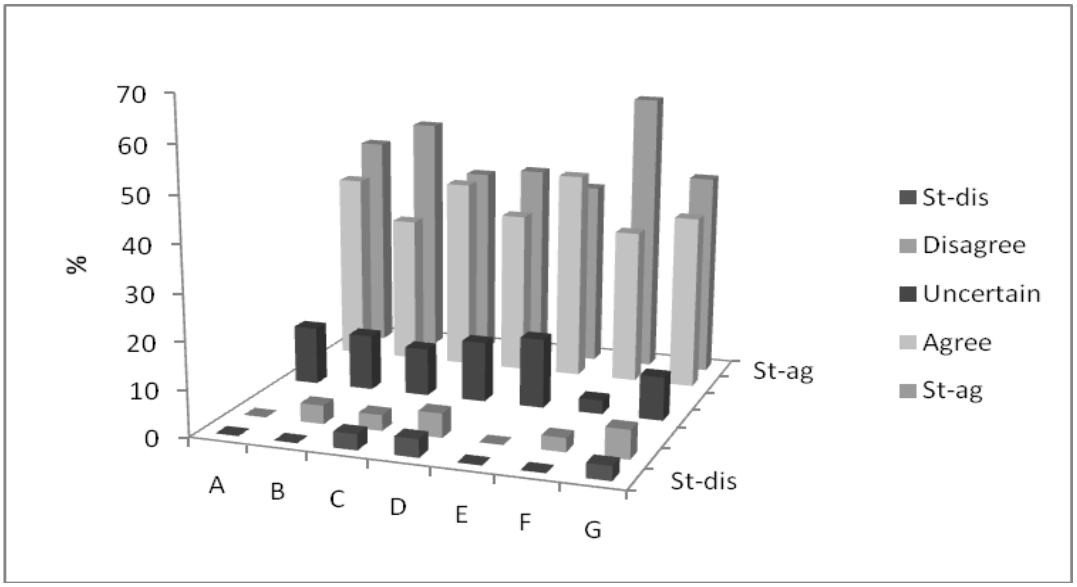

Figure 5.5: Students' attitudes towards the statement that "undertaking fieldwork is very important to support the theoretical concepts in the Geomorphology module".

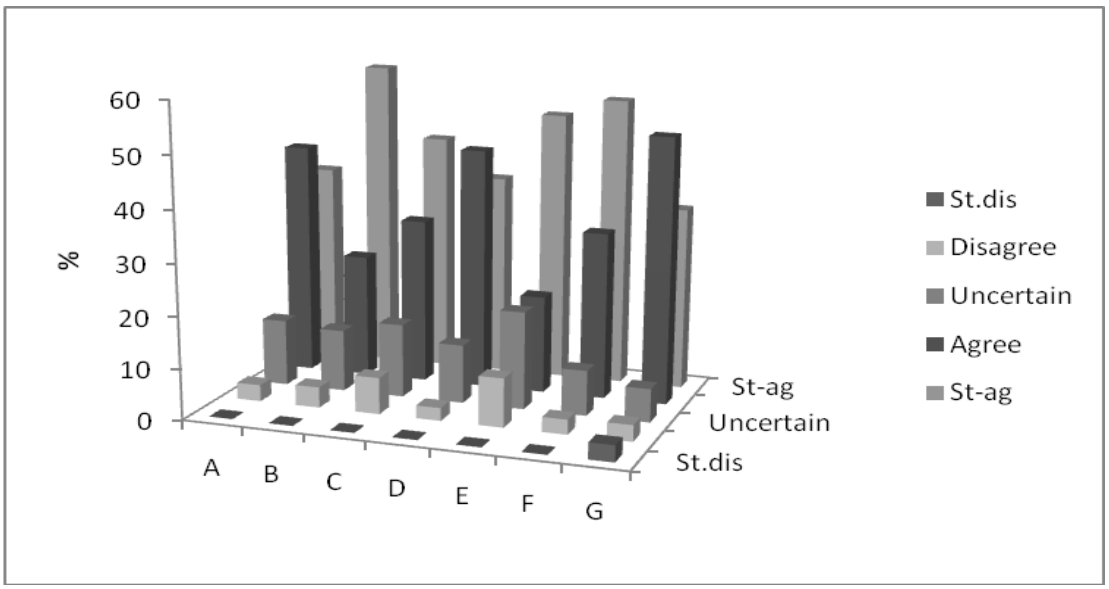

Figure 5.6: Students' attitudes towards the statement that "undertaking fieldwork is very important to support the theoretical in the Physical Geography module".

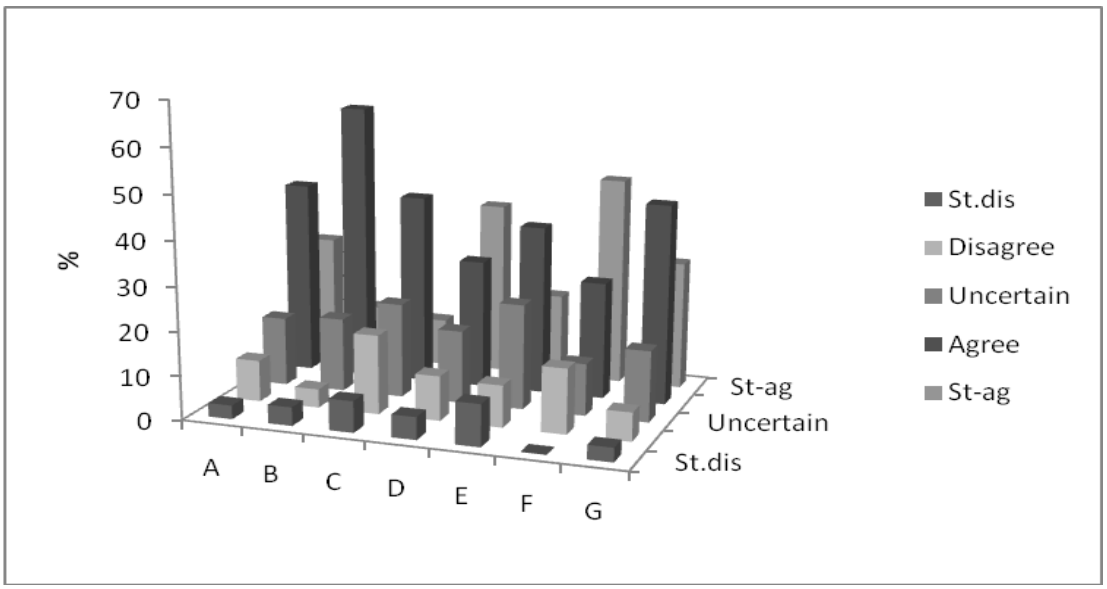

Figure 5.7: Students' attitudes towards the statement that "undertaking fieldwork is very important to support the theoretical concepts in the Environmental modules and subjects.

5.4.3 The types of fieldwork and the system of its application

Based on comments of students the most common type of fieldwork applied in Libyan universities was the one day trip (limited travel plus limited time) to the specific place near to the location of institutions which can be reached by bus in two hours time, so students were asked whether or not residential and international fieldwork had been scheduled and planned in advance to be undertaken at the end of the academic year. Results (Table 5.29) show that residential fieldwork was considered to be undertaken in the Institutions A, B, and E, but not in Institution G.

Table 5.29: Answers of student with regard to whether residential fieldwork was scheduled within their program of study.

Category	**A**	**B**	**E**	**G**	**Overall**
Yes	72.7	83.3	71.4	0.0	56.8
No	9.1	0.0	0.0	100	27.3
I do not know	18.2	16.7	28.6	0.0	15.9
Total	100	100	100	100	100
No	11	6	7	12	36

However, international fieldwork had not been included in programmes of study in any institutions (Table 5.30)

Table 5.30: Answers of student with regard to whether international fieldwork was scheduled within their program of study.

Category	**A**	**B**	**E**	**G**	**Overall**
Yes	0.0	0.0	0.0	0.0	0.0
No	72.7	83.3	100	100	89
I do not know	27.3	16.7	0.0	0.0	11
Total	100	100	100	100	100
No	11	6	7	12	36

5.4.4 The types of fieldwork undertaken and their timing

Students who had undertaken some fieldwork were asked to describe the nature of fieldwork that been undertaken. An average of 65.7% of students indicated that it included both observation and participatory fieldwork, with the highest percentage of such answers from students at Institution B (100% of students, Table 5.31).

Table 5.31: Percentage answers of students with regard to the nature of fieldwork undertaken

Category	A	B	E	G	Overall
Observation fieldwork	30	0.0	14.3	16.7	17.1
Participatory fieldwork	20	0.0	28.6	16.7	17.1
Both	50	100	57.1	66.7	65.7
Total	100	100	100	100	100
No	10	6	7	12	23

Concerning the manner in which fieldwork was carried out; students were asked to clarify the timing of such fieldwork. Results show that the fieldwork was undertaken irregularly and at separate times during the academic year (100% of responses, Table 5.32). Students stated that it had been undertaken without a prior schedule including its times and destinations known in advance to students, but it had been undertaken depending on the decision of the head of department.

Table 5.32: Percentage answers of students regarding the timing of fieldwork undertaken

Category	A	B	E	G	Overall
Weekly	0.0	0.0	0.0	0.0	0.0
Monthly irregularly	0.0	0.0	0.0	0.0	0.0
Irregularly with separated times	100	100	100	100	100
Total	100	100	100	100	100
N	11	6	7	12	36

5.4.5 Attitudes of students about the current application of fieldwork

In order to identify the attitude of students towards the current application of fieldwork, students were asked two questions in this context.

In the first question, students were asked to identify the extent of their agreement level with the statement that “the places which had been visited during the year were satisfactory to them in promoting their geographical knowledge and understanding”. Results suggest that 63.9% of students agreed strongly or agreed with this statement on average across all universities. However, a noticeable variation was observed in their responses as the highest percentage of agreement or strong agreement was registered in Institution A (72.8% of students, while the lowest percentage was in institutions G 50%), which also had the highest percentage of disagreement with this statement (33.3% of students; Table 5.33).

Table 5.33: Percentages of students' attitudes towards the statement that "the places which had been visited during the year were satisfactory to them in promoting their geographical knowledge and understanding".

Category	A	B	E	G	Overall
St-ag	45.5	16.7	28.6	16.7	27.8
Agree	27.3	50	42.9	33.3	36.1
Uncertain	9.1	16.7	14.3	16.7	13.9
Disagree	18.2	16.7	14.3	33.3	22.2
St-dis	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100
N	11	6	7	12	36

In the second question, students were asked to indicate the extent of their agreement or disagreement with the statement of "whether the length of each visit was enough to obtain the required information from the place". The results show that 62.8% of students expressed their disagreement or strong disagreement with this statement, while just 28.8% of students stated that they agreed or agreed strongly with the length of each visit. Comparing the different institutions 83.3% agreed or strongly agreed with this statement in Institution B, while the other three institutions all registered much higher levels of disagreement.

Table 5.34: The extent of students' agreement towards the statement that "the length of each visit was enough to gain the required information from the place"

Category	A	B	E	G	Overall
St-ag	10	50	14.3	16.7	20
Agree	10	33.3	0.0	0.0	8.6
Uncertain	10	16.7	0.0	8.3	8.6
Disagree	50	0.0	14.3	33.3	31.4
St-dis	20	0.0	57.1	41.7	31.4
Total	100	100	100	100	100
N	10	6	7	12	35

5.4.6 Attitude of students towards the idea of reform of the current program of fieldwork

Students were asked three questions related to this theme. Firstly, they were asked to what extent they agreed with the statement of "whether undertaking fieldwork in just the final academic year is enough to promote their geographical knowledge and understanding". Responses to the question of this statement were strongly tending towards disagreement (strongly disagree: 48%; disagree: 34%) (Table 5.35).

Table 5.35: The extent of students' agreement towards the statement that "undertaking fieldwork in just the final academic year is enough to promote their geographical knowledge and understanding"

Category	A	B	C	D	E	F	G	Overall
St-ag	0.0	0.0	3.7	2.6	14.3	3.2	3.2	2.1
Agree	0.0	12.5	7.4	16.7	0.0	0.0	9.7	4.6
Uncertain	7.2	4.2	11.1	24.4	4.8	9.7	6.5	10.4
Disagree	57.1	45.8	18.5	56.4	23.8	41.9	45.2	34.6
St-dis	35.7	37.5	59.3	56.4	57.1	45.2	35.5	48.6
Total	100	100	100	100	100	100	100	100
N	28	26	27	78	21	31	31	240

The second question asked students to what extent they agreed or disagreed with the statement of "whether undertaking fieldwork during all academic years may promote their geographical knowledge and understanding". In contrast to students` answers to the previous question, there was clearly an overwhelming response in favour of undertaking fieldwork from the early academic years (48%: strongly agree: 36.7%; agree), with few students reporting that they disagreed or disagreed strongly with this statement (7.2%) (Table 5.36)

Table 5.36: The extent of students' agreement towards the statement that "undertaking fieldwork during all academic years may promote their geographical knowledge and understanding"

Category	A	B	C	D	E	F	G	Overall
St-ag	51.6	32	42.9	55.1	47.6	39.4	59.4	48.8
Agree	38.7	44	39.3	33.3	33.3	51.5	21.9	36.7
Uncertain	6.5	12	7.1	6.4	9.5	6.1	6.2	7.3
Disagree	3.2	4	7.1	3.8	9.5	3	9.4	5.2
St-dis	0.0	8	3.6	1.3	0.0	0.0	3.1	2
Total	100	100	100	100	100	100	100	100
N	31	25	28	78	21	33	32	248

For the third question, students were asked to what extent they agreed with the idea of visiting an international site in the final academic year. This was strongly supported, with a high proportion strongly agreeing or agreeing (80.8%) with this statement on average, and the percentage answer given in response to this question being similar in each institution (Table 5.37)

Table 5.37: The extent of students' agreement with the statement about the importance of visiting international places

Category	A	B	C	D	E	F	G	Overall
St-ag	50	33.3	39.3	43.6	38.1	42.4	53.1	44.3
Agree	34.4	66.7	39.3	34.6	38.1	42.4	28.1	36.5
Uncertain	12.5	0.0	7.1	15.4	9.5	9.1	12.5	11.7
Disagree	3.1	0.0	3.6	3.8	9.5	3	3.1	3.9
St-dis	0.0	0.0	10.7	2.6	4.8	3	3.1	3.9
Total	100	100	100	100	100	100	100	100
N	32	20	28	78	21	33	32	230

The purpose of the fourth question in this context was to identify students` suggestions about the most important subject matter that must be given priority during the preparation of fieldwork. Students were asked to give detail regarding

such issues, and 51.3% of students named Environmental issues as the most important subjects, followed by Physical Geography subjects (39.7% of students), while just 8.9% of students named Human Geography issues (Table 5.38).

Table 5.38: Suggestions (%) of students regarding the subjects that should be given priority in the fieldwork scheme

Category	A	B	C	D	E	E	G	Overall
Environmental issues	45.2	33.3	39.3	55.1	65	55.9	48.1	51.3
Physical geography issues	48.4	50	50	37.2	30	38.2	44.4	39.7
Human geography	6.5	16.7	10.7	7.7	5	5.9	7.4	8.9
Total	100	100	100	100	100	100	100	100
No	31	6	28	78	20	34	12	224

5.4.7 Students' attitude towards the current strategies for fieldwork

Students in the final year (as they had experience with undertaking fieldwork) were asked to indicate their level of agreement or disagreement in relation to the statement that "the current strategy and design of fieldwork adopted by your institution meets and satisfies your needs" The results show a high percentage of disagreement or strong disagreement (87.4%) of students who did not believe that current strategy of fieldwork were effective; this disagreement was very high across all institutions (Table 5.39)

Table 5.39: Percentage of students' attitudes towards the statement that "the current strategy and design of fieldwork adopted by your institution meets and satisfies your needs"

Category	A	B	E	G	Overall
St-ag	10	0.0	0.0	10	5
Agree	0.0	0.0	0.0	0.0	0.0
Uncertain	0.0	16.7	14.3	0.0	7.6
Disagree	60	66.7	14.3	20	40.3
St-dis	30	16.7	71.4	70	47.1
Total	100	100	100	100	100
N	10	6	7	9	32

This high percentage of disagreement and strong disagreement of students might be attributable to two reasons; the first one could be that students were against the principle of undertaking the fieldwork in just the final year and would wish it to be performed from the early academic years, the second one could be the wish to include overseas fieldwork in the fieldwork schedule.

5.5 Students' perceptions about the final year dissertation

The purpose of this section was to address some important issues related to the dissertation of students in their final year as an essential element of the graduation requirements. Three themes are addressed below:

5.5.1 Ways of selection of the final year dissertations

The first question addressed the way the dissertation topic was chosen in order to identify any differences among the institutions. The results (Figure 5.8) suggested that there were three ways of choosing the topic of the project; the first way was that teachers offer several topics to students who have freedom to

select one of them according to their scientific orientation (Institutions of B, D,E and G). The second way was for students to select the topics themselves (Institutions of C and D). The third one was where the department draws up a list containing the project titles to be chosen by students, as is the case in Institution A.

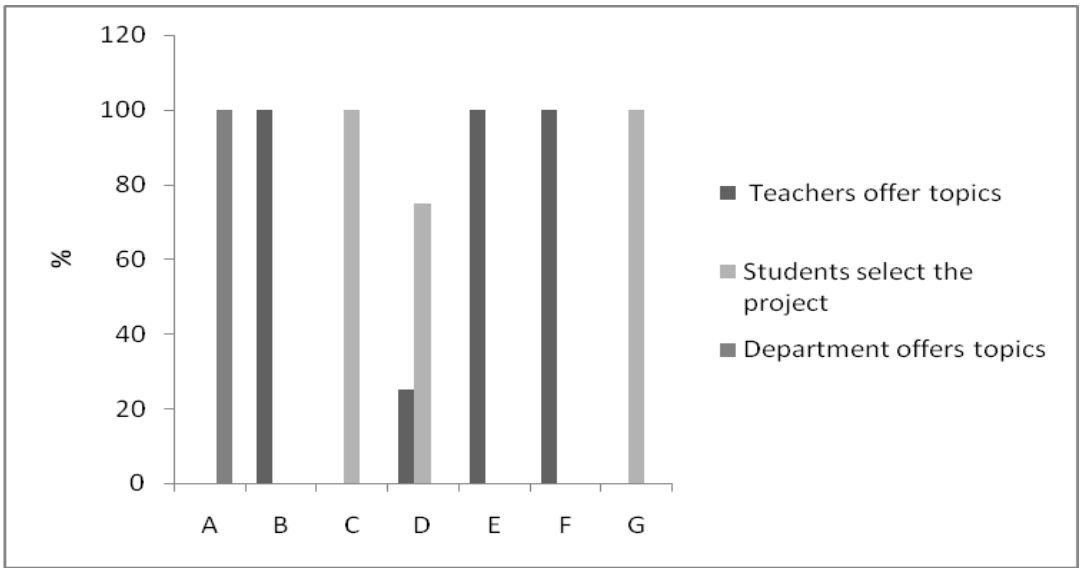

Figure 5.8: Answers of students regarding the ways of selection of the final year dissertation

5.5.2 The subject area of final year dissertations

This section deals with the subject area of the final year dissertation. It is evident from the results that the subjects related to Human Geography ranked first among the topics chosen by students (53.6% of students) followed by subjects of Physical Geography (28.6% of students) while the subjects of Environmental issues were less frequently chosen (17.8%) (Table 5.40). However, there were some exceptions: in the Institution University A the environmental subjects ranked first and Physical Geography subjects ranked

second (45.5% and 36.4% of students respectively), and in the Institution B the Environmental subjects ranked second (33.3% of students) (Table, 5.40).

Table 5.40: Percentage answers of students regarding the subject area of their dissertations

Category	A	B	C	D	E	F	G	Overall
Human Geography	18.2	50	80	58.3	57.1	75	63.6	53.6
Physical Geography	36.4	16.7	20	33.3	28.6	25	27.3	28.6
Environmental issues	45.5	33.3	0.0	8.3	14.3	0.0	9.1	17.8
Total	100	100	100	100	100	100	100	100
No	11	6	5	12	7	4	11	56

These topics did not thoroughly reflect the interest of students. Some students stated that they had wished their dissertations to be related to Environmental issues or Physical Geography, but they knew in advance that they would face the problem of shortage and lack of relevant resources and references needed, therefore they instead chose a subject that was more feasible and with references available in the library.

5.5.3 Difficulties faced by students related to data collection

Students were asked three questions; firstly, whether they had faced problems and difficulties relating to the collection of information during the preparation of their dissertations. The replies to this question revealed that a clear majority of students (89.1%) stated that they had faced problems. The answers given in response to this question were similar among universities, and the highest proportion agreeing with this statement was in the Institution C (100% of students), whereas the relatively low proportion of 81.8% of replies was in the Institution A (Table, 5.41).

Table 5.41: Answers of students as to whether they had faced problems on data collection during the preparation of their dissertations

Category	A	Al-	C	D	E	F	G	Overall
Yes	81.8	83.3	100	91.7	85.7	100	90	89.1
No	18.2	16.7	0.0	8.3	14.3	0.0	10	10.9
Total	100	100	100	100	100	100	100	100
No	11	6	5	11	7	4	11	55

In the second question, students were asked to state the most important difficulties they had experienced in this regard. The category of lack of resources came first with a percentage of 80.9% of students; followed by lack of facilities (9.6%); then lack of cooperation of governmental institutions in providing students the information needed (5.8%) with other unspecified problems being reported by 3.8% of students. The highest percentage answers related to lack of resources were in the Institutions E and the C (100% of students), while the lowest one was in the Institution B (40.4% of students) (Table 5.42).

Table 5.42: Answers of students regarding the kind of difficulties experienced related to their final year dissertations

Category	A	B	C	D	E	F	G	Overall
Lack of resources	81.8	40	100	75	100	75	88.9	80.9
Lack of facilities	9.1	0.0	0.0	16.7	0.0	25	11.1	9.6
Lack of cooperation of Institutions	9.1	20	0.0	8.3	0.0	0.0	0.0	5.8
Others	0.0	40	0.0	0.0	0.0	0.0	0.0	3.8
Total	100	100	100	100	100	100	100	100
No	11	5	5	12	6	4	9	52

The second part of this question was about whether their institution had sorted out the difficulties that the students had faced. Of those who reported that they

had faced difficulties in the preparation of their dissertations, 92.2% stated that their difficulties had not been sorted out by their institutions; while just 7.8% reported that they had been sorted out (Table 5.43).

Table 5.43: Answers of students regarding whether their difficulties related to the final year dissertation had been sorted out by their institution.

Category	A	B	C	D	E	F	G	Overall
Yes	27.3	20	0.0	0.0	0.0	0.0	0.0	7.8
No	72.7	80	100	100	100	100	100	92.2
Total	100	100	100	100	100	100	100	100
No	11	21	5	81	7	4	9	51

5.6 Summary of results from the chapter

This chapter is organized in terms of the four specific research questions posed in Chapter one. The results of the student questionnaire were used to answer the four research questions divided into four general themes: the geography degree courses offered and the modules taught, teaching methods adopted by teachers, the current application of fieldwork, and the final year dissertation. Furthermore students were offered chances to express their viewpoints about these matters.

The significance of the results will be discussed in chapter 8 in the light of other results in chapters 6 and 7. Here, the main conclusions from the present findings are summarized.

5.6.1 The modules taught

a) There was a wish for a range of geography degree courses to be available instead of just one compulsory program.

b) There was noticeable agreement between students that teaching the non-geography modules causes further pressure on them and reduces their degree of attention towards the principal degree modules.

c) Although the number of geography modules in general is appropriate to students, there is nonetheless an excess of modules in some academic years in some universities.

d) There is a unanimous demand from students in relation to the need for offering optional geographical modules to study.

e) Environmental issues are not satisfactorily introduced within the geography modules.

f) Students considered that the geography resources available in most libraries of the institutions are not satisfactory, and even what is available is not up to date.

5.6.2 Teaching methods

a) Just three out of seven institutions have geographical laboratories which are in poor or moderate condition in terms of the equipment, to extent that they do not meet the students' satisfaction.

b) The strategies adopted by teachers across all institutions are restricted to the traditional teaching methods such as the traditional lecture, without the use of other more modern techniques.

c) The descriptive illustrative tools and aids used by teachers do not meet the satisfaction of students, the three predominant kinds used by teachers being: maps, figures & tables, and atlases, while the three kinds most preferred by students are: field trips, experiments, and satellite pictures.

d) Students clearly would like their academic progress to be assessed by teachers by means of doing both controlled exercises and practical classes and coursework assignments.

e) There is a considerable disagreement among students with the way of lecture delivery used by teachers.

f) There is unanimous disagreement from students with regard to the likelihood of their getting a job after their graduation due to the lack of transferable skills gained during their study.

5.6.3 Application of fieldwork

a) Just four out of seven institutions undertake fieldwork for their students, and its application is limited to the final academic year.

b) Student clearly recognized the value of fieldwork in supporting theoretical learning.

c) The current strategies design of fieldwork adopted by institution do not satisfy students' needs in terms of increasing and improving their geographical understanding. Therefore there is a strong demand for fieldwork to be modified.

d) In terms of improving the current strategy of fieldwork, students see it as essential that it is introduced within the curricula from the first academic year;

also that international sites should be visited and that residential fieldwork would be useful in terms of increasing their geographical knowledge. Furthermore they concluded that environmental subjects should be given first priority within its scheme; followed by the physical geography subjects.

5.6.4 Final year dissertation

a) Students in their final academic year wanted their final year dissertation to deal with environmental or physical subjects, but the lack of resources relevant to these subjects has forced the students to select subjects related to human geography instead.

b) A majority of students have faced difficulties related to data collection needed for their dissertation, and the most important of these difficulties is lack of resources. Furthermore, these difficulties have not been sorted out by their institutions.

5.7 General summary

The above summary gives a general overview of results that have been inferred from the overall findings in all institutions; however, many facts cannot be generalized to all institutions as there were notable differences of attitudes and viewpoints of students between one institution and another which implies that the strategy and situation of some aspects of teaching geography varies among institutions. The most common differences that were found were related to the difference in how geography is taught between the old and new established institutions, these differences are summarized below.

1. Results revealed that the extent of embedding of environmental issues within the geography subjects in the old universities is relatively better than in newly established institutions.

2. Results suggested that the extent of availability of books in the libraries of old institutions is relatively better than in the new institutions.

3. The situation and condition of laboratories in the old institutions is relatively better than for new institutions.

4. The practical study concept implemented for some modules in the old institutions is better than that being implemented in the new institutions.

5. The current method used by teachers for assessing the academic progress of students in the old institutions is relatively better than what is being used in the new institutions.

CHAPTER (6): RESULTS OF TEACHERS` QUESTIONNAIRE

6.1 Introduction

This chapter presents the results of the analysis of the teachers' questionnaire. The findings are reported in the following sequence. The first section deals with the findings of the general information statement. The second section presents the findings regarding the course programs offered and modules taught. The third section explores the findings with regard to teaching methods used by teachers. The fourth section sheds light on the findings with reference to the current application of fieldwork.

As mentioned in chapter four only two teachers returned the questionnaire in the Institution A. Therefore the researcher has had to exclude this university and instead replaced it with the G.

6.2 Results of general information

Included here is the analysis of four parts of the questionnaire relating to teachers. Firstly, results are presented relating to personal information such as the gender of teachers, their nationality and their geographical specialization. The second section deals with teachers' qualifications. The third section presents findings regarding teachers' experience. The fourth section focuses on getting the views of teachers with regard to the extent of availability of educational facilities and resources.

6.2.1 Personal information

The purpose of this section was to gain background information about the university teachers who responded to the questionnaire namely their gender, nationality, and their geographical specialization.

The results show that a majority (84.1%) of teachers are male (Table 6.1), with just 15.9% being female. The Institution D actually had a majority (66.7%) of female staff (of those who responded), and the Institution H had 42.9% female, but they were very much the exception (Table 6.1), and the number of individuals involved is quite small, possibly influencing the results.

Table 6.1: Gender of teachers

Category	B	C	D	E	F	G	H	Overall %
Male	100	100	33.3	100	85.7	83.3	57.1	84.1
Female	0.0	0.0	66.7	0.0	14.3	16.7	42.9	15.9
Total	100	100	100	100	100	100	100	100
No	6	7	3	8	7	6	7	44

The second question was about the nationality of teachers. Results revealed that 100% of teachers were of Libyan nationality (Table 6.2), with no variation between institutions.

Table 6.2: Nationalities of teachers

Category	B	C	D	E	F	G	H	Overall %
Libyan	100	100	100	100	100	100	100	100
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100
No	6	7	3	8	7	6	7	44

In response to the question about the specialization of teachers, the results show that approximately half (48.8%) of teachers specialized in the field of Human Geography, followed by the field of Physical Geography (39.3%). The percentage of teachers who specialized in the fields of Environmental Geography and Cartography did not exceed 9.3% and 2.3% respectively. However, it is evident that the results cannot be generalized across all institutions, as the highest percentage of teachers specializing in Physical Geography was in the Institution C followed by Institutions B and H; (71%, 67%, and 42.9% respectively). On the other hand, teachers who specialized in the field of Environmental Geography were concentrated in Institution E (Table 6.3)

Table 6.3: Teachers` specializations

Category	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**Overall %**
Human Geography	16.7	14.3	66.7	75	71.4	40	57.1	48.8
Physical Geography	67.2	71.4	0.0	12.5	14.3	40	42.9	39.3
Environmental Geography	0.0	14.3	33.3	12.5	14.3	20	0.0	9.3
cartography	16.1	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Total	100	100	100	100	100	100	100	100
No	6	7	3	8	7	6	7	44

6.2.2 Teachers` qualifications

Questions in this section focused firstly on which type of qualification teachers held, and its place of obtainment, and secondly about the holding of an English certificate. These teachers were asked to indicate whether they hold any type of an English certification which enables them to read and understand English in a

proper way to derive the geographical information needed for their teaching written in the English language.

In response to the type of teachers` qualifications the results show that 70.5 % of teachers held a master`s degree, while just 29.5% held PhD degrees (Table 6.4). Some variation was observed with regard to this; the proportion of the teachers who held a doctorate was highest in the Institution B (100%), followed by Institution H (57.1%), then Institutions E and C (25% and 14.3% respectively), with none in the other three institutions. The percentage of teachers who hold MSc degrees was notably highest in the Institutions D, F, and G (100%), followed by Institutions C and E (85.7% and 75% receptively) (Table 6.4)

Table 6.4: Teachers' geography qualifications

Category	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**Overall %**
MSc	0.0	85.7	100	75	100	100	42.9	70.5
PhD	100	14.3	0.0	25	0.0	0.0	57.1	29.5
Total	100	100	100	100	100	100	100	100
No.	6	7	3	8	7	6	7	44

With respect to the place where teachers obtained their qualifications, it is clear (Table 6.5) that most teaches had obtained their own certificate from Libya (72.7%) and the majority of those teachers were concentrated in the newly established institutions. For example, 100% of teachers in the Institutions D, G and F, and 85.7% and 75% of teachers in the Institutions C and E, respectively, had obtained their own certificates from one of the local Universities. However,

this situation was completely different in Institution of B where 66.6% of teachers had obtained their own certificates from other countries; 33% from the US, 16.7% from one of the European countries, and 16.7% from Canada (Table 6.5).

Table 6.5: Places 0f obtainment of geography qualifications of teachers

Category	B	C	D	E	F	G	H	Overall
USA	33.3	0.0	0.0	0.0	0.0	0.0	0.0	4.5
UK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
European	16.7	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Arabic	33.3	14.3	0.0	25	0.0	0.0	42.9	18.2
Libya	0.0	85.7	100	75	100	100	57.1	72.7
Others	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Canada	16.7	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Total	100	100	100	100	100	100	100	100
No	6	7	3	8	7	6	7	44

Concerning holding of an English certificate, the replies to this question revealed that a clear majority of teachers (72.2%) stated that they did not hold any type of such certification (Table 6.6). A large majority of those were concentrated in the newly established institutions, such as the Institutions C, D, and F. This can be attributed to the fact that teachers in these institutions obtained their own geography degrees from Libya (see table 6.5) studying their courses in the Arabic Language. By contrast, a significant proportion (83.3%) of teachers in the Institution B stated that they held an English Certificate that enables them to read and understand well, followed by 28.6% of teachers in Institution H and 37.5% of teachers in Institution E (Table 6.6). The high proportion of teachers in the Institution B with an English certificate is probably

related to the high proportion of such staff who obtained their degrees in English speaking countries (Table 6.5)

Table 6.6: Percentage of teachers who hold an English Certificate

Category	B	C	D	E	F	G	H	Overall
Yes	83.3	0.0	0.0	37.5	0.0	33.3	28.6	27.3
No	16.7	100	100	62.5	100	66.7	71.4	72.7
Total	100	100	100	100	100	100	100	100
No	6	7	3	8	7	6	7	44

6.2.3 Teacher Experience

The purpose of this section was to obtain basic important information with regard to teaching experience of teachers. In this context Madsen & Cassidy (2005) point out that teaching experience has an effect on perception of quality of teaching.

In the light of the above fact three issues related to teachers were addressed and discussed regarding their teaching experience which are: length of teaching experience in teaching geography in higher education, attendance at conferences, and publication of papers.

6.2.3.1The length of teacher experience in teaching geography in higher education

Teachers were asked to indicate the length of their experience of teaching geography in higher education. The results indicate that geography teachers in

general mostly lie in the category of less than 5 years experience (68.2% of teachers). However, there was a noticeable variation in the replies (Table 6.7)

It is evident that the Institution B teachers have longer experience in teaching, with half of them in the category of more than 15 years, (50%), as well as a further 33.3% in the range of 10-15 years (Table 6.7). The Institutions C, E and H were the only other institutions with some staff with more than 5 years experience (Table 6.7).

Table 6.7: Length of teacher experience in teaching geography in higher education

Category	**B**	**C**	**D**	**E**	**F**	**G**	**H**	Overall
<5 ys	0.0	71.4	100	75	100	100	42.9	68.2
5-10 ys	16.7	28.6	0.0	12.5	0.0	0.0	42.9	15.9
10-15	33.3	0.0	0.0	12.5	0.0	0.0	14.3	6.8
>15 ys	50	0.0	0.0	0.0	0.0	0.0	0.0	9.1
Total	100	100	100	100	100	100	100	100
No	6	7	3	8	7	6	7	44

6.2.3.2Teachers' attendance at conferences

Teachers were asked to indicate whether they have attended any kind of conference related to geography, and they were also asked to indicate the type of such conferences and the frequency of attendance out of four categories given to them.

In relation to the first part of the question, a large majority of teachers (70.5%) said that they had attended conferences related to geography, while 29.5% said they had not (Table 6.8). There was considerable variation in the answers of

teachers from different institutions; 100% of teachers in the Institutions B, D and H have attended conferences while the high percentage of teachers who answered no was concentrated in the newly established institutions, and was particularly high in the Institution G (83.3%) (Table 6.8).

Table 6.8: Percentage of teachers who had attended conferences

Category	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**Overall**
Yes	100	57.1	100	75	57.1	16.7	100	70.5
No	0.0	42.9	0.0	25	42.9	83.3	0.0	29.5
Total	100	100	100	100	100	100	100	100
No	6	7	3	8	7	6	7	44

The results regarding the types of conferences attended revealed that there was a major difference to the answers given by teachers from the old established institutions on the one hand, and the newly established institutions on the other hand. The highest percentage of teachers who attended International or Arabic conferences was from the Institution B whereas the majority of teachers in the newly established institutions have not attended any International or Arabic conferences (Table 6.9). A high percentage of teachers across all institutions had the chance to attend national conferences, although the number of such conferences attended was usually fairly limited (83.7% had attended 5 conferences or less; Table 6.9)

Table 6.9: The percentage of teachers who attended conferences divided into four categories regarding the frequency of attendance, for each institution separately.

Category		**B**	**C**	**D**	**E**	**F**	**G**	**H**	**Overall**
International conferences	<5 conf	100	0.0	0.0	12.5	14.3	28.6	0.0	19.5
	6-9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	>10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nothing	0.0	100	100	87.5	85.7	71.4	100	80.5
	Total	100	100	100	100	100	100	100	100
	No	4	7	3	8	7	7	6	41
Arabic conferences	<5 conf	100	28.6	0.0	37.5	42.9	28.6	16.7	31.7
	6-9	0.0	0.0	0.0	0.0	0.0	14.3	0.0	2.4
	>10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nothing	0.0.	71.4	100	62.5	57.1	57.1	83.3	65.9
	Total	100	100	100	100	0.0	100	100	100
	No	3	7	3	8	7	7	6	41
National conferences	<5 conf	60	42.9	100	62.5	28.6	57.1	16.7	48.8
	6-9	40	14.3	0.0	0.0	0.0	28.6	0.0	11.6
	>10	0.0	0.0	0.0	12.5	0.0	14.3	0.0	4.7
	Nothing	0.0	42.9	0.0	25	71.4	0.0	83.3	34.9
	Total	100	100	100	100	100	100	100	100
	No	5	7	3	8	7	7	6	43

6.2.3.3Teachers and publication of articles

Teachers were asked to indicate how many times they have published articles in international, Arabic, and national journals. The results show that just 14.6% of teachers have published articles in one of the international journals, and this percentage is not evenly distributed among institutions; 100% of teachers in Institution B have published such articles, 14.3% and 12.5% of teachers in the Institutions F and B, respectively, have also published such articles while teachers in the rest of the institutions have not published any articles in any international journals.

With respect to the publishing of articles in Arabic journals, the results were to a large extent similar with the above results. Only 19% of teachers have published such articles, and in addition this percentage is not distributed evenly among institutions, as 100% of teachers of Al-Fatah University have published such articles, while only 28.6 %, 14.3%, and 12.5% of teachers in institutions H, C, and E, respectively, had done so and no one in the other three institutions had published any articles in such journals (Table 6.10). Some teachers, in all institution F, had published articles in national journals.

Table 6.10: Percentage of teachers who published articles in different type of journals divided into three categories regarding the frequency of publishing, for each institution separately.

Category		B	C	D	E	F	G	H	Overall
International Journal	**<5 p**	100	0.0	0.0	12.5	14.3	0.0	0.0	14.6
	6-9 p	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	>10 p	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nothing	0.0	100	100	87.5	85.7	100	100	85.4
	Total	100	100	100	100	100	100	100	100
	No	4	6	3	8	7	7	6	41
Arabic Journal	**<5 p**	100	14.3	0.0	12.5	0.0	28.6	0.0	19
	6-9 p	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	>10 p	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nothing	0.0	85.7	100	87.5	100	71.4	100	81
	Total	100	100	100	100	100	100	100	100
	No	4	6	3	8	7	7	6	42
National Journal	**<5 p**	60	57.1	33.3	37.5	0.0	28.6	16.7	33.3
	6-9 p	40	0.0	0.0	12.5	0.0	28.6	0.0	11.6
	>10 p	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nothing	0.0	42.9	66.7	50	100	42.9	83.3	55.1
	Total	100	100	100	100	100	100	100	100
	No	5	7	3	8	7	7	6	44

6.2.4 Views of teachers about a number of existing facilities and educational resources

The purpose of this section was to find out the status of working conditions of teachers in their institutions and how they perceive these conditions affecting their job performance and teaching effectiveness. Teachers were asked some questions in terms of the availability and adequacy of some important facilities which are considered the basic things that must be available in the workplace. Accordingly, this section dealt with two important issues, namely the availability

of individual offices for teachers and the extent of computer access that they had. These issues are dealt with separately below.

6.2.4.1Extent of availability of single room offices to teachers

Teachers were asked if they had been provided with their own individual office or whether they used a communal room with other staff. The results (Table 6.11) suggested that 100% of teachers indicated that they did not have their own office, but they had been sitting together in a common room.

A majority of teachers commented that these common rooms did not have proper office facilities that enabled them to keep their own educational things in such rooms and they were not appropriate academic offices. Furthermore, these rooms in some institutions are small and cannot accommodate all the teachers at the same time.

Table 6.11: Percentage responses of teachers to the question about the kind of office they have to use

Category	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**Overall**
Single office	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Common office	100	100	100	100	100	100	100	100
Total	100	100	100	100	100	100	100	100
No	6	7	3	8	7	6	7	44

6.2.4.2Extent of availability of access to computers and the Internet to teachers

As is well known, computers and the internet have rapidly become pervasive in many developed countries, nearly all schools are equipped with the infrastructure to conduct Information and communication technologies (ICT) mediated teaching and learning (Bauer, *et al.*, 2002; Teo, 2008). By contrast, the internet in most of the African countries has not been developed and introduced well in the field of education, due to the telecommunications infrastructure in most African countries lagging far behind that of developed countries (Oyelaran-Oyeyinka, 2003). The purpose of this part of the questionnaire was to investigate to what extent teachers have been provided with access to computers and the internet in their departments by the educational authorities in order to find out how technology was integrated into the curriculum in one particular higher education discipline, as well as in the institution as a whole. Teachers were asked to indicate whether the computers and internet access are available for instructional use or not.

The most notable finding was the limited access to computers in departments with the exception of just two institutions, B and E. Also the results show that 100% of institutions were without internet access either in the departments or in the institutions (Tables 6.12 and 6.13).

Table 6.12: Availability of computers and access to internet in departments

Category		**B**	**C**	**D**	**E**	**F**	**G**	**H**	**Overal l**
Computer in the office or common office in the department	**Yes**	100	0.0	0.0	100	0.0	0.0	0.0	31.8
	No	0.0	100	100	0.0	100	100	100	68.2
	Total	100	100	100	100	100	100	100	100
	No	6	7	3	8	7	6	6	44
Availability of access to internet in the office or the common office in the department	**Yes**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	No	100	100	100	100	100	100	100	100
	Total	100	100	100	100	100	100	100	100
	No	6	7	3	8	7	6	6	44

Table 6.13: Availability of computers and access to internet in the institutions

Category		**B**	**C**	**D**	**E**	**F**	**G**	**H**	Overall
Computer centre in the institutions	**Yes**	83.3	0.0	0.0	0.0	0.0	0.0	0.0	11.4
	No	16.7	100	100	100	100	100	100	88.6
	Total	100	100	100	100	100	100	100	100
	No	6	7	3	8	7	6	6	44
Availability of network centre of internet in the institutions	**Yes**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	No	100	100	100	100	100	100	100	100
	Total	100	100	100	100	100	100	100	100
	No	6	7	3	8	7	6	6	44

This position was elaborated by a number of teachers who provided additional comments in the open section of the questionnaire stating that access to technology tools, such as desktop computers, graphing calculators, software, and connectivity to the Internet, is probably the most obvious necessary component of an educational technology initiative. Teachers should be provided with these tools in order to use them with students, because teachers and

students without access to computers and internet in their university are at an obvious disadvantage for learning to use technology. Furthermore, teachers and students in the developed countries are relying more on internet sources to derive the data needed, which staff and students in Libyan universities are currently unable to do. The following quote illustrate this theme:

"I suggest that there is an urgent need to use technology in the teaching process. It has become an imperative issue nowadays because if we are going to engage our students in the class discussions and the lectures, we need to be doing this engagement with technologies they are familiar with; for example, when students are learning through technology, they are themselves looking for information on the internet and they can make their own decisions regarding the information".

In summary, some of the teachers expressed their frustrations regarding the lack of needed facilities, and they stressed that the extent of availability of facilities has a direct effect on teaching and learning. Poor departmental or institutional conditions make it more difficult for them to deliver adequate education to their students because the facilities are a critical part of the educational process. (These comments given by teachers about this issue also apply to the rest of the facilities such as: laboratory equipment, illustration tools, and data display devices.).

6.3 Views and attitudes of teachers about the course programmes offered and modules taught

The aim of this section is to present results relating to eight issues relevant to the geography course programmes offered and modules taught. Thus, this section seeks to explore the opinions and attitudes of teachers towards the idea of offering several geography courses, the optional modules, teaching non-geography modules, some issues relating to the syllabuses of geography modules taught, the sources of derivation of geography information, the extent of embedding of environmental education within the geography subjects, and the availability of geography resources (books). These issues were organized as follows:

6.3.1 Views of teachers about the proposition of offering several geography degrees courses

In this context, the researcher offered to teachers a set of geography degree course titles adopted from UK universities as possibilities for their establishment in Libyan universities. These courses were divided into six categories, namely: BSc in Geography, Geography and Environmental Management, Physical and Environmental Geography, Environmental Sciences, Human Geography, and all of them. Then, they were asked whether they supported the proposition of the researcher in terms of the possibility and likelihood of creation and establishment of such courses in Libyan universities instead of the one geography course which is implemented now.

It is interesting to note that this proposition produced a high level of agreement on the part of teachers. The majority (88.6%) of teachers supported the proposition of the creation and establishment of several geography degree courses instead of one course, whereas, 11.4% of teachers were against this proposed and opposed this idea (Table 6.14).

Table 6.14: Percentage of teachers who reported their agreement and opposition to the creation of new geography degree courses

Category	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**Overall**
Yes	100	100	100	75	71.4	100	85.7	88.6
No	0.0	0.0	0.0	25	28.6	0.0	14.3	11.4
Total	100	100	100	100	100	100	100	100
No	6	7	3	8	7	6	7	44

Of those who said no, some of them thought that the biggest challenge in establishing such courses would be the need for more staff members in their department, in particular in the subject area of environmental science. In addition, they commented on the lack of facilities needed for its success such as science classrooms, laboratories, teaching aids and so on. Consequently, the establishment of such courses in the light of the current circumstances would be a risk with uncertain results.

Of those who said yes, some of them reported that these courses could be established and achieve great success attracting more students to study, particularly if their essential requirements would be provided which are

necessary and must be in place before these courses were created. The following quote illustrate this theme:

"I think offering diversified geography and environmental programmes in the future in Libyan universities is really a good idea. It gives more flexibility to the current situation of teaching geography such as giving freedom to students to decide early in which field want they to be specialized, and also the environmental courses would develop students' understanding about environmental issues which would enable them to make a contribution in employment as an environmental science practitioner in their own society after their graduation".

In terms of which courses would be most welcomed by teachers, they were asked to circle the one geography degree course which they saw as the most important one to be established. A high proportion (71.8%) of teachers thought that it is possible to establish all of these courses for students to study (Table 6.15). The Geography and Environmental Management degree was the second most important course that teachers preferred to be established, followed by Physical and Environmental Geography (Table 6.15; Figure 6.1). By contrast, the category which was considered least important by teachers was the BSc in Geography, receiving no support by teachers (Table 6.15).

Table 6.15: Percentage of answers of teachers about which are the most important geography courses that could be created

Category	B	C	D	E	F	G	H	Overall
All of them	50	71.4	100	66.7	80	66.7	83.7	71.8
Geography and Environmental Management	0.0	14.3	0.0	16.7	20	16.7	14.3	12.7
Physical and Environmental Geography	16.7	14.3	0.0.	16.7	0.0	16.7	0.0	10.3
Environmental Sciences	16.7	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Human Geography	16.7	0.0	0.0	0.0	0.0	0.0	0.0	2.6
BSc in Geography	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100
No	6	7	3	6	7	6	6	39

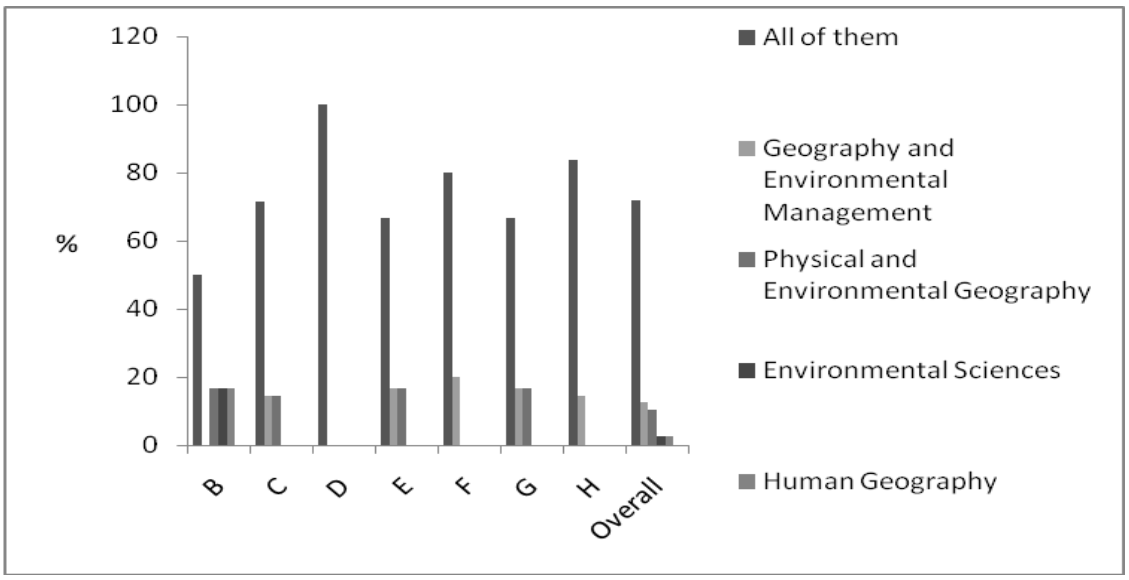

Figure 6.1: Percentage of answers of teachers about the most important geography courses that they would wish to be created.

6.3.2 Views of teachers with regard to the suggestion of offering optional modules

As has been previously mentioned there are no optional geography modules offered to students at present; all modules are compulsory and must be taught to students. Therefore, teachers were asked if they agreed with the suggestion of creating optional modules to be chosen by students in accordance with their academic wishes. Results revealed that the suggestion of offering some optional geography modules for students to study was supported by 61% of teachers, but was opposed by 39% of them (Table 6.16).

Table6. 16: Percentage of answers of teachers about offering optional modules

Category	B	C	D	E	F	G	H	Overall
Yes	100	66.7	66.7	85.7	28.6	50	42.9	61
No	0.0	33.3	33.3	14.3	71.4	30	57.1	39
Total	100	100	100	100	100	100	100	100
No	6	6	3	7	7	6	7	41

Of those who said yes a majority of them indicated that the number of optional modules should not exceed three modules in each academic year. Of those who said no some of them attributed their answer to the fact that the current structure of geography course needs to be restructured before making any new action.

6.3.3 The ways in which the syllabuses of modules taught are chosen

The purpose of this section was to identify the ways whereby the syllabuses and contents of modules are determined by teachers. So, teachers were asked how such contents were specified. A majority (68.2%) of teachers indicated that the syllabuses of their modules have been organized and structured by themselves. A further 29.5% indicated that such syllabuses had been designed by a committee in their own departments, and only 2.3% of teachers said that these syllabuses had been structured by a specific committee in their institutions (Table 6.17).

Table 6.17: The ways of organization and specification of syllabuses of modules

Category	B	C	D	E	F	G	H	Overall
By my self	83.3	100	0.0	100	100	50	42.9	68.2
By committee in dep	16.7	0.0	100	0.0	0.0	33.3	57.1	29.5
By committee in Uni	0.0	0.0	0.0	0.0	0.0	16.7	0.0	2.3
By experts	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100
N	6	7	3	8	7	6	7	44

6.3.4 Attitude of teachers about teaching non-geographical modules

Teachers were asked to indicate their level of agreement or disagreement with the statement that “teaching non-geography modules causes further pressure on students and should be removed”. The results show a wide spread of

opinion a cross all categories with little variation between institutions except for Institution D where more of the (very small) sample of teachers agreed with the statement. Overall 44.2% of teachers disagreed or disagreed strongly with this statement, while 39.6% of teachers expressed their agreement or strong agreement with this statement (Table 6.18). Clearly, there is a major divergence of views in respect of this suggestion.

Table 6.18: Percentage of agreement level of teachers with the statement that "teaching non-geography modules causes further pressure on students and should be removed"

Category	B	C	D	E	F	G	H	Overall
St-ag	33.3	28.6	0.0	50	16.7	33.3	42.9	32.6
Agree	16.7	0.0	0.0	12.5	0.0	16.7	0.0	7
Uncertain	0.0	14.3	33.3	25	16.7	0.0	28.3	16.3
Disagree	50	42.9	66.7	0.0	66.7	16.7	14.3	32.6
St-dis	0.0	14.3	0.0	12.5	0.0	33.3	14.3	11.6
Total	100	100	100	100	100	100	100	100
N	6	7	3	8	7	6	7	43

6.3.5 Views of teachers about adding new geography modules

Teachers were asked whether they think that new geography modules should be added to the existing modules. The answers given in response to this question (Table 6.19) were similar among teachers across all institutions, where 88.6% of teachers said that there is a need to add new modules, while 9.1% said no. The response 'don`t know' was just 2.3% on this issue.

Table 6.19: Percentage of teachers' answers about adding new geography modules

Category	B	C	D	E	F	G	H	Overall
Yes	100	85.7	100	87.5	71.4	83.3	100	88.6
No	0.0	14.3	0.0	12.5	14.3	16.7	0.0	9.1
I do not know	0.0	0.0	0.0	0.0	14.3	0.0	0.0	2.3
Total	100	100	100	100	100	100	100	100
No	6	7	3	8	7	6	7	44

Those who said yes accounted for their answers by saying that many geography departments across the world have introduced new geography modules especially related to environmental issues. Those teachers named a number of such modules that should be added, chief among which were: Libyan Environmental problems, Climate Change, Key Skills in Geography, Environmental Conservation, Land Use Management, Environmental Hazards and Disasters, GIS, Effective Learning Skills, Environmental Degradation, and Maps and Map Making.

Of those who said No, some of them gave the reason "because adding new modules will cause further pressure on students and this act should not be done unless the educational authorities reconsider the existing modules taught particularly the non-geographical modules".

6.3.6 Attitude of teachers about the syllabuses of their modules

Teachers were asked to indicate their level of agreement or disagreement with the statement that "the syllabuses and contents of your taught modules are satisfactory as far as you are concerned in terms of providing students with the

information needed". The results show (Table 6.20) that 69.8% of teachers agreed or strongly agreed that they were satisfied with such syllabuses indicating that they had done their best to gather the information needed relying on the existing sources of information that were available to them. However 16.3% of teachers expressed their disagreement or strong disagreement with this statement, indicating that the lack of information sources was the biggest challenge facing them in gathering sufficient and proper information needed (Table 6.20).

Table 6.20: Percentage agreement level of teachers with the statement that "the syllabuses and contents of your taught modules are satisfactory as far as you are concerned in terms of providing students with the information needed".

Category	B	C	D	E	F	G	H	Overall
St-ag	33.3	42.9	33.3	12.5	33.3	16.7	14.3	18.6
Agree	50	0.0	66.7	87.5	33.3	33.3	42.9	51.2
Uncertain	16.7	28.6	0.0	0.0	16.7	16.7	14.3	14.3
Disagree	0.0.	28.6	0.0	0.0	0.0	16.7	14.3	9.3
St-dis	0.0	0.0	0.0	0.0	16.7	16.7	14.3	7
Total	100	100	100	100	100	100	100	100
N	6	7	3	8	7	6	7	43

6.3.7 Attitudes of teachers about environmental issues that are currently integrated in modules

The purpose of this theme was to find out to what extent teachers think that environmental issues are integrated within the current geography modules. Accordingly, teachers were asked to indicate their agreement or disagreement with the statement that "environmental issues are satisfactorily integrated into geography modules currently taught". The results show that 42.9% of teachers agreed or strongly agreed with this statement, while 30.9% of them expressed

their disagreement or strong disagreement, and the option of ‘uncertain’ was ranked by 26.2% of teachers (Table 6.21).

Table 6.21: Percentage agreement level of teachers with the statement that “environmental issues are satisfactorily integrated into geography modules currently taught”

Category	B	C	D	E	F	G	H	Overall
St-ag	20	14.3	0.0	12.5	33.3	16.7	0.0	14.3
Agree	20	28.6	0.0	25	33.3	33.3	42.9	28.6
Uncertain	40	0.0	0.0	62.5	0.0	33.3	14.3	26.2
Disagree	0.0	42.9	66.7	0.0	33.3	16.7	0.0	19
St-dis	40	0.0	33.3	0.0	0.0	0.0	42.9	11.9
Total	100	100	100	100	100	100	100	100
N	5	7	3	8	7	6	7	44

Further important comments and explanations with regard to this theme were identified by teachers; for example some of them indicated that pollution geography includes subjects related to the pollution problem and other environmental issues cannot be integrated with this module, and this comment also applies to other environmental modules such as the geography of dry lands, and so on.

Those who expressed their disagreement or strong disagreement reported that most of the environmental issues are taught within a module named “Environmental Problems” which can not cover and include all the current environmental issues which have arisen in recent years. For example the climate change problem and global warming cannot be taught to students within one section of one module. Therefore such a module should be divided into several modules in order to include further and more environmental issues and more detail on those already included.

6.3.8 The sources of derivation of geography information

The purpose of this section was to find out which kind of sources teachers rely on to derive the geography information needed for their subject, and to what extent it differs among teachers across institutions. Teachers were asked to indicate which kind of sources they have been adopting and circle the extent of this adoption using three different categories given to them. The results (Table 6.22) show that: Arabic books, Libyan books, Arabic journals, National journals, and own research were considered the most important sources of information adopted by teachers with percentages of 79.1%, 78%,, 41.2%, 33.3, and 27.9% respectively. By contrast, 7.1% of teachers said that they have been adopting papers from international journals, 2.4% from English books, and also 2.4% from European books and those responses were concentrated in the Institution B where staff often held English certificates (see section 6.1.2).

Table 6.22: The kind of resources adopted by teachers to derive the geography information of their modules taught

Category		B	C	D	E	F	G	H	Overall
Libyan books	**adopted**	100	71.4	100	100	42.9	71.4	75	78
	Not adopted	0.0	0.0	0.0	0.0	28.6	14.3	0.0	7.3
	somewhat	0.0	28.6	0.0	0.0	28.6	14.3	25	14.3
	Total	100	100	100	100	100	100	100	100
	No	6	7	3	8	7	7	6	41
Arabic Books	**adopted**	80	85.7	100	75	100	85.7	33.3	79.1
	Not adopted	20	0.0	0.0	25	0.0	0.0	50	14
	somewhat	0.0	14.3	0.0	0.0	0.0	14.3	16.7	7
	Total	100	100	100	100	100	100	100	100
	No	6	7	3	8	7	7	6	43
English Books	**adopted**	50	0.0	0.0	0.0	0.0	14.3	16.7	2.4
	Not adopted	25	100	100	100	100	71.4	83.3	92.9
	somewhat	25	0.0	0.0	0.0	0.0	14.3	0.0	4.8
	Total	100	100	100	100	100	100	100	100
	No	6	7	3	8	7	7	6	42
European Books	**adopted**	25	0.0	0.0	0.0	0.0	0.0	0.0	2.5
	Not adopted	75	100	66.7	100	100	100	100	95
	somewhat	0.0	0.0	33.3	0.0	0.0	0.0	0.0	2.5
	Total	100	100	100	100	100	100	100	100
	No	6	7	3	8	7	7	6	40
National Journal	**adopted**	80	33.3	0.0	62.5	14.3	0.0	33.3	33.3
	Not adopted	20	33.3	66.7	37.5	85.7	85.7	33.3	52.4
	somewhat	0.0	33.3	33.3	0.0	0.0	0.0	33. 3	24.3
	Total	100	100	100	100	100	100	100	100
	No	6	6	3	8	7	7	6	42
Arabic Journal	**adopted**	80	28.6	66.7	50	14.3	42.9	33.3	41.9
	Not adopted	20	42.9	33.3	50	71.4	42.9	33.3	44.2
	somewhat	0.0	28.6	0.0	0.0	14.3	14.3	33.3	14
	Total	100	100	100	100	100	100	100	100
	No	5	7	3	8	7	7	6	43
International Journal	**adopted**	40	0.0	0.0	0.0	0.0	0.0	0.0	7.1
	Not adopted	60	100	100	100	85.7	100	83.3	83.3
	somewhat	0.0	0.0	0.0	0.0	14.3	0.0	16.7	9.5
	Total	100	100	100	100	100	100	100	100
	No	5	6	3	8	7	7	6	42
Own Research	**adopted**	40	28.6	0.0	50	14.3	28.6	16.7	27.9
	Not adopted	60	42.9	100	50	85.7	57.1	33.3	58.1
	somewhat	0.0	28.6	0.0	0.0	0.0	0.0	50	14
	Total	100	100	100	100	100	100	100	100
	No	5	7	3	8	7	7	6	43

A range of views were expressed by teachers with regard to using international journals as a source for getting the information needed, indicating that the lack of electronic resources whereby the latest information can be got from the international journals was considered a sorry matter because teachers were unable to trace and follow up what is new information in the field of education and geography, which would subsequently affect the quality of information presented to students. If these sources were available to teachers they might be able to present better and more up to date information to students.

6.3.9 Attitudes of teachers regarding the extent of availability of books in the library

Regarding this theme, teachers were asked to indicate their level of agreement or disagreement with the statement that “the existing books that are available in the library are satisfactory for you in terms of being up to date and of their richness of geographic information needed for your modules that you teach to students”. The opinions of teachers towards this statement are shown in Table 6.23. Results suggest that a majority (73.8%) of teachers expressed disagreement or strong disagreement with this statement. The institutions G, F, and E had the highest level of disagreement or strong disagreement, with proportions 83.3%, 83.3%, and 87.5% respectively of teachers. A small proportion (11.9%) of teachers agreed or agreed strongly with this statement, which were found in just four institutions (Table 6.23).

Table 6.23: Percentage agreement level of teachers with the statement that "the existing books that are available in the library are satisfactory for you in terms of being up to date and of their richness of geographic information needed for your modules that you teach to students"

Category	B	C	D	E	F	G	H	Overall
St-ag	20	28.6	0.0	0.0	16.7	0.0.	0.0	9.5
Agree	0.0	0.0	0.0	0.0	0.0	0.0	14.3	2.4
Uncertain	20	14.3	33.3	12.5	0.0	16.7	14.3	14.3
Disagree	60	28.6	0.0	50	33.3	33.3	42.9	38.1
St-dis	0.0	28.6	66.7	37.5	50	50	28.6	35.7
Total	100	100	100	100	100	100	100	100
N	5	7	3	8	7	6	7	42

It would appear from these results that further action should be taken by educational authorities to provide the libraries with the books needed. This could be achieved by signing agreements with the Arabic and international publishing houses to gain the latest up to date geography books. Furthermore, encouraging and supporting the translation process of geographical publications written in the English language into the Arabic language, as some teachers suggested, would be very helpful.

6.4 Views and attitudes of teachers about the teaching methods and geography course programs

This section presents the results of the teachers' questionnaire in terms of their attitudes and opinions with regard to several issues related to teaching methods used by them. The first section deals with several issues relating to the laboratory in terms of its availability in each institution, its condition, and the extent of availability of equipment. The second section looks at the findings with regard to presentation of lectures. The section three sheds light on the current

application of practical study. The section four focuses on the methods used for assessing students. Section five provides findings regarding using feedback questionnaires. Finally, section six explores findings related to the implementation of the designation of personal tutors

6.4.1 Views and attitudes of teachers about the existing laboratory

To investigate the current condition and status of labs, teachers were asked to indicate whether there was missing equipment in the lab or not. Results show that 100% of teachers whose institutions had labs answered yes (Table 6.24).

Table 6.24: Percentage of teachers' responses regarding whether equipment was missing in the geographical laboratory, for the two institutions that have such a laboratory

Category	B	D	Overall
Yes	100	100	100
No	0.0	0.0	0.0
I do not know	0.0	0.0	0.0
Total	100	100	100
No	4	3	7

Teachers were asked to indicate their agreement or disagreement level with the statement that "the condition and status of existing laboratories is satisfactory to teachers in supporting the theoretical study in a proper way". Results revealed that 100% of teachers disagreed or disagreed strongly that the conditions and statues of the present existing laboratories satisfactorily contribute in supporting the theoretical concept, and they also stated that this problem can be effectively tackled only if the university creates modern laboratories (Table 6.25).

Table 6.25: Percentage agreement level of teachers with the statement that "the condition and statues of existing laboratories is satisfactory to teachers in supporting the theoretical study in a proper way"

Category	B	D	Overall
St-ag	0.0	0.0	0.0
Agree	0.0	0.0	0.0
Uncertain	0.0	0.0	0.0
Disagree	50	0.0	33.3
St-dis	50	100	66.7
Total	100	0.0.	100
N	6	3	9

In this regard, a majority of teachers stated that due to the fact that modern teaching methods must be used in teaching geography, they have asked their institutions to establish a modern science laboratory, and improve the existing laboratories by providing them with equipment needed. Furthermore, some of them expressed the view that the departments of geography across Libyan Institutions should be given equal opportunity in terms of facilities needed with that granted and accorded the other vocational departments such as engineering departments. In addition, some teachers expressed their dissatisfaction about the non-use of practical classes as a modern teaching method which should enable students to gain appropriate knowledge due to lack of sufficient and adequate laboratories.

Some teachers stated that they were aware of the need and importance of application of practical study in supporting the theoretical concepts, but the problem lies in the lack of laboratories and the shortage of equipment, because the establishment of laboratories and providing the required equipment involves a considerable cost and the geography department could not afford its financial

costs due to the absence of its own budget. Thus, if such an independent budget did exist for each department it would be possible to do that.

6.4.2 Information from teachers on tools of presentation of lectures

This part of the questionnaire was designed to explore the ways whereby the lecture was presented to students in the classroom, by asking teachers to indicate the extent of their use of four presentation tools in the classroom namely: projector device (to show transparencies), white board, chalkboard, and data projection device (to present PowerPoint slides). The results of this question (Table 6.26) revealed that the most common and frequently used tool by teachers in presenting the lecture was the chalkboard (by 88% of teachers), then the use of a whiteboard by 59% of teachers. A PowerPoint supported lecture was adopted by only 4.5% of teachers due to the lack of the data projection device which 90.9% of teachers stated was not available at all, and this also applied to the use of a slide projector which was used by only 6.8% of teachers, 84.1% of whom reported that it was not available at all.

Table 6.26: The tools for presentation of lecture used by teachers

Category		B	C	D	E	F	G	H	Overall
Using projector device	**Used frequently**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	occasionally	50	0.0	0.0	0.0	0.0	0.0.	0.0	6.8
	Not available	33.3	100	0.0	100	100	100	100	84.1
	Available but not used	16.7	0.0	100	0.0	0.0	0.0	0.0	9.1
	Total	100	100	100	100	100	100	100	100
Using white board	**Used Frequently**	16.7	0.0	100	100	100	100	0.0	59.1
	occasionally	50	0.0	0.0	0.0	0.0	0.0	0.0	6.8
	Not available	0.0	100	0.0	0.0	0.0	0.0	100	29.5
	Available but not used	33.3	0.0	0.0	0.0	0.0	0.0	0.0	4.5
	Total	100	100	100	100	100	100	100	100
Using chalk board	**Used frequently**	66.7	100	0.0	100	100	100	100	88.6
	occasionally	33.3	0.0	100	0.0	0.0	0.0	0.0	11.4
	Not available	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Available but not used	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	100	100	100	100	100	100	100	100
Data show device for using (PowerPoint lecture)	**Used frequently**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	occasionally	33.3	0.0	0.0	0.0	0.0	0.0	0.0	4.5
	Not available	33.3	100	100	100	100	100	100	90.9
	Available but not used	33.3	0.0	0.0	0.0	0.0	0.0	0.0	4.5
	Total	100	100	100	100	100	100	100	100
	No	6	7	3	8	7	7	6	44

Teachers in Libyan institutions who know and recognize the utility of use of data projection devices to present PowerPoint slides stated that such devices should be available in all institutions because this method of presenting the lecture can enhance the teaching and learning experience for both staff and students, and

provide encouragement and support to staff by facilitating the structuring of a presentation in a professional manner.

Further comments given by those who either use chalkboard or the white board indicated that the use of such tools did not give as convincing a presentation for either students or teachers due to their use in the teaching process wasting the teaching time.

It would appear from these results and in the light of teachers` comments that efforts should be made to equip the classrooms with modern devices that can be used in presenting lectures especially the data projection devices which enable teachers to present PowerPoint slides in a lecture.

It should be noted from the results that the problem for Libyan teachers in terms of use of the data display devices did not lie in that teachers did not like to use them, but the most important challenge facing them was the lack of such devices and the science classrooms in their institutions.

6.4.3 The ways of lecture delivery

The purpose of this section was in find out how teachers delivered their lecture to students. Teachers were asked to circle the most common way such delivery was performed from four categories. The results (Table 6.27) show that the

common way for delivering the lecture to students was the method of 'dictating the lecture to students' which was adopted by 56.8% of teachers; the highest percentage of teachers who adopted it was found in the Institution G (85.7%), while the lowest such percentage was found in the Institution B (16.7%). The concept of this method is that the teacher explains in detail his lecture and then for a certain time afterwards he dictates it to the students to be written in their notes. The second common method was that of 'writing by points', the concept of this method is that the teacher explains in detail his lecture and while this is happening students are writing down its main points, and this was adopted by 25% of teachers. The third method which was adopted by 18.2% of teachers was the method of '**c**ollecting photocopies from shops' and the concept of this method is that the teacher explains the lecture in detail to students and then they have to buy photocopies of the lecture from a shop (Table 6.27). No teachers reported using a university website to get material to students.

Table 6.27: Percentage of teachers answers about the way of lecture delivery

Category	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**Overall**
By dictating the lecture to students	16.7	71.4	66.7	25	85.7	83.3	57.1	56.8
By writing points	50	14.3	33.3	50	0.0	16.7	14.3	25
Collecting photocopies from shops	33.3	14.3	0.0	25	14.3	0.0	28.6	18.2
From university website	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100
No	6	7	3	8	7	6	7	44

6.4.4 Information from teachers about the methods used to assess students' progress

Two questions were asked of teachers, the first one was to indicate which methods they have been using to assess the academic progress of students. The second one was to indicate their agreement or disagreement level with the statement that "the methods of assessment of students' progress used by you are satisfactory to you in reflecting the academic level of students"

As for the first question, the results revealed that the predominant method of student assessment adopted by teachers was the method of an exam which was adopted by 83.8% of teachers. Just 14.2% of teachers adopted the use of both the method of examination with assignments, and no other methods were used at all (Table 6.28).

Table 6.28: Percentage of teachers answer about assessment methods of students' progress

Category	B	C	D	E	F	G	H	Overall
Exam	66.7	85.7	100	87.5	85.7	100	75	85.8
Exam & Assignments	33.3	14.3	0.0	12.5	14.3	0.0	25	14.2
Practical class	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Assignments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exam &Practical class	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Assignments &Practical	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All of them	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total		100	100	100	100	100	100	100
No	6	6	3	8	7	6	6	37

Regarding the second question, 45.5 % of teachers agreed with this statement and another 11.4% strongly agreed. This high level of agreement might be

related partly to teachers who adopt both the exam and assignments methods. On the other hand, 18.1% of teachers expressed their disagreement or strong disagreement with this statement, indicating that a variety of assessment approaches of students' progress should be used and adopted by them to gain a clearer picture regarding the academic progress of students (Table 6.29).

Table 6.29: Level of agreement of teachers with the statement that "the methods of assessment of students' progress used by you are satisfactory to you to reflect the academic level of students"

Category	B	C	D	E	F	G	H	Overall
St-ag	33.3	0.0	0.0	0.0	14.3	0.0	28.6	11.4
Agree	66.6	57.1	33.3	75	42.9	16.7	42.9	45.5
Uncertain	16.7	0.0	33.3	12.5	14.3	66.7	14.3	25
Disagree	16.7	0.0	33.3	12.5	28.6	16.7	0.0.	13.6
St-dis	0.0	14.3	0.0	0.0	0.0	0.0	14.3	4.5
Total	100	100	100	100	100	100	100	100
N	6	7	3	8	7	6	7	44

6.4.5 Attitudes of teachers about the current application of practical study

The purpose of this theme was to find out teachers' views on the importance of application of practical study in supporting the theoretical study in Geomorphology and Physical Geography, and also to identify teachers` attitudes towards the current application of practical study to the aforementioned modules. Accordingly, teachers were asked to indicate their agreement or disagreement level with relevant statements, given in the legends to Tables 6.30 to 6.33.

In respect of the application of practical study to support theory in Geomorphology, the results show that all teachers (100%) agreed or agreed strongly with this statement, (Table, 6.30), and they did so as well for Physical Geography (Table 6.31).

Table 6.30: Level of agreement of teachers with the statement that "application of practical study is very important and a vital aspect in supporting the theoretical studies of Geomorphology"

Category	B	C	D	E	F	G	H	Overall
St-ag	33.3	57.1	33.3	37.5	42.9	60	50	45.2
Agree	66.7	42.9	66.7	62.5	57.1	40	50	54.8
Uncertain	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Disagree	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St-dis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100
N	6	7	3	8	7	6	7	42

Table 6.31: Level of agreement of teachers with the statement that "application of practical study is very important and a vital in supporting the theoretical studies of Physical Geography"

Category	B	C	D	E	F	G	H	Overall
St-ag	33.3	57.1	66.7	62.5	71.4	60	71.4	61.9
Agree	66.7	42.9	33.3	37.5	28.6	40	28.6	38.1
Uncertain	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Disagree	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St-dis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100
N	6	7	3	8	7	6	7	42

Regarding the question about current practical studies, nearly two-thirds (61.9%) of teachers expressed their disagreement or strong disagreement with the current level of application of practical study to Geomorphology while only 23.8% of teachers expressed their agreement or strong agreement with this

statement, a majority of them concentrated in the Institution B where 66.6% of their teachers agreed or agreed strongly with this statement (Table 6.32).

Table 6.32: Level of agreement of teachers with the statement that "the current application of practical to Geomorphology is sufficient in supporting the theoretical studies"

Category	B	C	D	E	F	G	H	Overall
St-ag	33.3	0.0	33.3	0.0	14.3	0.0	0.0	7.1
Agree	33.3	14.3	0.0	25	0.0	0.0	16.7	16.7
Uncertain	0.0	14.3	0.0	25	0.0	20	33.3	14.3
Disagree	33.3	28.6	0.0	37.5	42.9	0.0	16.7	26.2
St-dis	0.0	42.9	66.7	12.5	42.9	80	33.3	35.7
Total	100	100	100	100	100	100	100	100
N	6	7	3	8	7	6	7	42

As for the second module (Physical Geography) the results show (Table 6.33) similar results towards the current application of practical study for this module as for the module of Geomorphology. The same exception can be observed here where 88.8% of teachers in the Institution B expressed their agreement or strong agreement level with this statement, which might be attributable to the availability of a good laboratory in this institution (Table 6.33)

Table 6.33: Level of agreement of teachers with the statement that "the current application of practical to Physical Geography is sufficient in supporting the theoretical studies"

Category	B	C	D	E	F	G	H	Overall
St-ag	50	0.0.	33.3	12.5	0.0	20	0.0	11.9
Agree	33.3	14.3	0.0	37.5	14.3	0.0	0.0	19
Uncertain	0.0	14.3	33.3	0.0	14.3	0.0	33.3	11.9
Disagree	0.0	14.3	33.3	25	28.6	0.0	33.3	19
St-dis	16.7	57.1	0.0	25	42.9	80	33.3	38.1
Total	100	100	100	100	100	100	100	100
N	6	7	3	8	7	6	6	42

6.4.6 Teachers views on the use of feedback questionnaires

As is well known the evaluation of higher education teaching continues to rely heavily on student evaluation and it is widely used in higher education (Kember *et al.,* 2002). It is considered as a reliable measure of teaching and it can be used to improve the teaching of teachers (Algozzine *et al.,* 2004; Yao & Grady, 2005). Furthermore, it has in fact been widespread in the higher education institutions in many countries (Spooren *el al.,* 2000). Rovai *et al.* (2005) point out that student evaluation of teaching (SET) forms typically consist of a series of open- and close-ended questions concerning course content and teaching effectiveness that are completed by students anonymously at the end of the term without the faculty member's presence.

In the light of the desire for seeking evaluation of modules and courses from students by questionnaire feedback, the purpose of this question was to find out the extent of use of this procedure in Libyan institutions. Teachers were asked to indicate whether they gave out feedback questionnaires to students in order for their teaching to be evaluated by them.

The results suggested that teachers have not been using this system at all in any of the institutions (100% negative replies) (Table 6.34).

Table 6.34: Percentage of teachers responding on the use of feedback questionnaires

Category	B	C	D	E	F	G	H	Overall
yes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No	100	100	100	100	100	100	100	100
Some tomes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100
No	7	7	3	8	7	6	7	44

The most common problem mentioned by those who said ‘no’ was that they have not ever been asked by their institutions to implement this procedure, and it is not known in Libyan higher education institutions.

6.4.7 Teachers views on the implementation of the concept of Personal Tutors in geography teaching

As is well known, a personal tutor has a fundamental part of the academic role in developing the students’ understanding by monitoring and developing a mix of academic and pastoral view points on the progress of students (Hughes, 2004; Rhodes & Jinks 2005). Accordingly, the purpose of this section was to identify to what extent students were given such pastoral care and attention during their academic year. Therefore, teachers were asked to indicate whether they have been appointed as a personal tutor to a group of students or not. Results indicated that none has been appointed as a personal tutor (Table 6.35).

Table 6.35: Percentages of teachers who have or have not been appointed as a personal tutor to students

Category	B	C	D	E	F	G	H	Overall
Yes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No	100	100	100	100	100	100	100	100
Total	100	100	100	100	100	100	100	100
N	6	7	3	8	7	6	7	44

Some of them stated that appointment of a tutor for each group of students to monitor their academic matters should be adopted, since it will be very important for students to avoid many problems that could face them during their academic year.

6.5 Views and attitudes of teachers to the current application of fieldwork

Issues related to the current application of fieldwork were discussed in the previous chapter within the results of the students' questionnaire. Here, four important issues within this theme will be explored from the teachers' perspective in the following.

6.5.1 Attitudes of teachers with regard to the current strategy of application of fieldwork

The purpose of this theme was to identify the attitude of teachers regarding the current strategy of application of fieldwork. Accordingly, teachers were asked to identify their level of agreement or disagreement with the statement that "the

current strategy of application of fieldwork is sufficient in terms of providing students with geography knowledge in a proper way".

As can be seen from the results (Table 6.36) the majority (81%) of teachers did not see the current strategy and programs of fieldwork as being effective and just 11% of teachers agreed or agreed strongly that the current strategies were effective and this support came from just two institutions; B and E, particularly the former.

On the other hand, the highest percentage of disagreement or (100% strong disagreement) was found in the Institution D (Table 6.36)

Table 6.36: Level of agreements of teachers with the statement that "the current strategy of application of fieldwork is sufficient in terms of providing students with geography knowledge in a proper way"

Category	B	C	D	E	F	G	Overall
St-ag	33.3	0.0	0.0	12.5	0.0	0.0	8.1
Agree	16.7	0.0	0.0	0.0	0.0	0.0	2.7
Uncertain	0.0	0.0	0.0	12.5	14.3	16.7	8.1
Disagree	50	28.6	0.0	62.5	57.1	66.7	45.9
St-dis	0.0	71.4	100	12.5	28.6	16.7	35.1
Total	0.0	100	100	100	100	100	100
N	6	7	3	8	7	6	37

6.5.2 Viewpoints of teachers regarding reform of the fieldwork program

The aim of this part was to explore the attitudes and views of teachers with regard to three issues that can improve the effectiveness of the current strategy of fieldwork. These issues are outlined below.

6.5.2.1 Importance of the application of fieldwork from the first academic year

Teachers were asked to indicate their level of agreement or disagreement with the statement that “fieldwork should be implemented from the early academic years”. Clearly teachers overwhelmingly supported the idea of introducing the application of fieldwork from the early academic years, where 97.7% indicated their strong agreement or agreement with this statement, and stated that this procedure would be very valuable in developing the geography knowledge of students (Table 6.37)

Table 6.37: Level of agreements of teachers with the statement that “fieldwork should be implemented from the early academic years”

Category	B	C	D	E	F	G	H	Overall
St-ag	83.3	71.4	66.7	62.5	57.1	66.7	57.1	65.9
Agree	16.7	14.3	33.3	37.5	42.9	33.3	42.9	31.8
Uncertain	0.0	14.3	0.0	0.0	0.0	0.0	0.0	2.3
Disagree	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St-dis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100
N	6	7	7	8	7	6	7	44

6.5.2.2 Viewpoints of teachers regarding the most important issues in the application of fieldwork

Teachers were asked to circle one of four issues that they would like to be given priority within the fieldwork agenda from a list consisting of four categories namely: Physical geography issues, issues relating to Human geography, Environmental issues, and all of them.

The results in Table 6.38 indicate that 70.4% of teachers said that issues related to Physical Geography should be given first priority within the fieldwork scheme, indicating that these issues cannot be understood by students unless they are supported by the application of fieldwork. Whereas, 40.6% of teachers gave the environmental issues first priority indicating that the country faces a number of environmental problems which should be realized by students; chief among which are desertification and drought, pollution problems, and land degradation problems. Only 18.4% reported that all such issues should be given an equal priority. On the other hand none gave the issues related to human geography the first priority (Table 6.38)

Table 6.38: Rating of teachers to the most important issues that must be given priority within the fieldwork plan

Category	B	C	D	E	F	G	H	Overall
Issues of Physical geography	0.0	28.6	66.7	25	42.9	50	71.4	40.7
Environmental issues	33.3	57.1	33.3	75	57.1	0.0	28.6	40.6
All of them	66.7	14.3	0.0	0.0	0.0	50	0.0	18.2
Issues relating to Human geography	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	0.0	100	100	100	100	100	100
N	6	0.0	7	8	7	6	7	44

6.5.2.3Attitude of teachers to the suggestion of visiting international places in the final academic year

Teachers were asked to indicate their level of agreement or disagreement level with the statement that “visiting an international place within the application of field work in the final year should be adopted to increase the geography knowledge of students”. Results revealed that an overwhelming majority of the

teachers (93.8%) expressed their agreement or strong agreement level with this statement indicating that such application enriches the geography knowledge of students and provides them with information needed for their final year dissertation. Only 4.4% of teachers expressed their strong disagreement (Table 6.39)

Table 6.39: Level of agreements of teachers with the statement that "visit an international place within the application of field work in the final year should be adopted to increase the geography knowledge of students"

Category	B	C	D	E	F	G	H	Overall
St-ag	83.3	57.1	100	50	71.4	33.3	57.1	64.6
Agree	16.7	42.9	0.0	37.5	28.6	50	28.6	29.2
Uncertain	0.0	0.0	0.0	12.5	0.0	0.0	0.0	1.8
Disagree	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
St-dis	0.0	0.0	0.0	0.0	0.0	16.7	14.3	4.4
Total	100	100	100	100	100	100	100	100
N	6	7	3	8	7	6	7	41

6.6 Views of teachers with regard to the final year dissertation

Important issues with regard to this theme were discussed in the previous chapter. So, only one question was asked to teachers. They were asked if any institution has asked the university or the department about the results from dissertations in order to make use of them. All teachers reported that they have not been asked by any one of the governmental institutions or bodies for information relating to any students' dissertation (Table 6.40).

Table 6.40: Percentage of teachers' answers with the question that "if any institution has asked the university or the department about the results from dissertations in order to make use of them"

Category	B	C	D	E	F	G	H	Overall
Yes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No	100	100	100	100	100	100	100	100
I do not know	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100	100	100	100	100	100	100	100
N	6	7	3	8	7	6	7	44

The above answer might be attributed to the lack of relationship between the higher education institutions and governmental institutions as some teachers commented on and as has been mentioned in Chapter 2.

6.7 Summary of findings

This chapter is organized in terms of the nine specific research objectives posed in Chapter one. The results of the questionnaire teachers' perceptions were used to answer the nine research questions with regard to the general important information, modules taught, teaching methods adopted by teachers, the current application of fieldwork, and the final year dissertation. The questionnaire was designed to cover as much as possible the aforementioned four key elements. Furthermore lecturers were offered chances to express their viewpoints in this concern.

Through answers to the questionnaire from teachers it is clear that they had significant viewpoints which must be considered by the educational planners in Libya. Looking at the results many general observations can be made.

6.7.1 Part one (general information)

a) All teachers across all institutions are of Libyan Nationality

b) Approximately half of teachers are specializing in Human Geography and more than two-thirds in Physical Geography. Only 2.3% specialized in Environmental Geography.

c) Almost three quarters of teachers hold a Master`s degrees, while just one-quarter hold PhD degrees and a majority of those are concentrated in the Institution B, followed by the Institution H. On the other hand a round three-quarter of teachers have obtained their own geography qualification from one of the Libyan universities and those were concentrated in the newly established institutions. By contrast around half of teachers of Institution B have obtained their qualifications from the US or one of the European countries.

d) Almost three quarters of teachers do not hold an English qualification that enables them to read and understand English, while one-quarter of them do hold such a qualification.

e) As for the length of experience in teaching geography, more than two-thirds of teachers have less than five years of experience in teaching and an overwhelming majority of those were concentrated in the newly established institutions. By contrast the large majority of teachers who have between 5 to more than 20 years of experience in teaching were concentrated firstly in the Institution B, and secondly in Institution H.

f) Regarding the conferences attended by teachers, around two-thirds of teachers have attended national conferences. By contrast just one-fifth of them

have attended international conferences, and almost one-third Arabic conferences, and such attendance was by staff concentrated firstly in the Institution B, and secondly in Institution H.

g) With respect to articles published by teachers, less than one-fifth of teachers have published up to five articles in international journals and those were entirely from the Institution B, while a large majority of teachers in the rest of the institutions have not published such articles. As regards publishing in Arabic journals only less than one-fifth of teachers have done so and those were also concentrated in the Institution B, while a large majority of teachers in the rest of the institutions have not published such articles. Concerning publishing articles in national journals less than half of teachers have published articles in such journals, and over half of them have not published such articles at all.

h) With regard to the availability of electronic resources (access to computers and internet), only two departments had been provided with computers namely Institutions B and E and the rest of the departments across all other institutions have not been provided with computers. As for access to the internet no institutions have been connected with the internet and access to the internet is not available at all.

6.7.2 Part two curricular matters (modules taught and course structure)

a) With respect to the suggestion proposed by the researcher of the possibility of establishing a variety of geography courses in Libyan Universities instead of one common geography course which is implemented now, a large majority of

teachers across all institutions supported this idea and agreed to the establishment of all the courses suggested by the researcher.

b) More than two-thirds of teachers see the need to offer a set of optional modules (ranging from three to four modules), and such modules should be new relating to environmental issues in order attract students.

c) Regarding the ways of defining the syllabuses of modules taught to students, over two-thirds of teachers structure and organize such syllabuses themselves. Fewer (less than one-third) of syllabuses are organized by a committee in the department, and a very small number of them are organized by specific experts within the university.

d) As for teaching non-geography modules, to students less than half of teachers disagreed with the statement that “teaching non-geography modules causes further pressure on students and should be removed”, while around one-quarter of them agreed with it indicating that such modules should be replaced with geography modules, particularly those related to environmental issues.

e) A majority of teachers considered that the syllabuses of their modules were satisfactory in providing students with the information needed, while less than one-fifth expressed disagreement indicating that such contents would be better if other sources of information were more available.

f) Less than half of teachers considered that environmental issues are satisfactorily integrated into the geography modules taught, while less than one-quarter of them indicated that the new environmental problems raised in recent years should be given more attention.

g) An overwhelming majority of teachers rely on Libyan and Arabic books for the information taught in their modules, and around one-third and over one-quarter respectively make use of the national and Arabic journals, while a few use either European and English books or international journals.

h) As to the attitude of teachers with the statement that “the existing books that are available in the library are satisfactory for you in terms of their being up to date and richness of geographic information needed for your modules taught to students”. A large majority of teachers express their dissatisfaction with the books existing in their library in terms of not being up to date or providing the necessary information, while only around one- tenth of them express their satisfaction with them.

6.7.3 Part three (teaching methods)

a) All teachers thought that there was equipment missing from laboratories that should be available. Furthermore, they all expressed their disagreement or strong disagreement with the statement that “the condition and status of existing laboratories is satisfactory for teachers in supporting theoretical study in a proper way”.

b) As for the ways of presentation of lectures used by teachers, the common tool used by teachers in presenting the lecture was the chalkboard, with the use of a white board also being frequent, while the use of data and slide projector devices are very rare and are restricted to Institution B.

c) The commonest way of delivering the lecture to students was the method of dictating the lecture to students by teachers; also commonly used was the

method of writing by points in notes, and also **c**ollecting photocopies of the lecture from shops.

d) Concerning the assessment methods of students' progress adopted by teachers, the written examination is the most common, while just less than a quarter of teachers assess students' progress by the combined methods of examination and assignments; other methods of assessment are not used by teachers.

e) All teachers agreed that application of practical study is very important in supporting the theoretical study of Geomorphology and Physical Geography. On the other hand a high proportion of teachers did not think that the current application of practical study is sufficient in supporting the theoretical study.

f) No teachers in any institution used student feedback questionnaires to help evaluate their modules.

g) None of the teachers surveyed had been appointed as a personal tutor for students, since this procedure is not implemented in Libyan institutions.

6.7.4 Part four (application of fieldwork)

a) A large majority of teachers expressed their disagreement with the suggestion that the current strategy of application of fieldwork is sufficient in terms of providing students with geography knowledge in a proper way.

b) In terms of reforming the current strategy of application of fieldwork, teachers indicated three important issues that should be taken into account by educational authorities in this regard, specifically:

- They recommended that fieldwork must be implemented from the early academic years rather than limiting this application to the last academic year.
- They suggested that Physical Geography and environmental issues should be given first priority within the plan of fieldwork.
- They suggested that visiting at least one international site is very important to students studying in the final academic year.

6.7.5 Part five (final year dissertation)

a) Teachers have not been asked by any one of the governmental institutions or bodies for information arising from any final year students' dissertations. Some teachers commented that this might be attributed to the lack of links between the higher education institutions and governmental institutions.

CHAPTER (7): BRIEF COMPARISON STUDY BETWEEN LIBYAN AND UK UNIVERSITIES OF HOW GEOGRAPHY IS TAUGHT

As has been mentioned in the methodology chapter the researcher was going to undertake an equivalent field study on a number of UK universities by means of giving out the same questionnaire that was disseminated in Libyan Universities. However, this did not prove possible. Instead the provision of geography degrees in selected UK universities was assessed by means of documentary sources of information, available online from universities' own material about their courses together with any external information such as reviews of geography provision by the QAA (Quality Assurance Agency).

7.1 Dimensions of comparison study

The comparative study was designed to cover four themes related to teaching geography in UK and Libyan Universities, namely:

1. A brief comparison study of the kinds of geography courses offered in UK and Libyan universities

2. A brief comparison study of the structure of geography courses in UK and Libyan universities

3. A brief comparison study about various aspects of how geography is taught in UK and Libyan Universities

4. A brief comparison study regarding the application of fieldwork in UK and Libyan Universities supported by some previously existing questionnaire feedback of the perceptions of students.

This comparative study will be achieved by giving a brief overview of each of the above-mentioned aspects with regard to how geography is taught in UK universities in the main section, and then presenting what the equivalent information is from Libyan universities in another section.

7.2 Comparison study between the geography degree courses offered in UK and Libyan universities

7.2.1 An overview of the types of geography courses offered in UK Universities.

The purpose of this section was to discover how the titles of geography degree courses and their aims, from a selection of UK Universities, compare with what are adopted in Libyan Universities.

For the purpose of achieving the goal described above, the websites www.igu-net.org and www.**ucas**.ac.uk were used to obtain the information needed and required. On this basis, geography courses from a sample of UK Universities, which were selected from different regions of the country, are presented in this section.

7.2.1.1Courses offered by Geography and Environmental Sciences of the University of Bradford

Two degree courses are offered namely:

1.1 BSc Environmental science

1.2. BSc Geography and Environmental Management

Structure of courses and program content

These courses are based on study time of 3 or 4 years full-time divided into six semesters; 6 years part-time. Students who opt for a four year course are given a placement year which enables them to gain relevant work experience. Fieldwork is an essential element of these courses; it is undertaken from the first year including a residential field-course. In the second year there is residential fieldwork undertaken in the Mediterranean region. The final year dissertation is undertaken according to the interest of students and staff. The program of each course consists of a set of 30 modules dividing into 14 core modules and 16 optional modules. The modules taught in the two courses are shown in appendices 3 and 4

7.2.1.2Courses offered by the Geography Department in the University of Dundee

The geography department offers the following degrees

- BSc Single Honours Geography
- BSc Joint Honours in Geography and Environmental Science
- BSc without Honours in Geography

- MA Single Honours Geography
- MA Joint Honours in Geography and American Studies, Business Economics and Marketing, European Studies, History, Environmental Science, Planning, Politics, Psychology and Environmental Sustainability
- MA Named Honours Degree in Geography with a Language (French, Spanish or German)
- MA without Honours in Geography or in Geography and another subject

Structure of courses and program content

The undergraduate courses offered are based on 4 years study. Fieldtrips are an important part of teaching geography in this department. At all levels students have fieldtrips, from local to overseas and both day trips and week-long residential stays. The residential fieldtrips include: Germany, Canada, Australia, USA, Sweden, Spain, France and Switzerland. The modules taught in one selected course are shown in appendix 5.

7.2.1.3Courses offered by the Department of Geography Environmental and Disaster Management in Coventry University

The department offers 18 courses within 5 subject areas as follows:

1. Subject area of Climate Change, Environment and Sustainability includes:

1.1 Climate Change BSc honours degree

1.2 Environmental Management BSc honours degree

1.3 Global Sustainability BSc honours degree

2. Subject area of Disaster Management includes:

2.1 Disaster Management and Development BSc honours degree

2.2 Disaster Management BSc honours degree

2.3 Disaster, Reconstruction and Development BSc honours degree

2.4 International Disaster Management BSc

2.5 International Security and Disaster Management BA honours degree

3. Subject area of Geography

3.1 Geography BA honours degree

3.2 Geography BSc honours degree

3.3 Geography and Natural Hazards BSc degree

4. Subject area of Natural Hazards

4.1 Geography and Natural Hazards BSc honours degree

4.2 Natural Hazards BSc honours degree

5. Subject area of Tourism

5.1 Tourism Management BA honours degree

5.2 International Tourism BA honours degree

Structure of courses and program content

The courses offered are based on a study period of 3 years full-time, 4 years with professional placement year or with study in a European university. Fieldwork is an important part of the courses. In most of the courses there are residential field courses undertaken in the first two years along with a specialist field course at an overseas destination in the final year. All courses include a

number of core modules ranging from 6 to 13 modules each year. The modules taught in two selected courses are shown in appendices 6 and 7.

7.2.1.4Courses offered by the school of Geography in Exeter University

The school offers the following courses

4.1 BA Geography

4.2 BSc Geography

4.3 BA Geography with European Study

4.4 BSc Geography with European Study

Structure of courses and program content

The courses are based on a study time of 3 years. Fieldwork is an important component of all courses. Local fieldtrips are undertaken in the first year and a residential field course is undertaken in the second year including many destinations such as Austria, Canada, Iceland, Ireland, New Zealand, Spain, Switzerland, the USA and the UK. The courses offered consist of core and optional modules which can be selected from a set of modules which ranges from 3 to 7 modules each year depending on program. The modules taught in two selected courses are shown in appendices 8 and 9.

7.2.1.5Courses offered by the Department of Geography in Royal Holloway, University of London

The department offers 6 geography degrees as follows:

5.1 Geography BSc

5.2 Geography BA

5.3 Human Geography BA

5.4 Geography, Politics and International Relations BSc

5.6 Physical Geography and Geology BSc

5.7 Physical Geography BSc

Structure of courses and program content

All courses are based on 3 years study time. Fieldwork is a key part of the curriculum. In the first year fieldwork is undertaken in two forms, the first form is residential fieldwork for one week at the start of the spring term, the second form is undertaken at local sites throughout the academic year. In the second year there is also overseas fieldwork. In the third year there is no compulsory fieldwork but there are options of day or residential trips in the UK. The modules taught in two selected courses are shown in appendices 10 and 11

7.2.1.6Courses offered by the Department of Geography in Queen Mary, University of London

The following degree programs are offered within this department

1. Single Honours degrees: includes the following courses

1.1 BA Geography

1.2 BSc Geography

1.3 Human Geography BA

1.4 BSc Physical Geography

2. BSc Geography with Environmental Hazards: includes the following courses:

2.1 BSc Environmental Geography

2.2 BSc Environmental Science

2.3 BSc Environmental Science with Business Management

2.4 BA Global Change: Environment, Economy and Development

2.5 BSc Economic Geography

2.6 BA Cities, Economies and Social Change

3. Joint Honours degrees

3.1 BSc Geography and Economics

3.2 BA Geography and Politics

3.3 BA Geography and German

3.4 Geography and Hispanic Studies

3.5 BA Geography and Russian

3.6 BA Geography and French

Structure of courses and program content

Courses are based on three years study time divided into 6 semesters. Fieldwork is an essential part of the study of Geography, Environmental Science and related programmes. Students have opportunities to participate in fieldwork at all levels of their programme, some is compulsory, other field trips are optional. Field trips range from day or part day visits to locations close to the College, to residential field trips lasting up to ten days to a number of more distant venues in the UK and abroad. Furthermore, some modules containing

field trips run every other year. Each course offered consists of a set of compulsory and optional modules which varies from one course to other. The modules taught in two selected courses are shown in appendixes 12 and 13.

7.2.1.7 Courses offered by Department of Environmental and Geographical Sciences in Manchester Metropolitan University

The Department offers a range of degree programmes in Geographical and Environmental subjects as follows:

7.1 Ecology and Conservation BSc

7.2 Environmental Science BSc

7.3 Geography BSc

7.4 Human Geography BSc

7.5 Physical Geography BSc

7.6 Climate Change BSc

7.8 Environment and Enterprise BSc

7.9 Environmental Management and Sustainability BSc

Structure of courses and program content

All courses are based on three years study time. The department runs three sorts of fieldtrips; the first one is day-long field trips, the second one is a UK residential fieldtrip in the first and second year which is optional in the third year, the third one is an overseas fieldtrip in the summer/autumn period and its duration ranges from a week to over a month. Each course consists of a set of

core and optional modules. The modules taught in two selected courses are shown in appendices 14 and 15.

7.2.1.8Courses offered by the Department of Environmental and Geographical Sciences in Leeds University

The department offers four degrees programmes as follows:

8.1 BA Geography

8.2 BSc Geography

8.3 BA Geography with Transport Planning

8.4 BSc Geography- Geology

Structure of courses and program content

All courses are based on three years study time. Fieldwork is a main aspect of geography courses in this department. In the first year students participate in a weekend residential fieldtrip in the first few weeks as well as non-residential fieldwork within the Leeds area. In the second and third years there are overseas field trips. The modules taught in one selected course modules are shown in appendices 16.

7.2.1.9Overview of the courses offered in UK universities

Through the information in this section it is clear that the number of geography degree courses offered in eight selected UK universities reached 59 courses. In order to compare the results with the questionnaire information from Libya, these courses were categorised into one of three groups depending on the

broad subject area covered as shown in Table 7.1. The three different types of course program all have nearly the same percentage (around one third) in terms of their availability across all universities (Table 7.1).

Table 7.1: Percentages of geography course programs offered in eight selected UK universities.

Category	**Total**	**%**
Physical Geography	21	35.6
Human Geography	20	33. 9
Environmental Geography	18	30.5
Total	59	100

By reviewing the results presented in chapter 5 (Table 5.1) about the preferred broad academic interests of Libyan students, one can clearly note that the percentage of answers of students regarding this issue were distributed almost equally among all geography course programs. This shows that students in Libya and in the UK had similar preference for the different branches of geography, which implies that if the geography course programs offered in the UK universities could be established in the Libyan universities they would be met by a noticeable welcome by students.

7.2.2 An overview of the types of geography courses offered in Libyan Universities and their structure

As has been mentioned in chapter 3, departments of geography across all Libyan universities offer one single geography degree which is a BA in geography, in other words the geography discipline is not divided into sub-

disciplines in order to allow students to choose their preferred specialization. Students are required to study all the geographical modules during the study period within one single geography course without optionality. Accordingly, students have to study a combination of compulsory geographical modules over four years to obtain the degree. The structure of the geography course offered in Libyan universities was addressed and presented in chapter 3.

7.2.3 Similarities and differences of structure of geography courses in UK and Libyan universities

It will be clear from the above that there are a number of structural differences between geography courses in the UK and Libyan universities. Geography related degrees in UK universities offer a range of Geographical and Environmental subjects. Geography can be studied for a single honours degree, as a partner discipline in joint and combined programmes and as a component of modular degrees. In addition, many institutions offer undergraduate degree programmes based on subdivisions of the discipline such as human geography, physical geography, regional science and environmental subjects (QAA, 1994), which are not available in Libyan universities since students study to obtain a single general geography degree.

The field study is an essential component in all geography courses in UK universities taking three different forms, from the local day trips and residential local trips to overseas residential fieldtrips throughout all academic years, whereas fieldwork is not an essential part of the structure of the geography

course in Libyan universities and its application is limited to the final academic year in some universities and it is not undertaken at all in others.

Nearly all geography courses in UK universities offer a set of core plus a number of optional modules for students to study, whereas all modules within the structure of the course in Libyan universities are compulsory and there are no optional modules offered to students.

Modules taught within single honours geography courses in UK universities are nearly always geography related modules, but there are five compulsory non-geography modules taught within the structure of the geography course in Libyan universities, some of them taught both in the first and the subsequent academic years.

One similarity between the geography courses in the two countries is the introduction of information and communications technology (ICT) into the structure of the courses in both the UK and in most of the Libyan universities in the modules on Geographical remote sensing and GIS.

The structure of geography courses in UK universities consists of several modules that provide students with transferable skills such as modules of Study Skills and Advanced Map work, Critical Reading and Review Essay Course, Career Skills, Skills for Higher Education, Study Skills for Higher Education, Study Skills for Physical Geographers, Analytical Skills in Physical Geographers

and Geographical Techniques, whereas the structure of geography courses in Libyan universities does not include such modules except the module of Principles of Research Methods.

7.3 Comparison study between UK and Libyan Universities in terms of various aspects of how geography is taught

The purpose of this section was to make a brief comparison study between UK and Libyan Universities in terms of certain aspects related to how geography is taught. This section presents the results of two studies related to teaching geography carried out in the UK which are then matched with some of the results collected from Libyan Universities that deal with the same issues.

The first study presented here was carried out by the Quality Assurance Agency (QAA 1994) entitled “Quality Assessment of Geography 1994-95”. This study deals with many aspects regarding teaching geography in geography departments in England and Northern Ireland Universities, many of which have also formed the basis of the researcher`s study in Libyan Universities. The report includes results of many aspects of teaching geography gathered from 42 geography departments. Each result is summarized and matched with its equivalent from the researcher’s Libyan universities data below.

1. In UK Universities geography departments have clearly articulated aims and objectives which are well matched to institutional missions and which are

carried through into curricula and syllabuses (QAA, 1994). In Libyan universities, it can be inferred from the perceptions of students and teachers on the one hand and from what has been mentioned from the literature review on the other hand, as well as from the structure of the geography course, that the curriculum of geography should be reformed to achieve its mission and the best educational aims.

2. The QAA (1994) pointed out that a large number of classes in the UK geography departments observed were graded either excellent or satisfactory due to their having the necessary educational facilities needed for the teaching process which increases the quality grade of geography teaching. In Libyan Universities the results showed that the classes have not been provided with any kind of modern educational facilities at all; and the simplest example that illustrates this problem is the lack of display devices for a lecture where the lecture is still being displayed using the chalkboard and white boards.

3. The QAA (1994) indicated that there is a good range of teaching approaches in geography, including lectures, laboratory classes, small group sessions and fieldwork. In Libyan Universities the results show a limited range of teaching approaches for teaching geography, where the teaching methods are still largely restricted to using the traditional lecture. Furthermore, half of the departments do not have a laboratory at all, and the rest of them have inappropriate and inadequate laboratories for the teaching process.

4. According to the QAA (1994), fieldwork is a particularly valuable feature of geography courses in the UK Universities. It helps to develop a range of general and subject-specific skills and fosters excellent relations amongst staff and

students. In Libyan Universities, half of the geography departments included in the survey do not implement fieldwork at all. Furthermore, the application of fieldwork in the rest of the departments is restricted to the final year and this approach does not satisfy students' needs, and many suggestions were given by teachers and students in order to reform it.

5. Lecturers in UK geography departments use a range of assessment approaches which are well matched to course aims and objectives. There has been a welcome increase in the range of assessment methods in response to changes in the curriculum (QAA, 1994). In Libyan Universities the results revealed that the majority of lecturers do not use a range of assessment approaches and the dominant method used by them to assess the academic progress of students is the traditional unseen exam and there are few other approaches used in this regard.

6. Students in geography departments in UK Universities expressed a high level of satisfaction with the quality of their learning experience in geography and their achievements (QAA, 1994). In Libyan Universities it can be inferred from the perceptions of students that they expressed their dissatisfaction with many of the aspects of teaching geography.

7. Physical resources that support geography courses in the UK Universities are adequate and in a few cases excellent (QAA, 1994). In Libyan Universities the lack of resources is one of the most important problems mentioned by students and teachers.

8. The QAA (1994) reported that that there are a wide range of geography classes, including lectures, practical classes, information technology (IT)

workshops, seminars and tutorials in the UK Universities. In Libyan Universities, the results show that practical classes were not generally available in all universities. Furthermore, workshops, seminars and tutorials did not exist at all, and information technology has not been introduced in some universities.

The second study was also carried out by the Quality Assurance Agency (QAA 2007) entitled “subject benchmark statements 2007”. This study describes the nature and characteristics of geography degree programs and represents general expectations about standards for the award of qualifications at a given level in terms of the attributes and capabilities that those possessing qualifications should have demonstrated. Therefore, it expects that honours degree programmes should achieve many aims in teaching geography such as developing the geographical understanding of students through fieldwork; acquiring a range of academic and transferable skills including intellectual skills, discipline-specific skills, generic skills and personal attributes and social skills; using appropriate information and communication technologies (ICT), using a range of teaching methods including: lectures, seminars, tutorial, supervisions or other small group formats, directed reading and library use, laboratory practical classes, field investigation, a range of student-centred learning opportunities, which might include virtual learning environments, resource-based learning, problem-based teamwork, and communities of practice as well as the strategy of assessment of students that should support students learning and reflect the variety of abilities and skills developed within the curriculum by using a mix of assessment methods. The general expectations of a geography

degree program clearly remain substantially the same as they were in the 1994 report.

7.4 Comparison study between Libyan and UK Universities in terms of the application of fieldwork

7.4.1 Brief review of the evolution of fieldwork in the UK

Fieldwork has been given special attention by the UK educational authorities. It is an essential part of the geography curriculum as it is an important component of the set of teaching methods of geography that was encouraged by QAA.

Fieldwork has been a vital part of the geography curriculum in UK universities for a long time and in the past the desire to examine things in the field, just to 'go and see new places' was a powerful part of the geographer`s background (Gold, 1991). In the 1960s, the transformation of geography by the quantitative revolution changed the place of the field for both human and physical geography, which has led to emphasis on the field as a place where data could be collected with which theories could be tested (Matthews & Herbert, 2004).

In order to explain the evolution process of fieldwork, Kent *et al.* (1997) point out that "Although fieldwork has traditionally been important to geographers and for many it remains a defining component of the subject and a distinctive and important 'mode of learning' however, the range of its delivery methods and

styles varies considerably and its style within geography has changed rapidly since the 1950s". This process of evolution can be shown in Table 7.2.

Table 7.2: Evolution process of fieldwork in the UK (1950-1997)

Date	Approach
1950 **1960**	***Traditional 'look-see' or 'Cook`s tour' field courses*** • Observational and descriptive • 'landscape'- based or centred on 'sight-seeing' visits to specific sites of interest in geography • passive student participation
1970	***'New' Geography- 1960s 'revolution'*** ***Problem-orientated, project-based fieldwork*** • inductive and deductive approaches (positivist) hypothesis generation and testing, data collection and statistical analysis, interpretation and report writing
1980	• detailed scales, often carried out in a small area • active student participation although often staff-led
1985	***Enterprise in Higher Education-Transferable skills*** ***Problem-orientated fieldwork still dominant but introduction of transferable skills element*** • project design skills • organisational skills • leadership skills • group skills • activate student participation ***Thematic and guided trails*** • individual student initiative • group initiatives • feedback on completion
1990	***Massive growth in student numbers- teaching large classes*** • 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 transferable skills
1997	***Serious problems of cost of fieldwork to both departments and students combined with even larger classes*** • the future • 'virtual reality' to assist with field courses • But will 'virtual reality' be any cheaper or ever be as satisfactory

Taken from Kent et al., 1997. Changing approaches to fieldwork in geography 1950-1997.

7.4.2 The types of fieldwork applied in UK Universities

Fieldwork in geography departments is implemented from the first academic year and takes several forms; such forms were addressed by Gold (1992) and also presented in chapter 2 and in the first section of this chapter.

7.4.3 Brief comparison study of the perception of students about the current application of fieldwork in UK and Libyan Universities

The aim of this section was to undertake a brief comparison study between perspectives and attitudes of geography students towards the application of fieldwork in UK and Libyan Universities. The comparison process relied on results of a number of studies conducted by giving out questionnaires to samples of students in some UK Universities, and comparing these results with the author's own from Libya.

7.4.3.1Perception of students about the application of fieldwork in UK Universities

The first results presented in this context are derived from a study conducted by Fuller *et al.* (2006). The aim of their study was to find out the value of fieldwork in the light of students` views in Liverpool and Chester Universities with regard to the effectiveness of fieldwork in terms of learning and understanding of the

subject. The most important issues and results of this study can be presented as the following:

1. Students reported that fieldwork is an effective means of learning as part of study for their geography degree. It provided “valuable firsthand experience” that enhanced students` understanding of geography.

2. Students said that the fieldwork provides an unparalleled opportunity to study the real world, with all the benefits this brings.

3. Students stated that fieldwork is perceived as an effective learning tool, because it reinforces what the students have learnt in the classroom.

4. Students said that fieldwork increased their knowledge, skills and subject understanding. The range of skills developed by fieldwork depends on the nature of what is being studied, but many include use of technical instrumentation, development of research/observation skills, enhancing time management and/or critical thinking.

The second study was carried out by Boyle *et al.* (2007), the 'Student Views of Fieldwork' project, as part of the wider LTSN-GEES pedagogic research and fieldwork programme. Research was conducted across Geography, Earth and Environmental Science disciplines to examine the effect of fieldwork on students' achievements. The project aimed to monitor changes in student’s attitudes to learning that occurred as a result of attending residential field courses. In addition, the changes in how students value the fieldwork experience were examined as were differences in attitudes and values between different groups of students. The results were derived by giving out

questionnaires to students before and after a field course experience across seven UK higher education institutions (HEIs). The questionnaires were designed and piloted by the research group before full use on field courses from 2001 - 2002.

The pre- and post- fieldwork questionnaires comprised a number of sections which examined the following aspects of students' attitudes, perceptions and feelings towards the fieldwork experience (their 'affective' domain):

The study addresses the following questions:

1. What is the effect of fieldwork on student affective domains?

2. Do students' attitudes to learning change as a function of completing fieldwork?

3. Does fieldwork have the same effect on all stakeholders?

Accordingly, the study measured the following aspects:

1. Feelings. Students were asked to identify their feelings before and after going on fieldwork

2. Knowledge. Students were asked to indicate whether the fieldwork has contributed in developing their geography knowledge or not

3. Anticipation. Students were asked to comment on the anticipatory aspects of fieldwork and the accuracy of these feelings post-fieldwork.

4. Perception. Students were asked to indicate their level of attitude regarding the extent of usefulness of fieldwork.

5. Student Collaboration. Students were asked to comment on the level of collaboration, enjoyment and motivation on fieldwork.

Open questions were also included in the post-fieldwork questionnaire including "What was your most memorable fieldwork experience?" and "How has your relationship with the other students and with staff changed as a result of the field course?”

The findings of the study can be summarised in the following points:

1. The questionnaire responses show students had more positive than negative feelings about fieldwork both before fieldwork and after attending a field course, students were more likely to select "thoroughly enjoyed it", "worthwhile" and "learnt a lot” as those best reflecting their feelings.

2. After undertaking the field course a majority of students indicated that they thoroughly enjoyed the experience and perceived that they learnt a lot, and had put theory into practice

3. After fieldwork, students were significantly more positive in their attitudes to "liking challenges in their academic work", "being confident in working with others" and "coping with the physical challenges".

4. An important finding was that fieldwork boosted confidence, with students indicating that they were much more confident in meeting academic challenges. Perhaps the most beneficial aspect of fieldwork was evident in how relationships between students and between staff and students changed as a result of going on a field course.

5. Students indicted that the fieldwork had increased their knowledge.

The third study was carried out by Fuller *et al,* (2003) and presents the perception of students of the value of fieldwork. The data were collected by giving out a questionnaire to almost 30 final year students in geography and environmental sciences from five UK universities after undertaking the fieldwork. Analysis of responses identified 12 categories which reflect and amplify key educational objectives addressed by fieldwork in geography and environmental sciences from existing theoretical literature (Table 7.2).

Table7. 3: Categories of the educational objectives of fieldwork

Category	**Definition: responses relating to....**
Experiential	Hands-on experience/visualisation & observation of reality
Interest	Stimulation to learn
Technical	Use/application of specific equipment and techniques
Analytical/research	Data collection and practical skills, sampling & analysis
Specific subject knowledge	Understanding of topic studied
Holistic/transferable	Broader issues of learning (beyond the immediate topic), within and beyond degree
Assessment workload	Topic assessment & study workload
Financial/resource	Expenses and wider resources
Environmental	Being outside/inside
Time	Availability of time
Teaching/module delivery	Module organisation and teaching issues
Social/group dynamic	Cultural and inter-personal behaviour

(Source: Fuller *et al*., 2003)

Students were asked three questions.

Q1. In the light of any previous field experience, how could fieldwork have made this unit better?

Q2. In the light of any previous field experiences, how could fieldwork have made this unit worse?

Q3. What impact do you think the loss or withdrawal of fieldwork would have on your experience of the unit and understanding of the subject?

Regarding the answers of questions 1 and 2: all responses represented positive student perceptions of fieldwork, and the most important categories for the student groups responding were the following: experiential (29.3%) (e.g. “putting theory into practice”; holistic or transferable (21.2%) (e.g. “more confidence in exams and writing essays”); technical (16.8%) (e.g. “get an experience using equipment to build up field skills”); specific subject knowledge (14.2%) (e.g. helps you to remember, more likely to remember fieldwork than coursework); and social (10.4%) (e.g. “social advantage; getting to know your course mates and lecturers better”).

Regarding question three students reported that loss or withdrawal of fieldwork had a substantially negative impact on module experience, in the context of the following categories: experiential (11.8%) (e.g. “didn`t leave the classroom to see theory put into practice”), technical (17.2%) (e.g. “techniques and ideas learnt may have helped us when doing final-year project”); specific subject knowledge (17.1%) (e.g. “less understanding of channel morphology”); holistic or transferable skills (19.1%) (eg. “lost large part of understanding and so didn`t carry on in third year”); and also assessment or workload (8.7%) (e.g. “resulted in poor mark; lack of incentive”); and teaching or delivery (12.5%) (e.g. “lecturers kept referring to things that should have been covered on field trips”).

7.4.3.2Perception of students about the application of fieldwork in Libyan Universities

The perception of students with regard to the application of fieldwork in Libyan universities which is presented here is derived from the results of the student and teachers` questionnaire survey which was conducted by the researcher in some geography departments in Libyan Universities, as discussed in chapters 5 and 6. The most important results in this respect can be summarised as the following:

1. With regard to the effectiveness of fieldwork, students were satisfied that the places visited during the year were promoting their geographical knowledge and understanding, but the length of each visit should be increased to enable students to get the required information from the place.

2. Students were well aware of the importance of the fieldwork to increase their knowledge and understanding, but the restriction of its application to only the final year is not enough to promote greater geographical knowledge and understanding for students, and students wished it to be introduced as part of the geography curriculum from the first academic years.

3. Overall, from the student perspective, the current strategy for fieldwork applied in geography departments did not meet and satisfy the needs of students.

4. Both students and teachers gave many suggestions to reform the current application of fieldwork, particularly that it should be implemented from the first

academic year; and that overseas field trips should be introduced within the scheme of the fieldwork.

7.5 Summary of findings

This chapter was organized in terms of one set of research objectives posed in chapter 1. Specifically, this chapter reports the findings from making a comparison study between UK and Libyan Universities in order to investigate several important points related to teaching geography.

The results of teachers' and students` questionnaires which had been given out in Libyan Universities as a tool of data collection along with some literature related to teaching geography in UK Universities were used to answer the research question of this objective.

The first question related to the types of geography course offered in UK and Libyan Universities. The results showed that the geography courses offered in UK Universities are characterized by diversity which allow the students freedom of choice, unlike what is found in Libyan Universities. Furthermore, the results emphasised particularly the differences of structure of geography courses offered in Libyan and UK Universities.

The second part of this chapter addressed the methods of teaching geography in UK and Libyan Universities. Again, results showed the greater diversity of approaches in teaching geography in UK Universities compared to the situation

in Libyan Universities, as well as the generally better facilities available for teaching in the former.

The third research question explored the attitudes and perceptions of students towards the current application of fieldwork in UK and Libyan Universities. The results from students in UK Universities indicated their positive attitude towards the application of fieldwork. The results from students in Libyan Universities were more mixed; they appreciated what they did experience, but were not completely satisfied with the current application of fieldwork because they did not consider it to be sufficient.

CHAPTER (8): CONCLUSIONS AND DISCUSSION OF FINDINGS, RECOMMENDATION AND SUGGESTIONS FOR FUTURE RESEARCH

8.1 Introduction

This chapter gives an interpretation of the significant results given in Chapters 5 and 6 from questionnaires designed and distributed to students and teachers in geography departments of Libyan universities. Furthermore, it also explores the most important points raised in chapter 7 relating to the comparison study of teaching geography between the Libyan and the UK universities. Thus, it seeks to highlight the interesting issues raised by these results and to explore their significance in relation to the study questions and the earlier literature.

For the sake of clarity, the discussion in this chapter will be arranged into five sections, corresponding broadly to the research questions. Thus, section one of this chapter discusses the research findings related to the geography degree programs and modules taught. Section two explores issues related to teaching methods. Section three discusses the findings with regard to the application of fieldwork. Section four explores the points which emerged from the comparison study undertaken between the teaching of geography in Libyan and UK universities. Section five discuses the future of teaching geography in Libyan universities, posing the question of ‘what must be done and how?’

8.2 Discussion of findings of the students' and teachers` questionnaire with regard to the geography degree programs and modules taught

Before discussing the first issue of this theme it is useful to point out what has been mentioned earlier, that geography is taught in the developed countries (especially in the UK) as part of a group of allied subjects (like the social sciences or environmental studies). By comparison, departments of geography in Libyan universities offer only a single degree course as has been mentioned earlier.

Accordingly, the researcher posed the question of how students and teachers in Libyan universities view course programs offered in their departments. In discussing this matter greater emphasis should probably be placed initially on the perceptions of teachers as they have overall considerable experience in teaching geography as well as significant views with regard to how geography should be taught nowadays. It will then be useful to find out to what extent the perceptions of teachers are consistent with the perceptions of students. Any differences might be due to two reasons: the first one is that a number of teachers have obtained their own PhD from one of the developed countries so that they have a clearer picture of how geography is being taught elsewhere in the world; the second reason is due to the remarkable increase in recent years in the number of internet cafes throughout the Libyan cities which enables

students to see what is happening in the world in terms of developments in the field of science and knowledge.

Both students and teachers were asked “whether they support the establishment of various separately titled geographical and environmental courses, for each institution”. The responses given by the students are totally consistent with those given by teachers, with the majority of them agreeing with this statement (Figure 5.1; Table 6.14). Thus, there is a clear desire on the part of most students and staff to move away from a single geography degree. However, approximately 10% of students and 11.4% of teachers expressed their disagreement with it on the grounds of the lack of facilities that would be needed for the success of such courses, such as science classrooms, laboratories, teaching aids and so on, stating that establishment of such new courses in the light of the current circumstances is a risk with uncertain results. These comments reflect to a large extent one of the problems that Libyan higher education suffers from which has been mentioned by Libyan and Arab experts and which was addressed in chapter 3.

The second part of this exploration of programs asked students “which kind of geography courses they would like to study if they were offered them” and asked teachers “which kind of geography courses can be established”. The results showed that each of the broad categories of course suggested by the researcher was favoured by a noticeable percentage of students (for example, 27.8% of students would prefer to study a Physical and Environmental

Geography course; Table 5.2). This matches with the viewpoint of teachers, 71% of whom suggested creating all of the geography courses which were suggested by the researcher (Table 6.15).

By comparing the above result with that shown in Table 7.1 which displays the percentage of geography course programs offered in eight selected UK universities, one can conclude that establishment of similar courses in Libya would be met by a considerable welcome by Libyan students. It can be seen that such geography programs have nearly the same percentage in terms of their availability across all UK universities as was expressed in the percentage of preferences by students in Libya. Therefore, some of the comments from students and teachers in the open section at the end of the questionnaire suggesting that the creation of such courses would probably attract more students to study geography would appear valid, given the pattern of student choices in the UK indicated by table 7.1.

From what has been mentioned above, one can conclude that there is a considerable agreement among teachers and students regarding reform of the current strategy of teaching geography in terms of the courses offered and available in Libyan universities preferring instead of move towards what is offered in (the developed) countries such as the UK. This reflects a clear view that the current strategy of teaching geography has not been suitably upgraded since its establishment. The non-availability of facilities and resources may limit implementation of such a change, however.

In summary the suggestions of students and teachers in terms of the establishment of new degrees in geography and environmental geography are consistent with one set of solutions suggested by the Libyan Higher Education Ministry which was mentioned earlier in the literature review. This solution is represented under the heading “Reforming the educational curricula for the 21st century; these curricula should be based on the needs and abilities of students on the one hand, and to meet future needs of society on the other hand”.

As well as overall course programs, a second issue is about the teaching of non-geographical modules; this issue has not been addressed by any of the experts who deal with the problems of Libyan higher education.

Students and teachers were asked whether or not teaching non-geography modules within the geography program structure causes further pressure on students and reduces their degree of focus towards the principal geographical modules. The attitudes of students to this were mixed; 11.7% and 27% respectively of students agreed strongly or agreed with this statement, whereas 21.3% and 12.2% expressed their disagreement and strong disagreement towards it (Table 5.3). In contrast, the attitudes of teachers are inconsistent with the attitudes of students as a considerable percentage of teachers (44.2%) did not support this statement (Table 6.17).

None of the teachers gave specific comments concerning the reasons for their viewpoint, but two important points can be concluded from the comments of students. The first one is that students who agreed with this statement stated that such modules should be removed and replaced with new geography modules. The second one was given by students who disagree with this statement, who stated that such modules should not be removed because they contribute to increase their general cultural understanding. The disagreement of teachers with this statement can be probably attributed to the same reason given above by students.

In discussing the issue of the provision of optional modules, one can easily note from the analysis of the structure of geography courses in a number of UK universities that there are a number of optional subjects offered to students in each academic year as has been mentioned in chapter 7. As has also been mentioned previously Libyan universities do not include any kind of optional modules, as all modules are compulsory to study. Hence, the questionnaires asked students and teachers if they perceived a need to offer a set of optional modules to students within the structure of the course.

The results in Tables 5.8 and 6.16 indicated that 84% of students and 61% of teachers supported the offering of optional modules. However, students named a number of modules from the existing taught modules which should be presented as optional modules; teachers instead considered that such modules should be new ones which could be adopted from the list of possible modules

that was proposed by the researcher, especially the modules which deal with environmental issues. However, 16% of students and 39% of teachers did not support this statement, although none of them accounted for their answers so the reasons for their preference are unclear. The answer of students in this respect might be due to their lack of knowledge about the optional subjects; whereas the answers of these disagreeing teachers suggest they are satisfied with the current structure of the geography course which they do not want to be changed, although there might be other reasons for their replies such as this action involving them doing more work.

With regard to the perceptions of respondents concerning the addition of new geography modules, the results shown in Table 6.18, although not unanimous, indicated that 88.6% of teachers stated that there is an urgent need to add new geography modules. From the suggestions of teachers given in the open section of the questionnaire regarding this statement two notable points emerge which are;

1. The new modules suggested by teachers deal with global and local environmental issues, and enhance the skills of students. This means the embedding of Sustainable Development and Environmental Education needs to be enhanced within the geography curriculum.

2. The nature of the modules suggested by teachers achieve two aims of the Libyan Higher Education Ministry addressed in chapter three, the first of which called for the need to contribute in solving the national problems, the second one called for developing the skills of students.

The way in which new modules can be introduced to the current structure of geography course has not been explained by teachers, as they did not give any opinions on this theme. This can be done by means of two ways. The first way would be by merging five regional geography modules, namely Geography of Europe, Geography of Asia, new World Geography, Geography of Africa and Arab world Geography into only one module under the name of Geography of the World, in order to create the space to introduce the new modules which were suggested by teachers. The second way would be by removing or decreasing the number of the non-geography modules in order to be replaced with new geography modules.

Although a majority of teachers supported this suggestion of adding new geography modules, the opinions and comments of the 9.1% of teachers who did not support this statement should be considered too. They stated that adding new modules would cause further pressure on students and this act should not be done unless the educational authorities reconsider the existing modules taught, particularly the non-geographical modules.

In general, the support of the majority for teachers for this statement indicates that the current course of geography in Libyan universities needs to be restructured in terms of the nature and themes of the modules taught.

A further question was whether the current integration and embedding of environmental issues within the current geographical modules is satisfactory**.** Over half of students disagreed or disagreed strongly with this statement, while more than one-quarter of them agreed or agreed strongly with this statement (Table 5.9). The study also found that 42.9% of teachers agreed or agreed strongly with this statement, whereas 30.9% of them did not support it (Table 5.9). Therefore, although opinions were mixed, the majority of students and almost half of teachers thought environmental issues are currently not integrated satisfactorily in geographical modules. Despite this, the above results indicate that the answers of students are consistent with teachers; and even though more respondents were unsatisfied with the current situation, there was still considerable satisfaction among them in terms of the current integration and introduction of the environmental issues within the present modules taught.

A number of students and teachers in the open section at the end of questionnaire listed several environmental modules that they saw as requiring more attention and needing to be integrated within the geography course structure. These included modules of Environmental Resources Management, Global Warming, Environmental Law and Policy, Management of Libyan Natural Resources, Geography of Peace, Environmental Conservation, Introduction to Environmental Hazards and Disasters, Geography of Poverty and Introduction to Environmental Education.

The question that arises here is; what might be the impact if the above suggestions are taken into account by the people who are in charge of planning and designing the geography curriculum? It has been agreed by many philosophers that education and awareness towards environmental protection and conservation require knowledge, understanding, and a change of attitude by each individual (Hassan, *et al.,* 2009). This means the level of environmental awareness among students will be increased, so that subsequently, students might be able to contribute to solving the environmental problems that face their society. This fact was explored and addressed by Harold (1982) who found a positive correlation between environmental education instruction and favourable attitudes towards the environment. Furthermore, many writers indicate that the solution of environmental problems depends on the improvement of students` attitudes, and environmental education is one of the most important factors for preventing environmental problems (A-zden, 2008).

The above suggestions of students therefore support one of the most important goals of Libyan Higher Education which is “The enhancement of environmental awareness of students, in addition to motivating them to care and maintain their safety and the integrity of the environment and its various resources, and encourage them to contribute and play a fundamental role in solving environmental problems” (see Chapter three).

In summary, it could be said that respondents recognise well the nature and the extent of the relationship between geography in higher education and

sustainable development that has been addressed and explored by many authors such as Hopkinson *et al,* (2004). Furthermore, the role of geography in implementing education for sustainable development was explored by Jha (2007), McManus (2004) and Gough & Scott (2007). It could therefore be agreed that suggestions such as those above should be taken into account by the educational planners of Libyan Higher Education, and they will contribute to reforming the current geography teaching in Libyan universities.

Discussing the matter of the extent of availability of educational resources will examine the quality of educational resources both technological (computers, internet) and non-technological (textbooks) and the extent of their availability in Libyan universities. Therefore, the first issue of this theme is about the non-technological educational resources (books). Students and teachers were asked to indicate their attitudes with regard to the extent of availability of geography books in the library. Most students (59.6%) and 63.8% of teachers did not consider that such books are available, whereas 29% of students and 11.9% of teachers thought that they were available (Tables 5.10 and 6.2). The answers of student are generally consistent with the answers of teachers, although more students seemed satisfied with the availability of books than their teachers were.

The above mentioned percentages were not consistent across all institutions, however. It can be inferred from Tables 5.10 and 6.2 that respondents, especially in the newly established institutions, expressed their dissatisfaction

regarding the availability of books, while respondents in the old established institutions showed much greater satisfaction regarding the availability of such books. This might be because the old universities have been given more attention by the government, and they have the largest number of students among all institutions; also, they will have had longer to build up a collection of books over a number of years.

The above results describing the attitudes of students towards the availability of books in the libraries reinforce the findings of the United Nations Development Programme (UNDP, 2003) which in its report indicates the limitations of libraries in the Arab Countries' Universities, and Abu-Chara (1991) who indicates in his study into the libraries of many Arab universities the lack of important reference materials and documentation needed for research or to supplement theoretical and practical lessons.

Regardless of differences in responses between institutions, the most important comments were given by students across all institutions and concerned the quality of such books. Most respondents said that such books were not up to date, and some of them date back to between the1950s and the 1970s. Consequently, such books do not include the global and international subjects that have become prominent in the last few years, in particular, those related to environmental problems and political issues.

The second issue within this theme concerns the technological educational resources (computer and internet connections). Despite the clear importance of ICT, the results from the present study showed that there is a noteworthy shortage and often a complete lack of computers and internet connections across all institutions and departments in Libyan HE institutions (Tables 6.12, 6.13). This might be partly attributed to the introduction of such technology in the developing countries having only been done recently, as well as the lack of experience in terms of introducing such technology in the educational system.

In summary, the perceptions and attitudes of respondents with regard to this theme imply that teaching geography in Libyan universities was negatively affected by lack of educational resources and if they had been more available they would help to increase the effectiveness of the teaching process, because the curricular materials offer learning opportunities not only for students but also for teachers. Elizabeth & Krajcik (2005, p1) note that “Educative curriculum materials should help to increase teachers’ knowledge in specific instances of instructional decision making but also help them develop more general knowledge that they can apply flexibly in new situations”.

In addition to that, the literature underscores the importance of information and communications technology in supporting the teaching and learning process in education, and teaching geography in particular, for both students and teachers. This fact was explored by a number of writers such as Fletcher *et al.* (2007), Jha (2007), Lemberg & Stoltman (2001), Fisher& Binns (2000) and Freem

(2003), as discussed in Chapter two. Owing to its importance in the field of education it has been given special attention by many developed countries (Usun, 2009). This clearly means that increasing the introduction of ICT in the teaching of geography may improve the current situation in Libyan universities.

The results shown in Table 6.12 in respect of the sources of geography information adopted by teachers indicate that the three most important resources that teachers rely on in deriving the information needed were Libyan Books, Arabic Books and Arabic Journals, while the other resources were adopted by only a small percentage of teachers. Thus, 79.1% of teachers rely on Arabic books; 78% on Libyan books and 41.9% on Arabic journals, whereas only 7.1% rely on international journals and 2.4% on English language books.

The results presented above do not mean teachers do not want to adopt other resources such as the international journals, but the problem to a large extent arises from two reasons. Firstly there is the lack of electronic sources of information, so the latest information cannot easily be got from the international journals due to the lack of internet connections which can make vast amounts of information available (Scarsbrook, 2005). The second reason was probably due to the low level of English language ability among most teachers so that they can derive information from the books and journals printed in the English language. The percentage of teachers who hold an English Certificate is shown in Table 6.6.

It should be noted from the comments that teachers gave in the open section of the questionnaire that they recognise well that the lack of such technological resources in the field of teaching would have negative effects on the extent of their academic performance. These issues have been already addressed by many writers. For example, Usun (2009) points out that teachers are the key persons to use ICT in educational settings productively and to help integrate ICT into the curriculum.

As has been mentioned above, the lack of or shortage of technological and non-technological educational resources may have negative consequences and affect the level of students` achievements. This fact was confirmed by a number of teachers who stated that the lack of such resources affected the quality of information presented to students and if such sources had been available to teachers they might have been able to present more adequate information to students. This theme has been explored in a previous study carried out by Demir (2006), who revealed that the quality of educational resources affects the extent of students` achievement.

In summary, the views of teachers and students with regard to these themes confirm similar facts discussed by a number of authors in previous studies, for example the United Nations Development Programme (UNDP, 2003) indicates in its report that libraries in the Arab Countries' Universities are in a sorry state; and Chafchaouni (2002) who indicates that the paucity of resources, and the poor situation of teaching in general in higher education of Maghreb countries,

make it difficult to keep abreast of the latest educational developments in these fields. Furthermore, the present results are consistent with the fact that the internet in most Africana countries has not been developed and introduced well in the field of education, due to the telecommunications infrastructure in most African countries lagging far behind that of developed countries (Oyelaran-Oyeyinka, 2003).

These findings are important; the educational authorities should improve both non technological and technological educational resources, so that students can gain and track the latest information in the field of geography.

8.3 Students' and teachers` information and views with regard to teaching methods

With regard to the types of teaching methods used by teachers in Libyan universities, the literature highlights methods of teaching geography stressing such teaching must be achieved by use of a range of appropriate teaching methods. The significance of this is that students with different learning styles can be accommodated by the varied teaching methods, whereas any one method only will advantage some students rather than others. These points of view and suggestions were addressed and explored by Ediger (2005) and Gold *et al.* (1991). Such teaching methods were addressed in chapter two.

However, despite the importance of variation of methods in teaching geography, the results of the present study showed that the teaching methods used by teachers in Libya are restricted to use of traditional teaching methods such as

the traditional lecture, with very little use of practical classes or essay methods in some institutions (Table 5.18). Restriction of teaching methods to use of lectures in teaching in Libyan higher education institutions has also been reported by Alzubedi (2000) and El-Hawat (2004). The present study also found that the use of practical classes is limited to three institutions which have a laboratory.

The most noticeable point regarding non-use of other modern teaching methods, especially the use of practical classes, was raised by teachers in the open section at the end of the questionnaire where most of them attributed the reason to the lack of sufficient and adequate modern science laboratories in some institutions and lack of equipment in the existing labs in the rest of the institutions. These reasons have already been addressed by the United Nations Development Programme, (UNDP, 2003, P56), which in its report indicates that "the laboratories in Arab Universities are old and cannot accommodate the increasing numbers of students". This might be because the establishment of laboratories costs a considerable amount of money (The Royal Geographical Society 1997) on the one hand, and also because geography departments in Libyan universities do not have their own independent budget in order that establishment of such laboratories can be funded on the other hand; although a lot of money, representing a high proportion of the education budget, was spent to buy, settle and maintain the supplementary equipment and instruments for the educational process, some institutions are still suffering from shortage in this concern (Said Lagga *et al.,* 2004).

In terms of the ways adopted by teachers to aid the presentation of the lecturer, the most important aids used in general in HE presenting lectures are Boards, Projector Devices and Power Point Software, as was explored by Cable (1979) and Holzl (1997). However, the present results from Libya are not consistent with the aforementioned facts, since the common and frequently predominant tool used by teachers in presenting their lectures was the chalkboard, less commonly the use of a white board, while projector devices and Power Point were not available at all (Table 6.25).

However, the fact that teachers reported the non-use of data display devices does not mean that they did not want to use them; the problem lies in such devices not being available at all in their departments. Teachers suggested that they should be provided; stressing that reliance on the use of blackboards in presenting the lecture contributes greatly to wasted teaching time.

The above suggestions of teachers are consistent with the fact that PowerPoint software is a powerful presentation tool. Nowadays is has replaced the traditionally used colour slides and overheads at important conferences, and has quickly penetrated scientific and educational circles as well. PowerPoint is a user-friendly package that can be used for the creation of visually clear, dynamic and attention capturing presentations (Holzl, 1997). To elaborate on this theme and investigate the utility of use of a PowerPoint lecture, a survey was carried out by Szabo and Hastings (2000), asking a sample of higher

education students to compare the utility of a PowerPoint lecture to a traditional overhead or blackboard assisted lecture. The results of their study revealed that the majority of students agreed or agreed strongly that the use of Power Point is more attention capturing, more interesting, easier to follow and understand, visually clear, better emphasizes the important concepts, maintains focus on the presentation for a longer time, and is more beneficial for learning.

In summary, changing the tools by which the lecture is presented to students and incorporating the modern tools in teaching geography in Libyan universities may have positive effects in terms of increasing understanding of students of the lecture.

With regard to the way lectures were delivered to students, the results in Table 6.26 confirm what was addressed by Bashshur (2004) who points out that the lecture in Arab universities is delivered in a rhetorical manner, but it is in fact no more than a summary of what is in the book. The teacher refuses to answer questions other than repeat what he has already said; discussion or dialogue is not known, and students are expected to reproduce what they have heard; otherwise their grades will be low. This contrasts with common practice in countries such as the UK, where classes are often more interactive, and a student who produces relevant material not covered directly by the teacher is rewarded rather than penalized. This approach to a large extent impacted on the attitude of students towards such methods, who did not think that such methods are appropriate for them; this means methods have not helped

students sufficiently to gain a better geographical knowledge and understanding. Accordingly, one can conclude that diversifying the ways of lecture delivery will produce more positive attitudes from students, which means that their understanding of the lecture is improved and increased.

The attitudes and perceptions of students and teachers with regard to the current methods used by teachers for assessing academic progress of students showed some difference between the two groups. Students were nearly equally divided between satisfaction and dissatisfaction (Table 5.25, Figure 5.4) with current methods, whereas most teachers were satisfied with such methods (Table 6.29). A high degree of satisfaction of respondents might be attributed to some of the students appearing to have very little information about the nature of methods of assessment except the exam method and imagining that they would be much more difficult, as some of them stated, as well as the short experience of some teachers in teaching geography in the newly established universities.

Regardless of the differences in the above results, some teachers suggested that a variety of assessment approaches of students' progress should be used by them to gain a clearer picture regarding the academic progress of students. This point of view of teachers is consistent with the argument of Ramsden (2003) who points out that using a variety of assessment methods provides opportunities for students to demonstrate how much they understand and offers

more latitude for students to display their knowledge, and such variety has the potential to provide a more accurate depiction of each student`s achievement.

With reference to the students' and teachers' recognition of the value of the practical component, both students and teachers clearly agreed with the value of practical classes (Tables 5.19, 6.29, 6.30), although not as great a proportion of students expressed their agreement in this respect, and up to one quarter of students were uncertain. This may be attributed to the fact that practical classes are not implemented in most of the institutions; therefore; some students do not have direct experience of the value of such practical study in increasing their geography learning.

In general, the perceptions of respondents revealed in this study are to a large extent consistent with the results of previous studies with regard to the importance of practical study in teaching geography due to its many positive features, such as illustrating the theoretical study and training students in specific skills; furthermore, it can be fun and strengthens the relationship between students and teachers (Clark& Wareham 2003).

Regarding the current application of practical study, Tables 5.20, 6.31, 6.32 showed that both students and teachers generally were unhappy with the current application of practical study in supporting theory in most institutions. This attitude can be attributed to the lack of laboratories in a number of institutions and the inadequate laboratories in other institutions.

However, responses were not totally similar among institutions. Respondents in old established institutions expressed their satisfaction with the current application of practical study in some geography modules, probably closely associated with the availability of laboratories and their conditions which are better than those in the newly established institutions on the one hand, as well as possibly being associated with the greater levels of qualifications and experience of teachers in the old institutions.

The absence of a practical component from the geography curriculum in many Libyan universities may have consequences for the achievement and abilities of students due to the lack of transferable skills gained (Clark & Wareham, 2003; Smith, 1995).

As noted at the beginning of this section students' attitudes towards the teaching methods used by teachers (Table 5.21) showed considerable dissatisfaction towards them. The small percentage of students who were satisfied might be a result of those students not having an adequate idea of other teaching methods that could be applied to teaching except the lecture method. These results support those of El-Hawat (2004) whose research indicated that higher education in Libya has a traditional character in methods and schemes and it is interested to supply students with information, but it does not care much for developing scientific thinking.

Owing to the similarity of the problems of higher education between the Arab countries, the researcher has found findings which are consistent with the results of his study obtained by Bashshur (2004) on a sample of Tanta University students (in Egypt). Therefore, the researcher was not surprised from the results that he has got about this issue; as well as such results giving him more confidence with regard to the credibility of students' responses.

8.4 Discussions of findings with regard to the application of fieldwork

The first important finding that emerged about this issue suggested that students perceive the value and the importance of fieldwork in increasing and enriching their geography experience (Figures 5.5- 5.7). This finding is considered consistent with the views of Gold *et al*. (1991), Fuller *et al.* (2003), Kent *et al.* (1997), and the Higher (1996) on the importance of fieldwork in teaching geography, as explained in chapter 2.

Despite the wide recognition of importance of fieldwork in teaching geography by students, a small percentage of students did not recognize its value or were not sure about that, without giving any comments or reasons (Figures 5.5- 5.7). Two reasons can be put forward as possible explanations for this:

1. This question was asked to students in all academic years, whether they study these modules or not, therefore students who do not study these modules expressed their attitude based on lack of information and may not have any

idea about the nature of such modules. The researcher should have asked this question in general without specifying named modules to avoid this problem.

2. Some of the institutions do not apply fieldwork at all, so their students do not have much idea about the value and importance of fieldwork in teaching geography.

This finding implies that fieldwork should be given special attention as an essential part within the geography curriculum in the Libyan universities.

As for students' perceptions of the extent of effectiveness of the current application of fieldwork on their geography experience and knowledge, it is evident that students showed a very negative feeling towards gaining this knowledge by means of the current application of fieldwork (Table 5.39). This finding contrasts with what has been addressed by Higgitt (1996) and Kent *et al*. (1997) about the features of fieldwork in contributing to enhance and develop the geography knowledge of students, as well as it being inconsistent with the perceptions of students in UK universities who showed a notable positive attitude towards the same issue. This might be attributed partially to fieldwork being undertaken in just the final academic year which was not enough to promote the students` geography knowledge, whereas it is undertaken in all academic years in the most UK universities. Also, in Libya it was undertaken at separate times without drawing up a plan in advance, while in the UK it is undertaken as part of a clear structure indicated in advance. Furthermore, there were no visits to international places for Libyan students, which are considered

an important part of fieldwork in the UK universities (Tables 5.30; 5.32; 5.35; chapter 7).

The above reasons suggest an important question: how would the attitude of Libyan students towards fieldwork differ of it followed the UK strategy? The researcher thinks that students would have given more positive opinions towards it because students suggested that undertaking the fieldwork from the first academic year and throughout all academic years, as well as visiting one of the international places, may promote their geography knowledge and experience. Therefore, this indicates that many fundamental changes should take place in the current strategy of fieldwork in Libyan universities.

As regards reforming and improving the current strategy of fieldwork in the Libyan universities, respondents were very happy to support suggestions proposed by the researcher to improve this strategy. Respondents showed a strong desire to implement the fieldwork from the first academic year and during all their academic years. The suggestion of the need of visiting one international place was also supported by a large majority of responses (Tables 5.37; 6.36)

In summary, one can conclude three important facts. The first one is that fieldwork has not been integrated well within the geography program structure in most geography departments in Libyan universities (Table 5.28). The second one; the current strategy of application of fieldwork adopted in Libyan geography departments has not been completely able to achieve the objectives

of fieldwork which were explored by Higgitt (1996) and Kent *et al*. (1997) which are represented in subject-specific objectives, transferable / enterprise skills objectives and socialisation and personal development objectives as addressed in chapter 2. Thirdly the current strategy of fieldwork needs to be reformed and, according to the perceptions of respondents, fieldwork should be implemented from the first academic year and overseas fieldwork should be included in the program.

8.5 Discussion of the comparison study relating to teaching geography in Libyan and UK universities.

As reviewed earlier there have been fundamental stages of development in the geography discipline in the UK since its establishment. For example, it was taught in the country`s universities as geographical elements only before 1830; then afterwards independent geography departments were established in many universities since 1887; and since 1960 it has witnessed a considerable shift in terms of the trend towards the specialism of several degree courses (Johnston & Sidaway, 2007). Nowadays geography as a discipline in UK Higher Education is regarded as a major subject within the educational system (Johnston, 1985).

As shown in chapter 7 section 7.1.1, four comparative aspects were highlighted. The researcher's intent in studying these aspects was to make a brief comparative study between the UK and the Libyan universities in the field of teaching geography. Libya and the UK have no similar history in the teaching

geography. There is a big time gap period in terms of the date of establishment of the geography discipline in the two countries, as stated in chapter 2. Consequently, it is not surprising that there is a difference in the teaching of geography between the two countries in terms of the nature of geography courses offered and their structure, and the geography curriculum of these courses.

One of the most significant points that emerged from the comparative study was that a wide range of geography and environmental courses are being offered to study for students in UK universities, which means that the current strategy of teaching geography in the UK gives students the chance to be specialized in a particular area. On the contrary, the geography discipline in Libyan universities does not offer such geography degree courses.

Looking back at the results presented in chapters 5 and 6 one can clearly note that teachers and students in the Libyan universities were attracted by the idea of establishing several district geography and environmental course degrees.

Another important point that emerged was about the similarities and differences of structure of geography courses in the UK and Libyan universities. In the UK institutions the structure of geography is built on some fundamental pillars such as the fieldwork, optional modules and non-teaching of non-geography modules, whereas the structure of the Libyan geography course reflects the lack of such pillars within the course structure. The results presented in

chapters 5 and 6 showed students and teachers wished to see reform of the structure of geography courses in Libyan universities such as introducing fieldwork within the course, offering a set of optional modules and reducing the non-geography modules, which if adopted would move Libyan courses to become more similar to those in the UK.

Another fundamental point that emerged in this respect was about the differences of views and attitudes of students towards the application of fieldwork as it is implemented in the teaching of geography in UK and Libyan universities. Students in the UK universities appeared clearly satisfied with the fieldwork provided, whereas students in Libyan universities thought that the current strategy of fieldwork should be completely reviewed due to it not meeting their satisfaction.

In conclusion, addressing the issues that emerged from the comparison study will have implications for the planning of the geography curriculum in Libyan universities, providing helpful points that should be taken into account by the educational designer. In recent years, the main focus in Libya has been on quantitative expansion, the opening of new higher education institutions to increase the number of students, to keep abreast of demand. As quantitative needs are met, it may be time to focus more attention on qualitative improvement. Thus, many elements can be adopted from the structure of geography courses in the UK universities to be integrated into the structure of geography courses of the Libyan universities.

8.6 The future of geography teaching in Libyan universities

The aim of this section is to consider and analyse the main points addressed earlier in this study in order to consider future prospects for the geography curriculum in Libyan universities.

In the light of what has been mentioned earlier, here are some of the questions or dilemmas that the researcher thinks do not have short term solutions, but are options to be worked out in the light of prevailing conditions to sort out the current problems step by step to gain success in the long term.

- How the different aspects of the difficulties explored can be harmonized and co-ordinated with each other so that teaching geography in the Libyan universities can be developed into something that is more desirable to both students and employers?
- What is wrong in the teaching of geography in Libyan universities that needs to be fixed?' Or in other words; what are the most important weaknesses that have been discovered in geography teaching in Libyan universities in the light of students and teachers' perceptions?
- How can the perceptions and views of students and teachers in respect to reforming the curriculum of geography in Libyan universities be taken into account effectively?'
- What would students and teachers wish the future of geography teaching in Libyan universities to be like?

The aims of Libyan higher education which were addressed in chapter 3 have a clear objective of reaching a high educational level and achieving the desired success in this sector. However, the Libyan higher education sector is still suffering from plenty of problems that may prevent it from achieving its goals, and the results from this study shows that the geography curriculum needs substantial reform; the structure of the geography curriculum adopted in UK universities can be helpful and useful as a model in designing a new geography curriculum in the Libyan universities.

However, efforts have been and are still being made to reform the higher education curricula in the Libyan universities; the biggest and the most important challenge facing these efforts is that there are not any central bodies to define the goals of higher education and to appoint supervisors to ensure that they are properly implemented (Abou-Chacra, 1991).

Although Libya has an established Governmental high-level decision-making body dealing with higher education which is represented in the Higher Education Ministry, the problem lies in the lack of buffering bodies between the State and the higher education institutions. Libyan does not have a council for evaluation and/or accreditation of higher education that can build bridges between the Higher Education Ministry and the higher education intuitions (Bashshur, 2004).

Another shortcoming that poses a challenge for the country is the relative lack of experience and expertise in policy and strategy development as well as in planning and management of higher education systems (UNESCO, 2003).

Although much progress has been made in the Libyan higher education sector, particularly in terms of increasing and distributing the number of universities throughout the country, much more is still required. The growing demand on higher education and the pressures of globalization should prompt higher education systems, structures, institutions, and programs to adopt a radically new vision that would prevent Libyan society from lagging behind (UNESCO, 2003).

Finally, looking back at the results that have been reviewed on teaching geography in Libyan universities it can be said that more and greater efforts should be made in order to define the roots of the main problems that beset teaching geography when the reform process is to be done.

8.7 Recommendations

In this section, recommendations are made which, if implemented would, it is believed, enhance the effectiveness of teaching geography in the Libyan universities.

In the following pages, the writer lists the guidelines he would wish to see accepted and implemented in teaching geography in Libyan universities in the future. They have been formulated on the basis of the teachers and students` views

1. The geography courses offered to students in Libyan university need to be re-thought and reconstructed by adopting and offering a variety of geography and environmental courses

2. Teaching non-geography modules needs to be reconsidered by educational planners.

3. Optional modules should be offered to students in each academic year

4. The number of modules taught in some academic years in some institutions needs to be reduced.

5. Additional material concerning environmental issues needs to be introduced within the geography subjects and integrated within the modules taught.

6. New environmental modules should be added within the present structure of the geography course

7. More, and recent, geography books need to be made available to students in their institutions` libraries.

8. Equip laboratories in the geography departments with the necessary supplies and tools for scientific activity, and provide the necessary aids to upgrade the level of their output

9. Teaching methods should not be restricted to the lecture and should be diversified by adopting a variety of modern teaching methods by teachers.

10. The method of lecture presentation used by teachers needs to be changed by using modern devices such as a data projector, and such devices must be made available to teachers.

11. Feedback questionnaires should be used by teachers to seek students' views at the end of the year.

12. The academic progress of students during the academic year should be followed up by appointing a personal tutor to each group of students.

13. A variety of descriptive illustration tools should be used by teachers in the teaching process. Furthermore, such tools need to be made available to teachers in their departments.

14. Assessments of academic progress used by teachers need to be diversified by using a variety of approaches.

15. Libyan institutions need to be provided with computer networks and internet access.

16. The method used by for students to obtain information from a lecture needs to be updated.

17. Teaching strategies should focus on enhancing the transferable skills gained by students in order to enable them to get a job after their graduation.

18. Fieldwork must be an essential part of the geography curriculum and should not be restricted to the final academic year but must be undertaken from the early academic years.

19. The current strategy and design of fieldwork adopted by geography departments need to be reformed to satisfy the students' needs.

20. Overseas fieldwork should be implemented in the final academic year to enhance the geography knowledge of students.

21. Students need to be guided well when they want to select their own final year dissertation, and they need to be encouraged to select the subject area that they would like to study according to their interest. Furthermore they must be provided with the resources needed for that.

22. The difficulties faced by students in carrying out their final year dissertation must be overcome by their institutions.

23 Maximum benefit needs to be achieved from international organizations and their publications on the international information network to aid in teaching geography in Libyan universities.

24. Attendance at conferences and publications of papers need to be facilitated for teachers by the Libyan Higher Education Ministry.

Although, a set of recommendations has been set out in the previous section, it is appropriate to discuss the ways by which such recommendations could be implemented. The researcher believes that the results of this study provide an opportunity to improve the majority of aspects of teaching geography in Libyan universities. But it should be noted that the responsibility for the implementation

of these recommendations is not limited to one specific group, and they cannot be implemented without intensifying efforts of cooperation between several relevant groups namely: the Higher Education Ministry, Universities and Departments including their heads and lecturers. The efforts for implementing such recommendations should be divided among these bodies according to the nature of each recommendation and extent of ability of each body to achieve its desired goals from these recommendations.

Government including the Higher Education Ministry must bear the biggest responsibility for implementing the most important parts of the recommendations, especially those that require a long time or a considerable financial cost, such as designing and offering a variety of geography and environmental courses, allocating additional funds to universities to provide their libraries with the books needed and the existing laboratories with the equipment needed, curriculum material and facilities for teachers and students and improving the current strategy of application of fieldwork.

Universities can play an effective role in the implementation of many of the recommendations if they receive official permission from the higher education ministry which enables them to reform some aspects of the existing curricula of geography teaching in their geography departments, such as a review of the teaching of non-geography modules, introducing new geography and environmental modules and reducing the number of modules in some academic years. Universities must give additional opportunities to teachers to attend

national and international conferences and help them to publish their own researches in the national and international journals.

Geography departments including their heads can also contribute effectively to implement fairly rapidly many important parts of the recommendations according to their possibilities available, such as diversifying the teaching methods and assessment methods of students' progress used by teachers, introducing 'skills' elements into the teaching programmes, using students' questionnaires to evaluate the courses, using descriptive illustration tools in lectures and solving the problems facing students during their final year dissertations. Some staff development sessions may be needed to enable staff to engage effectively with some of these proposed changes.

8.8 Suggestions for Further Studies

As there were a number of significant findings in the attitude and views of teachers and students in several and different aspects in teaching geography, more works on similar lines and in diversified paths are possible in the broad area of geography teaching. Doors for broad as well as niche topics are wide open. Some such topics that have educational relevance are given below in the interest of future researchers

1. Replication of this study using participants from other disciplines of Libyan higher education is recommended. These results are only generalized to geography disciplines in Libyan universities and cannot easily be generalized to other disciplines, although some of the issues may be the same. The purpose of

this suggestion to find out the similarities and differences of issues in the teaching process between geography disciplines and others will help the Libyan Education Ministry to plan suitable reforms which are applicable for the wider university sector.

2. Additional study should be conducted to examine the value of fieldwork in teaching geography. This study could compare the impact of the application of fieldwork on students' achievements comparing students from institutions which undertake fieldwork and those from institutions that do not.

3. Additional study should be made to find out the most important matters and issues affecting the performance of teachers in teaching geography. This study may investigate the needs of teachers which enhance their performance such as educational recources, teaching aids, educational facilities, laboratories and their equipment.

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Appendix 1 Questionnaire presented to students of geography departments in the Libyan universities

Part one: general information

(1)- Please indicate your gender M ( ) F ( )

(2)-please circle what is your academic year 1 2 3 4

Part two: the geography courses offered and modules taught

1. Please indicate what your preferred broad academic interest is

A. Environmental subjects. B. Physical Geography. D. Human Geography. D. All of them.

2. Do you agree with the idea of establishing of various separately titled geographical and environmental courses such as: (a) Physical and Environmental Geography (b) Geographical and Environmental Management (c) Environmental science (d) Bachelor of Human Geography ? YES ( ) NO ( )

3. If the answer is yes: which kind of course would you prefer to study? Please indicate one of the following options:

(a) Physical and Environmental Geography ( ) (b) Geographical and Environmental Management ( ) (c) Environmental science ( )

(d) Bachelor of Human Geography ( )

Using a scale of 1= strongly agree 2=agree 3=uncertain 4= disagree 5= strongly disagree, please indicate your level of agreement with the following statements (circle the number that shows your level of agreement)

4. Teaching non-geographical modules causes further pressure on students and reduces their degree of attention towards the principal geographical modules

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

5. The number of geography modules taught in the first academic year is appropriate to you, and there is no need to be reduced. 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

6. The number of geography modules taught in the second academic year is appropriate to you, and there is no need to be reduced

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

7. The number of geography modules taught in the third academic year is appropriate to you, and there is no need to be reduced 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

8. The number of geography modules taught in the fourth academic year is appropriate to you, and there is no need to be reduced

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

9. Environmental issues are satisfactorily integrated and embedded within the current geography modules 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

10. The geography books are available in the library and meet your needs

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

11. The syllabuses of the Geomorphology module are appropriate to enable you to understand this module in a satisfactory way 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

12. The syllabuses of the physical Geography module are appropriate to enable you to understand this module in a satisfactory way 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

13. The syllabuses of the Regional Geography module are appropriate to enable you to understand this module in a satisfactory way 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

14. The syllabuses of the Environmental Geography module are appropriate to enable you to understand this module in a satisfactory way 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

15. Do you agree that optional modules should be offered to students in each academic year? YES ( ) NO ( )

16. If the answer is yes, how many modules should be offered in each academic year? Please select one option from the following:

One module ( ) Two modules ( ) Three modules ( ) Four module ( )

17. Can you please name the modules that you would most like to see as optional?

(a)..... (b)..... (c)..... (d).....

Part three teaching methods

1. Does your department have a laboratory? Yes ( ) No ( )

2. Do you think that there is equipment missing in your department's laboratory? YES ( ) NO ( ) I do not know ( )

Using a scale of 1= strongly agree 2=agree 3=uncertain 4= disagree 5= strongly disagree, please indicate your level of agreement with the following statements (circle the number that shows your level of agreement)

3. The existing equipment and apparatus in the laboratory are suitable in supporting the theoretical study? 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

4. The existing equipment and apparatus are sufficient for the number of students?

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

5. The application of practical study is very important in supporting the theoretical study of Geomorphology 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

6. The application of practical study is very important in supporting the theoretical study of Physical Geography 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

7. The application of practical study is very important in supporting the theoretical study of GIS 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

8. The application of practical study is very important in supporting the theoretical study of Soil Geography 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

9. The current application of practical study of Geomorphology is applied in a satisfactory way in supporting the theoretical concepts.

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

10. The current application of practical study of Physical Geography is applied a satisfactory way in supporting the theoretical concept?

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

11. The current application of practical study of GIS is applied in satisfactory way in supporting the theoretical concept? 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

12. The current application of practical study of Soil Geography is applied in satisfactory way in supporting the theoretical concept?

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

13. The teaching methods adopted by teachers meet your satisfaction

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

14. The illustrative tools used are satisfactory for you in terms of enabling you to understand the lecture. 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

15. The current system of evaluation of your academic progress implemented by teachers is satisfactory for you. 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

16. The current methods of lecture delivery are appropriate for you.

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

17. The current geography teaching will qualify you to get a job in a relevant subject other than the teaching domain after your graduation

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

18. Please indicate what is most important descriptive illustration tool used by teachers in the class room.

Reports about voyages of discovery	Maps	Figures& Tables	Satellite picture	objects	Photographs	Field trips	Experiments

19. Please indicate what is most important descriptive illustration you would like to see used by teachers in the class room.

Reports about voyages of discovery	Maps	Figures& Tables	Satellite picture	objects	Photographs	Field trips	Experiments

20. Please indicate to what extent the following teaching methods are used by teachers

Category	Frequently	Some times	Never
Lecture			
Tutorials			
Seminars			
Learning with internet			
Practical classes			
Essays			

Part four: the application of fieldwork

1. Does your department undertake fieldwork in your academic year?

YES ( ) NO ( )

2 Has your department planned to undertake the following types of fieldwork in this year?

A residential fieldwork YES ( ) NO ( )

B international fieldwork YES ( ) NO (

3. What kinds of field study are implemented? Please indicate the relevant one:

A. Just observational fieldwork ( ) B. Participatory fieldwork C. ( ) both ( )

4. How many times it is undertaken?

A. Weekly regularly ( ) B. Monthly regularly ( ) C. Irregularly with separated times

Using a scale of 1= strongly agree 2=agree 3=uncertain 4= disagree 5= strongly disagree, please indicate your level of agreement with the following statements (tick the box that shows your level of agreement)

5. Undertaking and applying fieldwork is very important to support the theory in the following modules.

Category	1	2	3	4	5
Geomorphology					
Physical Geography					
Environmental modules					

6. The places which have been visited within the fieldwork program were satisfactory in promoting your geographical knowledge and understanding?

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

7. The length of each visit was enough to have the required information from the place. 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

8. Undertaking fieldwork in just the final academic year is enough to promote your geographical knowledge and understanding

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

9. Undertaking fieldwork during all academic years may promote your geographical knowledge and understanding 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

10. Visiting international places is important to increase your geography knowledge 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

11. The current strategy and design of the fieldwork adopted by your institution meets and satisfies your needs 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

12. What are the most important issues which must be given priority in the scheme and consideration during the preparation of the fieldwork?

(a). Environmental issues ( ) (b). Physical geography issues ( ) (c).Hhuman issues ( )

Part five: undertaking a final year dissertation

1. Are you undertaking a research project? YES ( ) NO ( )

If yes, please answer the following questions in this section

2. Which subject area IS your dissertation related to?

A. Human Geography ( ) B. Physical Geography ( ) C. Environmental issues ( )

3. Have you faced any difficulties in terms of collecting the data needed for your dissertation? YES ( ) NO ( )

4. Which kind of the following difficulties have you faced?

Lack of resources	
Lack of facilities	
Lack of cooperation of Institutions	
Others	

5. Has your department helped you to tackle your difficulties? YES ( )NO ( )

Part six: suggestions

In the space provided here, please add your suggestions and comments that are not already addressed in this questionnaire, which could be used to improve the geography teaching in general. You also can use this space to elaborate on any of the answers you have given already.

1. Your suggestions regarding the subjects taught:

……

2. Your suggestions regarding the teaching methods employed:

……

3. Your suggestions regarding the field study program:

……

4. Your suggestions regarding the final year dissertation

……

Thank you for your time and help

Appendix 2 Questionnaire presented to teachers of geography departments in the Libyan universities

Part one: general information

1. Please state your gender? Male ( ) Female ( )

2. What is your nationality? Libyan ( ) Non-Libyan ( )

3. What is your specialization?

A. Human Geography ( ) B. Physical Geography ( ) C. Environmental ( ) D. Cartography ( )

4. What academic qualifications do you hold?

A. Master degree ( ) B. PhD ( ) other (please specify) ( )

5. Where did you obtain your certificate?

USA		Libya	
UK		Canada	
Europe		Other	
Arab			

6. Do you hold an English certificate that enables you to write and read English?

Yes ( ) No ( )

7. How many years of experience do you have in teaching geography in higher education?

Less than 5 years		Between 10-15 years	
From 5- 10 years		More than 15 years	

8. Have you attended any conference related to geography? Yes ( ) No ( )

If yes please indicate how many geography conferences you have attended

Category	Less than 5	6-9	10 years or more	Nothing
International conferences				
Arabic conferences				
National conferences				

9. Please indicate how many papers have you published?

Category	Less than 5	6-9	10 years or more	Nothing
International Journal				
Arabic Journal				
National Journal				

10. Which type of office have you been provided by your institution?

A. Single room office ( ) B. shared office ( )

11. Do you have a computer in your office or in the common room?

Yes ( ) No ( )

12. Do you have internet access in your office? Yes ( ) No ( )

13. Does your institution have a computer centre? Yes ( ) No ( )

14. Has this computer centre been provided with internet connection?

Yes ( ) No ( )

Part two: the geography courses offered and modules taught

1. Do you agree with the idea of establishing of various separately titled geographical and environmental courses such as: (a) Physical and Environmental Geography (b) Geographical and Environmental Management (c) Environmental science (d) Bachelor of Human Geography ?

Yes ( ) No ( )

2. If the answer is yes: which kind of course would you suggest to be established? Please indicate one of the following options:

(a) Physical and Environmental Geography ( ) (b) Geographical and Environmental Management ( ) (c) Environmental science ( )

(d) Bachelor of Human Geography ( ) (e). All of them ( )

3. Do you agree with the idea of offering optional modules to students in each academic year? Yes ( ) No ( )

4. How are the syllabuses of your modules specified?

By my self		By committee in University	
By committee in the department		By experts of Education Ministry	

5. Do you think that new geography modules should be added to the existing modules? Yes ( ) No ( )

6. To what extent are the following sources adopted for deriving the information needed?

Category	adopted	Not adopted	Somewhat used
Libyan books			
Arabic Books			
English Books			
European Books			
National Journal			
Arabic Journal			
International papers			
Own Research			

Using a scale of 1= strongly agree 2=agree 3=uncertain 4= disagree 5= strongly disagree, please indicate your level of agreement with the following statements (circle the number that shows your level of agreement)

7. Teaching non-geographical modules causes further pressure on students and reduces their degree of attention towards the principal geographical modules 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

8. The syllabuses and contents of the modules you teach are satisfactory to you in terms of providing students with the information needed.

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

9. Environmental issues are satisfactorily integrated into geography modules taught.

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

10. The existing books that are available in the library are satisfactory for you in terms of their up to date and containing the geographic information needed to teach your module 1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

Part 3 teaching methods

1. Does you department have a laboratory?

2. Do you think that there is equipment missing in you department`s laboratory?

YES ( ) NO ( ) I do not know ( )

3. To what extent are the following tools used in presenting your lectures?

Category	Used frequently	Used in narrow range	Not available	Available but not used
Using projector device				
Using white board				
Using chalk board				
Data show device for using (PowerPoint lecture				

4. How do students obtain the lecture information?

By dictating the lecture to students	
By note taking during the lecture	
Collecting photocopies from shops	
From university website	

5. Which kind of assessment method do you use to assess your students` academic progress (tick one)?

Exam		Exam &Practical class	
Exam & Assignments		Assignments &Practical	
Practical class		All of them	
Assignments			

6. Do you distribute a questionnaire to your students in order for them to evaluate your performance? Yes ( ) No ( )

7. Have you been appointed as a personal tutor to a group of students?

Yes ( ) No ( )

Using a scale of 1= strongly agree 2=agree 3=uncertain 4= disagree 5= strongly disagree, please indicate your level of agreement with the following statements (circle the number that shows your level of agreement)

8. The condition and statues of the existing lab is satisfactory to teachers in supporting the theoretical concepts in a proper way

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

9. The methods of assessment of students' progress used by you are satisfactory to you to reflect the academic level of students

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

10. Application of practical study is very important and a vital aspect in supporting the theoretical aspects of the following modules

Category	1	2	3	4	5
Geomorphology					
Physical Geography					

11. The current application of practical work in Geomorphology is sufficient in supporting the theoretical concept of the following modules.

Category	1	2	3	4	5
Geomorphology					
Physical Geography					

Part four: fieldwork

Using a scale of 1= strongly agree 2=agree 3=uncertain 4= disagree 5= strongly disagree, please indicate your level of agreement with the following statements (circle the number that shows your level of agreement)

1. The current strategy of application of fieldwork is sufficient in terms of providing students with geographical knowledge in a proper way

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

2. Fieldwork should be implemented from the early academic years

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

3. Visiting one international place within the programme of field work should be adopted to increase the geography knowledge of students

1- ( ) 2- ( ) 3-( ) 4-( ) 5- ( )

4. Please tick one of the boxes from the following list of issues that must be given top priority within the scheme of fieldwork.

Issues of Physical geography		Issues relating to Human geography	
Environmental issues		All of them	

Part five: final year dissertation

1. Has any institution asked the university or the department about the results from previous dissertations in order to make use of them?

YES ( ) NO ( ) I do not know ( )

Part six: suggestions

In the space provided here, please add your suggestions and comments that are not already addressed in this questionnaire, which could be used to improve the geography teaching in general. You also can use this space to elaborate on any of the answers you have given already.

1. Your suggestions regarding the subjects taught:

……

2. Your suggestions regarding the teaching methods employed:

……

3. Your suggestions regarding the field study program:

……

4. Your suggestions regarding the final year dissertation

……

Appendix 3 Arabic version of students' questionnaire

استبيان الطلبة

الجزء الاول معلومات عامة

1. نوع الجنس ذكر ( ) أنثى ( )

2. السنة الدراسية 1. ( ) 2. ( ) 3.( ) 4. ( )

الجزء الثانى: أسئلة التخصصات الجغرافية المعروضة و المواد الدراسية

1. من فضلك وضح ماهو اهتمامك الجغرافى

(أ). علوم بيئية (ب). جغرافية طبيعية (ج). جغرافية بشرية (د). جميغ الفروع

2. هل توافق على فكرة عرض التخصصات الجغرافية والبيئية الاتية امام الطالب للدراسة بدل من عرض تخصص جغرافى شامل

(أ). جغرافية طبيعية وبيئية (ب). جغرافية وادارة بيئية (ج). علوم بيئية (د). جغرافية بشرية. نعم( ) لا ( )

3. اذا كانت الاجابة بنعم ماهو الفرع الذى ترغب ان تسجل فيه:

(أ). جغرافية طبيعية وبيئية (ب). جغرافية وادارة بيئية (ج). علوم بيئية (د). جغرافية بشرية.

باستخدام مقياس الأجابة التالى (1). أوافق بشدة (2). أوافق (3). غير متأكد (4). لا أوافق (5). لا أوافق بشدة, من فضلك أجب عن الاسئلة الاتية:

4. تدريس المواد غير الجغرافية من شأنه ان يسبب فى زيادة الضغط العلمى على الطالب وبالتالى يساهم فى تقليل تركيزه على المواد الجغرافية الأساسية 1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

5. عدد المواد الجغرافية فى السنة الاولى يعتبر ملائم للطالب ولايحتاج الى التقليل منه

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

6. عدد المواد الجغرافية فى السنة الثانية يعتبر ملائم للطالب ولايحتاج الى التقليل منه

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

7. عدد المواد الجغرافية فى السنة الثالثة يعتبر ملائم للطالب ولايحتاج الى التقليل من

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

8. عدد المواد الجغرافية فى السنة الرابعة يعتبر ملائم للطالب ولايحتاج الى التقليل من

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

9. المسائل والمشاكل البيئية مدرجة ضمن المقرر الجغرافى يشكل مرضى اليك.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

10. الكتب الجغرافية متوفرة بشكل مناسب فى المكتبة وتفى بتلبية حاجتك.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

11. المفردات الدراسية لمقرر الجيومورفولوجيا مناسب لك ويمكنك من فهم المقرر بشكل مقنعز

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

12. المفردات الدراسية لمقرر الجغرافية الطبيعية مناسب لك ويمكنك من فهم المقرر بشكل مقنع.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

13. المفردات الدراسية لمقرر الجغرافيا الاقليمية مناسب لك ويمكنك من فهم المقرر بشكل مقنع.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

14. المفردات الدراسية لمقرر الجغرافية البئية مناسب لك ويمكنك من فهم المقرر بشكل مقنع.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

15. هل توافق على ضرورة عرض مجموعة من المقررات الاختيارية الى جانب المواد الاجبارية

نعم ( ) لا ( )

16. أذا كانت الأجابة بنعم كم مقرر من المفرض ان يتم عرضها كل سنة من وجهة نضرك

الجزء الثانى (أسئلة مناهج التدريس)

1. هل يوجد معمل جغرافى تابع للقسم؟ نعم ( ) لا( )

2. هل هناك أجهزة غير متوفرة فى المعمل؟ نعم ( ) لا ( )

باستخدام مقياس الأجابة التالى (1). أوافق بشدة (2). أوافق (3). غير متأكد (4). لا أوافق (5). لا أوافق بشدة,

من فضلك أجب عن الاسئلة الاتية:

3. المعدات والأجهزة الحالية الموجودة داخل المعمل تعتبر كافية لدعم الدراسة النظرية؟

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

4. المعدات والأجهزة الحالية الموجودة داخل المعمل تعتبر مناسبة لعدد الطلبة

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

5. تطبيق الدراسة العملية يعتبر مهم جدا لدعم الدراسة النظرية لمقرر الجيمورفولوجيا

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

6. تطبيق الدراسة العملية يعتبر مهم جدا لدعم الدراسة النظرية لمقرر الجغرافيا الطبيعية.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

7. تطبيق الدراسة العملية يعتبر مهم جدا لدعم الدراسة النظرية لمقرر نظم المعلومات الجغرافية.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

8. تطبيق الدراسة العملية يعتبر مهم جدا لدعم الدراسة النظرية لمقرر جغرافية التربة.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

9.التطبيق العملى الحالى لمقرر الجيمورفولوجيا مطبق بشكل مقنع اليك.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

10.التطبيق العملى الحالى لمقرر نظم المعلومات الجغرافية مطبق بشكل مقنع اليك.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

11.التطبيق العملى الحالى لمقرر الجغرافية الطبيعية مطبق بشكل مقنع اليك.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

12.التطبيق العملى الحالى لمقرر جغرافية التربة مطبق بشكل مقنع اليك.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

13. مناهج التدريس الستخمة من قبل للأساتدة تعتبر مقنعة لك؟

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

14.الوسائل التوضيحية المستخدمة من قبل الأساتدة تساعدك على فهم المادة بشكل مقنع

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

15.الأسلوب المتبع من قبل الأساتدة لتقييم أداء الطالب يعتبر مقنع اليك؟

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

16.الأ سلوب المتبع من قبل الاستاذ لايصال المحاضر للطالب يعتبر مقنع اليك؟

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

17. النظام الحالى لتدريس الجغرافية سيؤهلك للحصول على عمل فى غير مجال التعليم.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

18. من فضلك وضح ما أهم وسيلة ايضاح تستخدم من قبل الاستاذ داخل الفصل؟

تقرير مرئية	الخرائط	الجداول والارقام	الصور الفضائية	المواد الملموسة والمجسمات	الصور	الدراسة الحقلية	التجربة

19.ماهى أهم الوسائل التوضيحية التى تفضل ان يتم أستخدامها من قبل الأستاذ؟

تقرير مرئية	الخرائط	الجداول والارقام	الصور الفضائية	المواد الملموسة والمجسمات	الصور	الدراسة الحقلية	التجربة

20. من فضلك وضح مدى أستخدام وسائل التدريس الأتية من قبل الأستاذ؟

لاتستعمل مطلقا	بعض الأحيان	دائما	التعريف
			المحاضرة
			المتابعة الخاصة
			حلقة دراسية
			استخدام الانترنت
			الدراسة العملية
			بحث

الجزء الثالث (أسئلة الدراسة الحقلية)

1.هل يتم اجراء دراسة حقلية للسنة ادراسية التابع لها؟ نعم ( ) لا ( )

2. هل أدارق القسم خططت مسبقا للقيام بالاتى

(أ). دراسة حقلية لفترة متواصلة من الايام نعم ( ) لا ( )

(ب). دراسة حقلية دولية نعم ( ) لا ( )

3. مانوع الدراسة الحقلية المطبق؟ (أ). دراسة حقلية لغرض الملاحظة ( ) (ب). مشاركة وتطبيق. (ج). كلاهما ( )

4. كم مرة يتم تطبيق برنامج الدراسة الحقلية؟ (أ). أسبوعيا بانتظام ( ) (ب). شهريا بأنتظام ( ) (ج). بشكل غير منتظم وعلى أوقات منفصلة ( ).

باستخدام مقياس الأجابة التالى (1). أوافق بشدة (2). أوافق (3). غير متأكد (4). لا أوافق (5). لا أوافق بشدة,

من فضلك أجب عن الاسئلة الاتية:

5.أجراء الدراسة الحقلية يعتبر مهم جدا لدعم الدراسة النظرية للمقرارات الأتية:

التعريف	1	2	3	4	5
الجيمورفولوجيا					
الجغرافية الطبيعية					
الجغرافية البيئية					

6. الأماكن التى تم زيارتها تعتبر مقنعة لك من حيث زيادة معلوماتك الجغرافية

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

7. الوقت المخصص لكل زيارة ميدانية يعتبر كافى للحصول على المعلومات المطلوبة؟

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

8. تطبيق الدراسة الحقلية فى السنة الدراسية النهائية فقط يعتبر كافى لتطوير معلوماتك الجغرافية.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

9. تطبيق الدراسة الحقلية ابتداء من السنة الدراسية الاولى من شأنه ان يطور معلومات الطالب الجغرافية.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

10.زيارة أحدى الأماكن الدولية فى السنة من شأنه ان يرقى الخبرة الجغرافية للطالب.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

11.النظام الحالى المطبق للدراسة الحقلية يلبى احتياجاتك العلمية.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

12.ماهى أهم المسائل التى يجب التركيز عليها فى الزيارات الميدانية:

(أ). المسائل البيئية ( ) (ب). الجغرافية الطبيعية ( ) (ج). الجغرافية البشرية ( )

الجزء الرابع (الأسئلة المتعلقة بمشروع التخرج)

1. هل تقوم بانجاز مشروع التخرج؟ نعم ( ) لا ( )

2. أذا كانت الأجابة بنعم من فضلك أجب عن الأسئلة الأتية:

3. ماهو المجال الذى ينتمى اليه بحثك؟

(أ) جغرافية بشرية ( ) (ب). جغرافية طبيعية ( ) (ج). جغرافية بيئية ( )

4. هل واجهتك اى مشاكل متعلقة بتجميع البيانات؟ نعم ( ) لا ( )

5. مانوع المشاكل التى واجهتك؟

قلة توافر المصادر	
قلة الأمكانيات	
عدم تعاون مؤسسات الدولة	
مشاكل أخرى	

6. هل قامت أدارة قسمك بحل هذه المشاكل؟ نعم ( ) لا ( )

الجزء الخامس أقتراحات وتوصيات

فى هذا الفراغ من فضلك أضف اى أقتراح او توصية من شأنها ان تساعد على دعم هذا البحث

1. اقترحاتك وتوصياتك بخصوص المقرر الجغرافى

.....

اقترحاتك وتوصياتك بخصوص أساليب التدريس

.....

اقترحاتك وتوصياتك بخصوص الدراسة الحقلية

.....

Appendix 4 Arabic version of teachers' questionnaire

أستبيان الأساتذة

الجزء الاول معلومات عامة

1. نوع الجنس ذكر ( ) أنثى ( )

2. الجنسية : ليبى ( ) غير ليبى ( )

3. ماهو تخصصك الجغرافى؟ (أ). جغرافية بشرية ( ) (ب). جغرافية طبيعية ( ) (ج). جغرافية بيئية ( )

(د). خرائط ( )

4. ماهو مستوى مؤهلك الحالى؟ ماجستير ( ) درجة ذكتوراة ( )

5. من اى دولة تحصلت على شهادتك؟

USA		ليبيا	
UK		كندا	
دولة أوربية		دول أخرى	
دولة عربية			

6. هل تحمل شهادة لغة أنجليزية بحيث تمكنك من القراءة والفهم بشكل جيد؟ نعم ( ) لا ( )

7. ماهو عدد سنوات خبرتك فى مجال التدريس الجامعى؟

أقل من 5 سنوات		من 10 الى 15 سنة	
من 5 الى 10 سنوات		أكثر من 15 سنة	

8. هل حضرت أى مؤتمر جغرافى؟ نعم ( ) لا ( ). من فضلك حدد وفق الاتى:

التعريف	أقل من 5	من 6 الى 9	أكثر من 10	لاشى
مؤتمرات دولية				
مؤتمرات عربية				
مؤتمرات محلية				

9. من فضلك حددعدد البحوث التى قمت بنشرها؟

التعريف	أقل من 5	من 6 الى 9	أكثر من 10	لاشى
مجلات عالمية				
مجلات عربية				
مجلات محلية				

10. مانوع المكتب المخصص لك؟

(أ). مكتب خاص (ب). مكتب جماعى ( )

11. هل تملك كمبيوتر فى مكتبك؟ نعم ( ) لا ( ).

12. هل يوجد انترنت فى مكتبك؟ نعم ( ) لا ( )

13. هل جامعتك تملك مركز كمبيوتر؟ نعم ( ) لا ( )

. هل تم تزويد هذا المركز بشبكة أنترنت؟ نعم ( ) لا ( )14

الجزء الثانى (أسئلة المقرر الدراسى)

1. هل توافق على فكرة عرض التخصصات الجغرافية والبيئية الاتية امام الطالب للدراسة بدل من عرض تخصص جغرافى شامل؟

(أ). جغرافية طبيعية وبيئية (ب). جغرافية وادارة بيئية (ج). علوم بيئية (د). جغرافية بشرية. نعم( ) لا ( )

. ماهو الفرع الذى ترى أنه بالامكان تأسيسه؟2

(أ). جغرافية طبيعية وبيئية (ب). جغرافية وادارة بيئية (ج). علوم بيئية (د). جغرافية بشرية (ه). كل الفروع ( )

3. هل توافق على ضرورة عرض مجموعة من المقررات الاختيارية الى جانب المواد الاجبارية؟

نعم ( ) لا ( )

4.كيف يتم تحديد محتويات منهج المقرر الذى تقوم بتدريسه؟

أقوم بتحديده بنفسى		لجنة الجامعة	
لجنة القسم		لجنة أمانة التعلية	

5. هل تعتقد بأن هناك مقرارات جغرافية يجب اضافتها؟ نعم ( ) لا ( )

6.الى أى مدى يتم تبنى المصادر الاتية:

التعريف	متبنى	غير متبنى	متبنى بعض الشى
كتب ليبية			
كتب عربية			
كتب باللغة الأنجليزية			
كتب أوربية			
مجلات محلية			
مجلات عربية			
مجلات عالمية			
بحوث شخصية			

باستخدام مقياس الأجابة التالى (1). أوافق بشدة (2). أوافق (3). غير متأكد (4). لا أوافق (5). لا أوافق بشدة,

من فضلك أجب عن الاسئلة الاتية:

7. تدريس المواد غير الجغرافية من شأنه ان يسبب فى زيادة الضغط العلمى على الطالب وبالتالى يساهم فى تقليل تركيزه على المواد الجغرافية الأساسية 1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

8. المفردات الدراسية للمقرارت التى تقوم بتدريسها تعتبر مقنعة للك من حيث تزويد الطالب بالمعلومات اللأزمة

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

9. المسائل والمشاكل البيئية مدرجة ضمن المقرر الجغرافى يشكل مرضى اليك.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

10. الكتب الجغرافية متوفرة بشكل مناسب فى المكتبة وتفى بتلبية حاجتك.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

الجزء الثالث (أسئلة مناهج البحث)

1. هل يوجد معمل جغرافى تابع للقسم؟ نعم ( ) لا( )

2. هل هناك أجهزة غير متوفرة فى المعمل؟ نعم ( ) لا ( ) لاأعرف ( )

3. الى أى حد تقوم بأستخدام الادوات الاتية فى تقديم المحاضرة:

التعريف	تستخدم بشكل مستمر	تستخدم بشكل قليل	غير متوفرة	متوفرة ولكن غير مستخدمة
جهاز عرض الشرائح				
السبورة البيضاء				
السبورة السوداء				
جهاز العرض المرئى				

4. كيف يقوم الطلاب بالحصول على المحاضرة؟

عن طريق إملاء المحاضرة للطلاب	
عن طريق كتابة النقاط الأساسية	
يتم تجميعها من محل تجارى	
من موقع الجامعة	

5.كيف تقوم يتقييم الطلبة؟

إمتحان		إمتحان وتطبيق عملى	
إمتحان وبحوث		بحوث وتطبيق عملى	
تطبيق عملى		كل الأساليب السابقة	
بحوث فقط			

6. هل تقوم بتوزيع إستبيان على الطلبة لغرض تقييم تدريسك اليهم؟ نعم ( ) لا ( )

7. هل تم تكليفك لكى تكون متابع شخصى لمجموعة من الطلاب؟ نعم ( ) لا ( )

باستخدام مقياس الأجابة التالى (1). أوافق بشدة (2). أوافق (3). غير متأكد (4). لا أوافق (5). لا أوافق بشدة,

من فضلك أجب عن الاسئلة الاتية:

8. الوضع الحالى للمعمل يعتبر مقنع لك من حيث دعم الدراسة النظرية.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

9. الأسلوب المتبع من قبلك لتقييم أداء الطلبة يعتبر مقنع اليك؟

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

10. تطبيق الدراسة العملية يعتبر من وجهة نظرك مهم جدا للمقررات الأتية:

التعريف	1	2	3	4	5
الجيمورفولوجيا					
الجغرافيا الطبيعية					

11. التطبيق الحلى للدراسة العملية للمقررات الأتية يعتبر مقنع لك من حيث دعمه للدراسة النظرية؟

التعريف	1	2	3	4	5
الجيمورفولوجيا					
الجغرافيا الطبيعية					

الجزء الرابع (أسئلة الدراسة الحقلية)

باستخدام مقياس الأجابة التالى (1). أوافق بشدة (2). أوافق (3). غير متأكد (4). لا أوافق (5). لا أوافق بشدة,

من فضلك أجب عن الاسئلة الاتية:

1.النظام الحالى المطبق للدراسة الحقلية يلبى احتياجاتك العلمية.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

2. من المفروض أن يتم تطبيق الدراسة الحقلية إبتداء من السنة الدراسية الأولى

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

3.زيارة أحدى الأماكن الدولية فى السنة من شأنه ان يرقى الخبرة الجغرافية للطالب.

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

4.ماهى أهم المسائل التى يجب التركيز عليها فى الزيارات الميدانية:

(أ). المسائل البيئية ( ) (ب). الجغرافية الطبيعية ( ) (ج). الجغرافية البشرية ( ) كلها ( )

1. ( ) 2. ( ) 3. ( ) 4. ( ) 5. ( )

الجزء الخامس (أسئلة مشروع التخرج)

1. هل هناك أى مؤسسة من مؤسسات الدولة قامت بمحاولة تبنى نتائج اى مشروع تخرج للأستفادة منه؟

نعم ( ) لا ( )

الجزء الخامس أقتراحات وتوصيات

فى هذا الفراغ من فضلك أضف اى أقتراح او توصية من شأنها ان تساعد على دعم هذا البحث

1. اقترحاتك وتوصياتك بخصوص المقرر الجغرافى

.....

اقترحاتك وتوصياتك بخصوص أساليب التدريس

.....

اقترحاتك وتوصياتك بخصوص الدراسة الحقلية

.....

اقترحاتك وتوصياتك بخصوص مشروع التخرج

.....

Appendix 5 Content of course of BSc Geography and Environmental Management (University of Bradford) 2010

Level 1	**Level 2**	**Level 3**
Semester 1 1. Physical Geography I: Landscape and Process 2. Environmental Investigation Techniques 3. Contemporary Issues in Geography and Environmental Management 4. Global Environmental Systems **Semester 2** 1. Physical Geography I: Landscape and Process 2. Environmental Investigation Techniques 3. Field Project I: Applied Geography 4. Humans: Past and Present	**Semester 3** **Core modules** 1. Environmental Management: Case Studies 2.Data Collection and Analysis 3. Environmental Impact Assessment **Optional modules** 4. Environmental Monitoring 5. Physical Geography II: Geomorphology 6. Water and its Management 7. Diversity and Context: Working and Living in the UK Today (10 credits) **Semester 4** **Core modules** 1. Environmental Management: Case Studies 2. Data Collection and Analysis 3. Field Project II **Optional modules** 1. Natural Resources 2. Introduction to GIS 3. Cultural Resource Management (10 credits) 4. Urban Living: A Social Anthropology of the City 5. Economics of the Environment (10 credits)	**Semester 5** **Core modules** 1. Project (dissertation) (30 credits) 2. Project Preparation (10 credits) 3. Environmental Law and Policy (10 credits) **Optional modules** 1. Reclamation Ecology 2. Geohazards: Past, Present and Future 3. Global Environmental Management **Semester 6** **Core modules** 1.Project (dissertation) (30 credits)* **Optional modules** 1. Reclamation Ecology 2. Agriculture, Countryside Change, Nature Conservation 3. Waste Management (10 credits) 4. Political Geography of Northern England 4. Reconstructing Past Environments

Appendix 6 Content of course of BSc Environmental Science (University of Bradford) 2010

Level 1	Level 2	Level 3
Semester 1 1. Physical Geography I: Landscape and Process 2. Environmental Investigation Techniques 3. Contemporary Issues in Geography and Environmental Management 4. Global Environmental Systems **Semester 2** 1.Physical Geography I: Landscape and Process 2. Environmental Investigation Techniques 3. Field Project I: Applied Geography 4. Humans: Past and Present	**Semester 3** **Core modules** 1. Environmental Management: Case Studies 2. Data Collection and Analysis 3. Environmental Monitoring **Optional modules** 3.Environmental Impact Assessment 4. Physical Geography II: Geomorphology 5. Water and its Management **Semester 4** **Core modules** 1. Environmental Management: Case Studies 2. Data Collection and Analysis 3. Field Project II **Optional modules** 1. Natural Resources 2. Introduction to GIS 3. Urban Living: A Social Anthropology of the City 4. Economics of the Environment (10 credits) 5. Open Channel Hydraulics (10 credits)	**Semester 5** **Core modules** 1. Project (dissertation) (30 credits) 2. Project Preparation (10 credits)* **Optional modules** 1. Reclamation Ecology 2. Environmental Law and Policy (10 credits) 3. Geohazards: Past, Present and Future 4. Global Environmental Management **Semester 6** **Core modules** 1. Project (dissertation) (30 credits) 2. Waste Management (10 credits) **Optional modules** 1. Reclamation Ecology 2. Agriculture, Countryside Change, Nature Conservation 3. Waste and Wastewater Systems (10 credits) 4. Environmental Noise Control (10 credits) 5. Reconstructing Past Environments

Appendix 7 Content of course of BSc Single Honours Geography

(University of Dundee)

Level 1	**Level 2**	**Level 3**	**Level 4**
1. A World in crisis? Population and Environmental 2. A World of plenty? Environment and development	1. Dynamic Human Worlds 2. Dynamic Physical Worlds	1.Concepts and Techniques 2. Research Methods and Field Skills 3. Geographical Methods 4. Glacial Processes and Environments 5. Population Geography 6. Hydrology and Water Resources 7. Geographical Remote Sensing 8. Geographies of Health 9. Migration and Ethnicity 10 Urban Geography 11. An Environmental History of the American West: Land Water, Forest and Wilderness 12. Geography of Power: Contemporary Political Geography 13 GIS 14.Environmental Geosciences	1. Catchment Sediment Dynamics 2. Advanced Hydrology and Water Resources 3. Advanced Urban Geography 4. Advanced Population Geography 5. GIS (Advanced) 6. Advanced Geographies of Health 7. Advanced Glacial Processes and Environments 8. An Environmental History of the American West: Land, Water, Forest and Wilderness (Advanced) 9.Geographies of Power: Contemporary Political Geography (Advanced) 10. Coastal and Estuarine Geosciences 11. Dissertation

Appendix 8 Content of course of Climate Change BSc Honours degree

(Coventry University)

Year 1	**Year 2**	**Year 3**
1. Earth Systems 2. Landscape Processes 3. A Sustainable Britain 4. Practicals and Fieldwork 5. Skills for Higher Education 6. Introduction to Disasters 7. A Globalising World 8. Add+vantage Module	1.Climate Change: the science and the symptoms 2. Oceans and Atmosphere 3. Global Sustainability 4. Research Methods and Fieldwork 5. Career Skills 6. Natural Hazards 7. Geographical Information Systems 8. Warning and Informing for Environmental Hazards 9. Assessment for Disaster Interventions 10. Rivers and Coasts 11. Add+Vantage Module 12. Professional Placement year (Optional)	1. Fieldcourse 2. Quaternary Environment and Climate Change 3. Issues in Sustainability 4. GED Project 5. GIS and Natural Hazards 6. Dry land Geomorphology and Hazard Management 7. River Catchment Management 8. Environmental Management 9. Add+Vantage Module (individual choice)

Appendix 9 Content of course of Geography and Natural Hazards BSc Honours degree (Coventry University)

Year 1	**Year2**	**Year 3**
1. Earth Systems 2. Landscape Processes 3. Practicals and Fieldwork 4. Skills for Higher Education 5. Introduction to Disasters 6. Globalising World 7. A Sustainable Britain 8. Add+vantage module	1. Natural Hazards 2. Warning and Informing for Environmental Hazards 3. Research Methods and Fieldwork 4. Career Skills 5. Geographical Information Applications 6. Climate Change 7. Rivers and Coasts 8. Add+vantage Module 9. Professional Placements Year (Optional)	1. Natural Hazards Field course 2. Community Resilience to Environmental Disasters 3. Research Project 4. GIS and Natural Hazards 5. Quaternary Climate Change 6. Dry land Geomorphology and Hazard Management 7. River Catchment Management 8. Environmental Management 9. Add+vantage module

Appendix 10 Content of course of BA Geography (University of Exeter)

Year 1	Year 2	Year 3
Core modules 1.Foundations in Human Geography 2. Geographies of Global Change 3.Geographies of Place, Identity and Culture **Optional modules** 1. An Introduction to the Physical Geography of South West England 2. Earth Systems 3. Global Climate System	**Core modules** 1. Human Geography Practice 2. Human Geography Field Trip 3. Theory, Space and Society **Optional modules** **(Human geography modules)** 1. Historical Cultural Geography 2. Living Natures 3. Political Geographies 4. Social Geography Sustainable Development in Britain **(Physical geography modules)** 1. Catchment Hydrology and Geomorphology 2. Coasts 3. Environmental Feedbacks to Climate Change 4. World of Fire and Ice	**Core modules** 1. Dissertation **Optional modules** **(Human geography** **modules)** 1. Animal Geographies 2. Cultural Geographies of Landscape 3.Gender and Geography 4. Critical Geopolitics 5. Geographies of Material Culture 6. Postcolonial Geographies 7. Nations, Identity and Territory 8. The Geography of Monsters: Science, Society & Environmental Risk **(Physical geography modules)** 1. Climate- Society-Environmental Interaction 2. Dating Techniques 3. Dry Lands 4. Landscape Systems Management 5. Lessons from Climates Past 6. The Cryosphere 7. Thermal Behaviour of Stream and River System

Appendix 11 Content of course of BSc Geography (University of Exeter)

Year 1	**Year 2**	**Year 3**
Core modules 1. An Introduction to the Physical Geography of South West England 2. Earth Systems 3.Global Climate Systems 4. Study Skills for Physical Geographers Optional modules 1. Geographies of Global Change 2. Geographies of Place, Identity and Culture 3. Nature, Environmental and Development	Core modules 1. Spatial Skills for Physical Geographers 2. Physical Geography Field Trip 3. Physical Geography Practice Optional modules (Physical geography modules) 1. Catchment Hydrology and Geomorphology 2. Coasts 3. Environmental Feedbacks to Climate Change 4. World of Fire and Ice (Human geography modules) 1. Historical Cultural Geographies 2. Living Natures 3. Political Geographies 4. Social Geography 5. Sustainable Development in Britain	Core modules 1. Dissertation Optional modules (Physical geography modules) 1. Climate-Society-Environmental Interactions 2. Dating Techniques 3. Dry Lands 4. Landscape System Management 5. Lessons from Climates Past 6. The Cryosphere 7. Thermal Behaviour of System and River System (Human geography modules) 1. Animal Geographies 2. Cultural Geographies of Landscape 3. Gender and Geography 4. Critical Geopolitics 5. Geographies of Material Culture 6. Postcolonial Geograhies 7. Nations, Identity and Territory 8. The Geography of Monsters: Science, Society & Environmental Risk

Appendix 12 Content of course of BSc Geography, Politics and International Relations (Royal Holloway, University of London)

Year 1	Year 2	Year 3
Core modules 1.Geographical Techniques 2.Geographical Research & Field Training I 3. Introduction to Human Geography 4. Geographies of Development **Optional modules** 1.Introduction to Politics & Government 2. Introduction to Globalisation 3. Introduction to International Relations 4. Classic & Contemporary Readings in Politics & International Relations	**Core modules** 1. Geographical Research & Field Training II **Optional modules**. 1. Political Geography 2.Cities: Ecologies & Economies 3. Cultural Geographies 4. European Integration since 1945 5. Comparative Political Institutions 6. Political Sociology 7. Comparative Foreign Policy Analysis 8. International Relations Theory 9. Democracy in Britain 10. Contemporary Political Theory 11. International Political Economy 12. Democracy in Britain 13. Contemporary Political Theory 14. International Political Economy 15. The Politics of Migration & Ethnicity 16. Empire & Decolonization 16. Issues in Democratic Theory	1. Dissertation 2. Two human geography options 3. PIR units to value of 1 course unit 4. Additional human geography &/or PIR units to the value of 1 course unit.

Appendix 13 Content of course of BA Human Geography (Royal Holloway, University of London)

Year 1	Year 2	Year 3
1. Introduction to Human Geography 2. Geographies of Development 3. Physical Geography I 4. Physical Geography II 5. Geographical Techniques 6. Geographical Field Research & Field methods	1. Two modules from A. Political Geography B. Cities: Ecologies & Economies C. Cultural Geographies of the Modern World D. Perspectives on Development 2. One further Geography option or course from another department 3. Human Geography Research & Field Methods	1. Human Geography Dissertation 2. Four human geography options 3. Two further Geography option, or equivalent from another department

Appendix 14 Content of course of Environmental Geography BSc (Queen Mary University of London)

Year 1	Year 2	Year 3
Core modules 1. Introduction to Geographical Ideas and Practice 2. Earth Surface Processes and Landforms 3. Environmental Research Methods 4. Fieldwork in Physical Geography and Environmental Science 5. Global Environmental Issues 6. Planet Earth: Global Systems **Optional modules** 1. Environment, Nature and Society 2. Geographical Perspectives 3. Globalisation, Development and Inequality 4. The Diversity of Life 5. Conservation and the Environment 6. Evolution	**Core modules** 1. Earth System Cycles 2. Research Strategies in Physical Environments **Optional modules** 1. Digital Worlds: Cartography, Modelling and GIS 2. Global Environmental Change 3. Global Change Biology 4. Populations, communities and ecosystems 5. Aquatic ecosystems: structure and function 6. Marine Biology	**Core modules** 1. Independent Geographical Study **Optional modules** 1. Coastal and Aquatic Management 2. Cold Environments 3. Environmental Hazards 4. Environmental Pollution Management 5. Extreme Environments 6. Practical Environmental Modelling 7. Progress in Physical Geography 8. Quaternary Palaeoenvironments 9. Science and Politics of Climate Change 10. Water Catchment and Management

Appendix 15 Content of course of Geography and Economics BSc

(Queen Mary University of London)

Year 1	Year 2	Year 3
Core modules 1. Principles of Economics 2. Microeconomics 1 3. Macroeconomics 1 4. Mathematical Methods in Economics and Business 1 5. Introduction to Geographical Ideas and Practice 6. Globalisation, Development and Inequality **Optional modules** 1. Critical Human Geographies 2. Environment, Nature and Society 3. Geographical Perspectives 4. Reinventing Britain 5. Research Methods in Social Sciences I (Statistics) 6. Research Methods in Social Sciences II (Interviewing and Surveys) 7. Global Environmental Issues 8. Planet Earth: Global Systems	**Core modules** 1. Statistical Methods for Economics 1 2. Microeconomics 2 3. Games and Strategies 4. Macroeconomics 2 **Optional modules** 1. Spaces of Uneven Development 2. Geographical Research in Practice 3. Geographical Information Systems 4. Geography, Identity, Belonging 5. Health, Inequality and Society 6. Society, Culture and Space 7. Urban Futures	**Optional modules** 1. Independent Geographical Study 2. Gender and Development 3. Geographies of Home 4. Geographies of Labour 5. Geography, Identity, Belonging 6. Global Historical Geographies 7. Body, Health and Society 8. Regional Economics and Policy 9. Spaces of Post-Socialism 10. The Geography of HIV/AIDS 11. The Politics of Development 12. Urban Futures 13. Urbanism, Culture and Modernity 14. Victorian London: Economy, Society and Culture

Appendix 16 Content of course of climate change BSc (Manchester Metropolitan University)

Year 1	Year 2	Year 3
Core modules 1. Geography and Environment Tutorials 2. Field Activities 3. Geography Concepts and Practice 4. Issues in Environmental Science Optional modules 1. Principle of Sustainability 2. Environmental Management 3. Ecology 4. Ecosystems	Core modules 1. Field course 2. Project Preparation 3. Reconstructing Quaternary Environments 4. Climate and Climate Change Optional modules 1. GIS Earth Observation 2. Development Geographies 3. Global Biodiversity and Conservation 4. Ecology and Landscape 5. Geomorphological Processes 6. Natural Resources and Pollution 7. Environmental Decision Making 8. Vocational Experience	Core modules 1. Dissertation Optional modules 1. Tropical Land Use Conservation 2. River and Coastal Management 3. Freshwater and Marine Sediment System 4. Global Environmental Change and Ecosystem 5. Soil Microbial Ecology 6. Dry Lands, Desertification and Development 7. Contemporary Issues in Geography and Environment 8. Aviation and its Environmental Impact 9. Applied GIS and Earth Observation 10. Conservation of Habitats and Species 11. Impacts and Models of Climate Change 12. Field Research: Specialism 13. Arctic, Antarctic and Alpine Systems 14. Consultancy Projects 15. Sustainable Production and Consumption

Appendix 17 Content of course of Environmental Management and Sustainability BSc (Manchester Metropolitan University)

Year 1	**Year 2**	**Year 3**
Core modules 1. Geography and Environment Tutorials 2. Field Activities 3. Geography Concepts and Practice 4. Principle of Sustainability 5. Environmental Management **Optional modules** 1. Introducing Human Geographies 2. Ecology	**Core modules** 1. Project Preparation 2. Field Course 3. Environmental Decision Making **Optional modules** 1. GIS Earth Observation 2. Urban and Rural Geographies 3. Development Geographies 4. Global Biodiversity and Conservation 5. Ecology and Landscape 6. Natural Resources and Pollution 7. People, Place and Policy 8. Vocational Experience	**Core modules** 1.Dissertation **Optional modules** 1.Tropical Land Use and Conservation 2. River and Coastal Management 3. Global Environmental Change and Ecosystem 4. Environmental Risk Management 5. Contemporary Issues in Geography and Environment 6. Aviation GIS and Earth Observation 7. Conservation of Habitats and Species 8. Field Research: Specialism 9. Consultancy Projects 10. Sustainable Production and Consumption

Appendix 18 Content of course of BA geography with transport planning

(Leeds University)

Year 1	Year 2	Year 3
Semester 1 **Core modules** Ideas in Geography Changing Worlds, Changing Places Geography of the UK Geography Tutorials Introduction to Transport Policy **Optional modules** Ecology and the Changing Climate Geography, Environment and Society **Semester 2** **Core modules** Changing Worlds, Changing	**Semester 3** **Core modules** Human Geography Tutorials with Dissertation Design Ideas in Human Geography Transport and the Environment **Optional modules** Social Data Analysis Geographies of International Development and Rebellion Human Geography European Field Class Cities and Regions; Analysis and Planning Political Geography The Geography of Resources: Securing Future Supplies The Modern City Career Preparation for Geographers Transport Economics Transport and Society **Semester 4** **Core modules** Human Geography Tutorials	**Semester 5** **Core modules** Dissertation Travel Activity and Social Analysis **Optional modules** European Cities Population Analysis Radical Geographies: Engagement, Theory, Praxis Urban and Regional Development: A case study of Athens Geographies of 'Britishness' Research Placement Autonomous Geographies, Sustainable Futures Public Transport Policy and Practice **Semester 6** **Core modules** Dissertation Travel Activity and Social Analysis **Optional modules**

Places Field Research: Leeds GIS for Human Geography Geography Tutorials Instruments of Transport Policy **Optional modules** Water and the Weather Geography, Environment and Society	with Dissertation Design Ideas in Human Geography Transport Land Use and Development **Optional modules** GIS and Spatial Analysis Qualitative Research Methods Population, Health and Wellbeing Retail Geography Human Geography European Field Class Spaces of Citizenship and Belonging Project Appraisal Transport and Society	Advanced Retail Planning Urban and Regional Development: A case study of Athens Research Frontier: Citizenship and Belonging GIS for Urban and Regional Planning Transnational Geographies Geographies of Consumption Environment and Development in South East Asia Workplace Co-operative Project Research Placement The Geographies of Childhood and Youth Physical Distribution and Logistics