

4

UNDERSTANDING THE LEARNING AND TEACHING OF GEOGRAPHY

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Among the hundreds of geography departments around the world there is a wide range of courses and degree structures. However, some features are regularly found. Early in your degree you will probably follow a set of courses/modules common to all the students on your degree scheme. Later in your degree you will probably have some choice as to which courses you study. Most of the courses will be taught using a relatively small number of teaching methods. How geography courses are taught varies much less than the actual subject matter of the courses. So, you will usually be taught geography through:

- lectures;
- tutorials;
- seminars;
- fieldwork;
- practical classes; and
- a dissertation or project.

Additionally, you will be able to learn geography through the Internet and using other resources. Each is a distinctive way of introducing you to geography. Your role in the learning process varies from the apparently fairly passive (taking notes during a lecture) to the obviously highly active (as during your dissertation and fieldwork). This chapter explains how each of these methods of teaching and learning works and what you can do to get the most from them.

4.1 LECTURES

He who can, does; he who cannot, teaches [he who cannot teach, lectures?].

George Bernard Shaw

Here is some traditional advice to new staff on how to write a lecture:

First, you tell them what you are going to tell them (set the scene). Second, you tell them. Third, you tell them what you have just told them (recap and summarize).

What I tell you three times is true.

Lewis Carroll

The lecture is probably the single most frequently used method of teaching geography (and most other subjects). A lecture involves a timetabled period of usually one hour at a regular time each week during which a member of staff will talk about some aspect of geography. The lecture topics will usually be listed in the syllabus section of the course's guide. With so much stress placed on lectures as a method of teaching, it is worthwhile reviewing why they still form the mainstay of teaching geography in higher education.

What are lectures for? Lecturers are trying to do one or more of the following things:

- start you off (and no more than that) on your study of an aspect of geography;
- give you key facts you need to know (e.g. dates, places, events, theories, formulae, data);
- give you an overview of the structure of a large field of geographical research, focusing on the essentials;

- show you how a geographer develops an argument;
- get you enthusiastic about the subject so you will want to study it further;
- challenge the *status quo* in a part of geography and suggest alternatives to the current orthodoxy;
- challenge you to re-think your views on a part of geography.

It is the last two of these – being critical of orthodoxy and of your own views – which are the most important. The critical thing is for you to be critical. Kneale (1999: 65–71) develops in more detail the idea of critical thinking in geography.

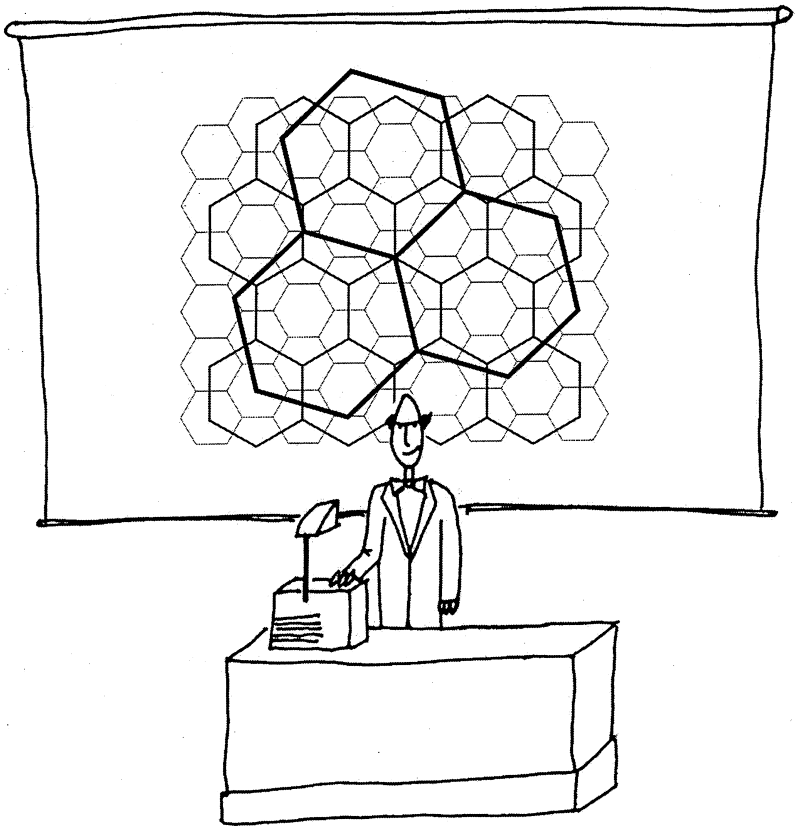
The lecture format allows an expert in a particular aspect of geography to give you an overview of the subject based on his/her extensive reading and perhaps research. That wealth of experience and understanding, distilled into a 60-minute presentation, allows you access to the key points of a large volume of work by geographers. As such, it should be a sound platform for you to begin your learning about that part of geography.

Lectures will probably not only be retrospective (in the sense of reviewing previous work) but also be forward looking, identifying the key issues for future policy or for our theoretical understanding of the subject. This programmatic aspect of the lecture will be most strongly developed in final-year courses and can be useful as a source of ideas for your dissertation or essays.

Given the popularity among staff of the lecture as a teaching device, it is perhaps surprising that the traditional lecture is criticised by lecturers as well as by students. If a lecture is to hold the class's attention for 60 minutes, it needs to be delivered in an enthusiastic manner. A lecture is, to an extent, a performance and the students are the audience; not all lecturers are top-rank performers. So some lectures will be rather dull. Also, some lecture topics are important but hard to convey in an exciting way. So, one of the criticisms of the lecture is that it is actually quite hard to concentrate on a subject for as long as 60 minutes. Studies have shown that student attention is high at the start of lectures, declines slowly to a low point after 20–30 minutes, where it remains until attention picks up again in the final 5–10 minutes. Sometimes lecturers will use various devices to counteract this cycle of attention. Some are quite simple, such as varying their tone of voice, moving to another part of the lecture theatre to talk, and showing slides or overhead transparencies (OHTs). Other ways of breaking up the lecture include asking you questions during the

lecture or getting you to discuss a geography topic with your neighbour for a short period in the middle of the lecture.

Lectures are also criticised as being too lecturer-centred and hence too passive an experience. To an extent this is inevitable with this style of teaching; other teaching methods such as tutorials (which require you to be more involved) are used to counteract this. However, this criticism is also partly wrong. You should be active in lectures – you need to be thinking about what the lecturer is saying, and summarising the lecture in your lecture notes. This requires a lot of focused effort; it is just not as visible an effort as speaking in a tutorial or rushing around on fieldwork.



'Okay class, copy down quickly Christaller's $k=132$ system'

Here are a few tips on how to get the most out of your lectures.

- 1) If you cannot attend the lecture (perhaps because you are ill), copy someone else's notes. You will still learn something from a lecture at second hand.
- 2) The key things to look for in a lecture – and to record in your notes from it – are the *structure* given to the topic by the lecturer, the *key contents* (such as dates, definitions, people, formulae, events, data and theories), and the *key arguments* which are described.
- 3) You need to be able to write notes quickly and accurately. Why not try to develop your own 'shorthand' of abbreviations for the frequently used terms in your courses? Here are some examples – *U* for unemployment, *A* for Africa, *Gn* for glaciation, *env* for environment, *dev* for development, *ch* for change. This is not unlike text messaging on mobile 'phones.
- 4) Remember that the most important thing for you to do during a lecture is not to take notes all the time (though 60 minutes of feverish scribbling is a serious temptation) but rather to *listen actively*. A tape recorder may capture precisely all the lecturer's words but it will not tell you which ones are important and why they are important. Only you can do that by thinking about what you are hearing, sifting out the key issues and noting them down.
- 5) You may want to experiment with different methods of taking notes; for example, lots of headings and sub-headings rather than text and sentences; using parallel columns of notes for different sections of the lecture; or graphical methods like mind maps and spider diagrams where items get put in boxes on the page and the boxes are linked by lines to show how the ideas in the boxes are connected.
- 6) After the lecture, make sure your lecture notes are properly labelled in terms of the course name and the lecture title. In your first year at university you might attend as many as 200–250 lectures, so obviously some sort of filing system will be helpful.
- 7) Soon after each lecture read over your notes and make sure they make sense and that you have got down all the points legibly. If not, check with a fellow student at the next lecture to see if he/she can fill in the gaps in your notes. Don't re-write your notes.
- 8) Think about the topic; go over the key points in your mind. Why is this topic important enough to warrant a slot in this course? How does this lecture relate to the previous ones in the course? Are there

parallels between this lecture and those in other courses? Do you agree with the lecturer and what he/she said or the approaches or emphases used? A lecture is not a brainwashing exercise, no matter how eminent the lecturer is on this topic. You are expected to develop your own views and be able to support them.

- 9) Any lecture is only a summary of a huge volume of material. It is like a map, showing you the intellectual topography of a subject area. For the full detail that you will need if you are to do well in your essays and examinations, you will need to do the reading which has been recommended by your lecturer. Lecture notes are the starting point to develop an understanding of a subject – and so accurate comprehensive lecture notes are better than scrappy ones – but they are only the start.
- 10) After the lecture you will need to do the follow-up reading. It might be fun to share out the reading with a friend and then compare notes. Explaining to your friend the key points in what you have read will consolidate that material in your mind, and you can learn what was important in your friend's reading.

The traditional phrase 'reading for a degree' does actually describe what the ideal student should be doing – as a guideline, two or three hours of reading for each hour of lectures.

KEY TIPS

- ✓ **Don't make notes on everything the lecturer says – just the key points.**
- ✓ **After the lecture, read over your notes and jot down the most important things you have learned from the lecture.**

Taking notes

Notes are just that – the key points to remember. Notes must be much shorter than the original but be faithful to it. Taking good notes is a skill in its own right. This is easier if you are reading a book or article since you can check and re-read and get the points correctly, but the danger is that

you copy down too much detail to remember it all. In a lecture you hear the information just once (though the good lecturer may help you by showing OHTs or PowerPoint displays of key facts, by giving you a paper handout with the key points or having a website you can check later). But even downloadable lecture notes on the web are not a substitute for the lecture itself.

Lectures are experiences as much as information-transfer devices and that experience and the lecturer's enthusiasm for the subject can help you to process and understand the topic more fully. But since you hear it once, you have time to note only the key points, and even that demands close attention – no easy matter for 50–60 minutes at a stretch. The spelling of new words, statistics or formulae can be hard to get right first time and may need subsequent checking. Notes for an essay on the topic will have to be more detailed than notes from a standard lecture.

Here is a block of text on dams. It might be from an article or the text of a lecture. Try to take notes from it while you are reading it over for the first time. To make this a realistic exercise (your time will always be limited) spend not more than 10 minutes on this – time yourself.

DAMS

Dams are one of those aspects of geography that transcend the human, environmental and physical divide in geography. They change natural physical systems in major ways. They have considerable environmental consequences. They are designed to achieve clear economic benefits. Dams also raise considerable passion, on both sides; their supporters and critics are equally vociferous. A dam will have long-term effects yet it must weather rapidly changing social, political and economic conditions. Finally dams are as much symbols as real features of the landscape. They can symbolise progress and people's mastery of the natural world, or they are emblems of our uncaring destruction of the environment and harsh treatment of the poor, depending on one's point of view.

There are about 45,000 large dams in the world today; that is one large dam opened per day since 1900. They cross 61 per cent of the world's large rivers and their reservoirs cover an area as large as Great Britain and hold as much water as the North Sea. The USA was a keen early dam builder. The USSR followed suit with an ambitious programme

between the 1930s and 1970s, while many African, Asian and Latin American countries built dams from the 1960s. Dams now irrigate up to one-sixth of the world's food production and produce one-fifth of the world's electricity.

The economic case for dams is apparently simple. Once built, they provide cheap hydro-electricity and can also be used for many other economic activities, ranging from flood control and irrigation downstream to fishing, recreation and shipping services upstream. The profiles of costs and benefits of dams differ from those for conventional power stations. In the latter, the cost of building the station is lower but the running costs are higher than for dams. Dams require huge amounts of capital and take many years to build, in part because of the need to make dams enormously strong to resist the water pressures on them from the reservoir. Yet targets and reality may be some way apart. A quarter of all dams irrigate less than 35 per cent of the area planned and another quarter deliver less than half of the promised water to cities. Average construction costs of dams over-ran by 56 per cent.

The environmental arguments are much more complex. On the one hand, flood control may alter the natural environment, but in ways that help flood-prone human communities which are more important than any changes to wildlife or habitats which the dam may cause. Silting may be a serious problem (the reservoir traps the silt that would have been washed seaward, so reducing the reservoir's storage capacity and power-generating potential). This process reduces global reservoir capacity by about one per cent per year. The Nile Delta is in retreat because the river now has so much less silt. While a conventional power station can be demolished when its useful life is over, dams are very difficult to remove; in effect, they are quasi-permanent. A number of other environmental effects from dams have been cited. The weight of water may be great enough to cause earthquakes. The raised humidity along the reservoir's banks may cause insect-borne diseases to increase. While the hydro-electricity may be generated without any direct emissions of greenhouse gases, the rotting of the vegetation along the reservoir's banks and the intensified agriculture allowed by the regular supply of water, may release even more damaging amounts of methane. The lack of new silt downstream may mean that more artificial fertiliser is needed on the farms.

Socially, dams also have many consequences, and these often focus on the effects on the communities along the river. Downstream, irrigation water that was once free becomes something controlled by others and may be expensive to buy, though it is now available year-round and not

just in the wet season. Upstream, whole communities, habitats and archaeological sites may be lost for ever – 100,000 people were displaced by the High Aswan Dam – and the communities may never be compensated. Fishing communities tend to have their lives seriously affected by dams due to fish migrations being stopped or fish being killed by changes in water quality.

Much depends on the balance of effects, and that will vary from river to river, country to country and between historical periods. In the USA, for example, money may be available to compensate those who lose out from the dam being built, and to remove archaeological sites and even to recreate habitats. In poorer countries there may be enough money to build the dam and no more than that. In arid areas the silting and health issues may be more of a problem in some river systems than in others. A lot also depends on how widely one casts one's boundary for measuring the effects of the dam. Is the boundary just the dam itself or are the indirect effects on the wider regional and national economy to be taken into account too? Is one looking at effects in the short term or the long term? One's judgement on the fairness of damming rivers may depend on whether the beneficiaries adequately (if at all) compensate the losers.

Finally, how does one weigh up the relative importance in the balance sheet of issues as diverse as electricity prices, national electricity self-sufficiency, rare species, a traditional way of life and a loss of power among local communities? Much depends on the values of the person compiling the balance sheet. There may therefore be serious arguments over the likely advantages and disadvantages of building a new dam that will go beyond the ever-present difficulties of making forecasts (particularly long-range ones) and scientific uncertainty. Such controversies have been witnessed during the last 20 years over several proposals for dams to be built in China and among those to be funded by the World Bank in several countries. Overall, the effects of dams are elusive for any one river/dam, and are very hard to generalise for dams worldwide. All in all, dams are a real microcosm of many of the issues which face geographers today.

Your notes

Your notes on this 1,018-word text might look like this.

DAMS

controversial – econ., soc. & env. effects

D as symbols of modernity or destructiveness

45K big D in world. 61% large rivers D'ed; up to 1/6 world food irrigated by D;

1/5 world elec. from D

Econ. case

cheap renewable elec.; multi-use; capital intensive but cheap to run; long term; BUT may deliver < planned irrig./water; 56% cost over-runs

Env. issues

Stop floods (good for river people);

habitats + sites lost

trap silt (not to fields – problem); ↓ power (–1%/yr); coast (erosion – Nile Δ);

health effects (insect diseases); ↑ methane (rotting)

Soc. issues

way of life changed

people displaced (100K High Aswan) – go where?

balance of power from local to outsiders?

fishing ↓

Effects vary

– by river, country, period

– LDCs not afford remedial measures

– neg. effects local/quick but benefits regional/national, longer? Any local compensation?

– understanding of effects ↑;

– effects' balance depends on perspective + world-view + self-interest;

– precise measurement/costings v. diff.

D as microcosm of geog.

These notes are 165 words long, just 16 per cent of the length of the original which was packed with detail. Some notes could be under 10 per cent of the original and still keep all the key points. See how contractions have been used (for example, 'D' for dams) and symbols (↓ for 'reduction in'). Observe also the use of headings, punctuation and gaps which show the basic structure (such as 'Econ. case', 'Env. issues'). This is much clearer to read than a solid block of text (as in the box below) which is exactly the same 165 words but laid out without spacing. It is much harder to grasp.

DAMS controversial – econ., soc. & env. effects. D as symbols of modernity or destructiveness. 45K big D in world. 61% large rivers D'ed; up to 1/6 world food irrigated by D; 1/5 world elec. from D. Econ. case – cheap renewable elec.; multi-use; capital intensive but cheap to run; long term; BUT may deliver < planned irrig./water; 56% cost over-runs. Env. issues – Stop floods (good for river people); habitats + sites lost, trap silt (not to fields – problem); ↓ power (–1%/yr); coast (erosion – Nile Δ); health effects (insect diseases); ↑ methane (rotting). Soc. issues – way of life changed, people displaced (100K High Aswan) – go where? balance of power from local to outsiders? fishing ↓. Effects vary – by river, country, period, LDCs not afford remedial measures, neg. effects local/quick but benefits regional/national, longer? Any local compensation? – understanding of effects ↑; effects' balance depends on perspective + world-view + self-interest; precise measurement/costings v. diff. D as microcosm of geog.

Why, you might ask, take any notes? Why not just read the original, learn shorthand and so lose none of the detail, or use a highlighter pen to mark up a photocopy? The main benefit of actively taking notes is that this forces you to read the text carefully. You have to work out what is important and see the sequence of the argument. You are actively working with the text and that helps you understand the issues. Details can always be found again if you need a particular fact, statistic or quotation for an essay.

PITFALL 6 EQUIFINALITY

Large-scale farming (for example, ranches and plantations) can be the result of:

- colonialism (as in East Africa);
- the settlement of areas previously uninhabited by white people (Australia, Canada);
- the amalgamation of previously smaller farms (see East Anglia or northern France);
- socialist economic planning (e.g., in the former Soviet Union).

Different processes can lead to similar outcomes. Put another way, you cannot necessarily infer the causes of events solely on the basis of their end-result.

4.2 TUTORIALS

You may also be taught geography through the medium of tutorials at some point during your degree. A tutorial is a small group of students (outside Oxford and Cambridge, usually 6–12 students) who meet with a member of staff for an hour, often weekly or fortnightly. Tutorials can have two functions, one pastoral and the other academic.

The pastoral function

Some tutorials have a pastoral function – they are a device to allow you to discuss academic and personal problems with a member of staff who may be able to sort them out. Your department can use the tutorials to keep a watching brief on your progress. The general rule is that unless a problem shows clear signs of going away of its own accord, it is better to tackle it quickly. The earlier problems are dealt with, the better; problems often become harder to solve the worse they have become.

Remember too that your university will probably also have other sympathetic knowledgeable people whose skills lie in helping with difficult issues on a confidential basis – examples include your Students' Union, a student-run Nightline, Chaplaincy, Student Counselling, a Learning

Support Unit or a college tutor. It would be a terrible waste if financial, medical or personal problems got to such a state that they threatened your continuing at university. For many people university may be their first time away from home, so some problems can be expected. Tutors will often have good ideas from their experience of previous students about how you can tackle any problems.

Academic functions

The other function of tutorials is to help you learn more effectively about geography and to develop new skills – why else would departments continue to use so expensive a method of teaching? Lectures are a much more ‘efficient’ way of teaching a large number of students.

Staff would probably argue that the benefits of tutorials derive from the way they can help you. These are:

- acquiring critical judgement (learning how to assess the strengths of various positions and arguments);
- active learning (you can be asked to learn geography in many different ways during a tutorial);
- practising how to apply principles to cases (beyond the examples given in the lectures);
- challenging attitudes and beliefs (higher education is a chance to think afresh about ideas);
- developing oral skills (you and 200 other students in a lecture theatre cannot hold a debate, but in groups of 6–12 you can);
- gaining practical skills (some of which are better taught in smaller groups);
- generating self-confidence (in your growing abilities);
- learning from other students (listening to what they say and how they argue and work);
- learning to work in a group (tutorials are just the right size for small-group work);
- promoting understanding (through debate and having the time to think ideas through);
- taking more charge of your learning and reflecting on your progress.

*What happens in tutorials***Group work**

A tutorial can be used to let you practise working within a small group of students to achieve together some common goal. You might be asked to produce a group report on some aspect of geography – together you discuss it, share the reading and research, and all contribute to the final report. Generally essays are completed by each student individually – you personally are solely responsible for it and the quality of the final essay is attributable to you. In a group project, however, you are usually collectively responsible. Somehow the group has to decide what to do, which is no easy task if, say, three vocal students each want to develop the project in a different direction. So, in a group, everyone has to learn:

- to weigh up the pros and cons of different tactics and find the best one;
- to compromise with others so that a single plan of action can be agreed;
- to work fully within that plan (even if there are parts of it that you do not much like) so that the final report will be as good as possible.

There is a general model of how groups form and work which is useful to bear in mind. The model (its originator was B. W. Tuckman) predicts that most groups go through four stages in their development.

Forming	<i>The group members are polite, a little wary of each other, finding out how each other works and reacts.</i>
Storming	<i>People start to dislike each other and discover each other's agendas and shortcomings; some hostility may be evident; the group could collapse at this stage, or its members realise that they may have to compromise with each other.</i>
Norming	<i>Realisation that compromises have to be made, so ground rules are worked out to get the job done despite each other's weaknesses and using each other's strengths.</i>
Performing	<i>The conflicts are worked through and a modus vivendi is established; people get to know and even like each other; and the job starts to get done to a common plan which everyone accepts.</i>

The moral of this model of group work is that tensions are inevitable; time has to be allowed for them to be worked through. So don't expect to get productive work done too quickly, not until the group has started to gel. Of course, the second project your group does will get going much quicker than the first.

Group work has its practical problems. One such problem is the lazy student who skives off and hopes to benefit from everyone else's efforts without contributing anything him/herself. The rest of the group will be expected by the department to try to persuade the lazy student to join in. If you cannot, tell your tutor so that the lazy student does not get a free ride on your efforts. The opposite problem is the bully – the pushy, loud-mouthed student who drives the project in his/her direction ignoring all others. If everyone agrees that the proposed direction is the best one, then that is fine. If, however, the rest of the group has good grounds for disagreeing, you need to use your force of numbers to persuade him/her to back down. Again, the necessity of compromise is critical.

Working collaboratively is rarely straightforward but the experience of working together through the difficulties to achieve a successful outcome can be among the most rewarding and valuable experiences you have at university.



'The joys of group work'

A useful device to help the group work well is to give every member a specific task. So, one person might agree to chair the group, a second might take charge of word-processing the final report, a third might draft section A, and so on. Each task is essential, big and important, and they all contribute to the overall progress of the project. For further details about group work there is good advice in Vujakovic et al. (1994).

An effective team is likely to be one which:

- agrees a plan of action and sticks to it . . .
- . . . yet can be flexible when difficulties arise;
- trusts each other to work well and is not disappointed;
- helps each other out in a crisis;
- is sensitive to each other's needs and uses each person's talents in the best way;
- learns quickly from its mistakes;
- reviews progress regularly;
- provides positive outcomes for all its members.

Group work in a tutorial is as much about learning how to work reasonably harmoniously and effectively with fellow students (and practising this skill) as it is about the specific topic of your project. Of course, in your career after university you will also have to work in groups, and so the experience will be useful and should be recorded on your curriculum vitae or résumé for potential employers to see.

ACTIVITY 10

After your next group project, jot down how well the group worked as a team.

What went well? Why? What did the group do to produce this?

What went less well? Why? What did the group do to produce this?

What did each team member get out of the project?

Could you list a few do's and don't's to help achieve an even better outcome the next time you have to work in a group?

It is worth going through this list after each group project.

Discussions

The other main function of tutorials is to practise discussing geography. This lets you learn new material that comes up in discussion. It will also help you understand things that puzzled you or were not clear in lectures

or your reading – you can ask the tutor questions so he/she can explain things more fully. But the main skill you will learn is how to discuss issues sensibly. Essays and examinations are about improving your *written communication skills*; tutorials are about improving your *oral communication skills*. This is partly a matter of gaining some self-confidence in speaking and you will never develop that if you spend the entire tutorial staring fixedly at your knees, hoping that by avoiding eye contact with your tutor you will never be asked to speak. If there is a debate, say a few words. If someone says something you do not fully agree with, say something like, ‘I see what you mean, but what about . . .?’ , or ‘how does that fit with . . .?’ , or ‘will that be true of every region?’

If the tutor asks you to prepare a 10-minute talk on something, the best preparation is to practise your talk several times beforehand so you can almost memorise it. If you have a script of what you want to say, try to lay it out with headings and sub-headings in big clear handwriting or typeface. Giving the group a handout to study while you are talking can also be effective. This handout might include photocopies of relevant maps and diagrams on your topic. You can use the handout for detailed facts and the talk itself for the overall structure and key ideas.

Remember, no one is going to laugh at you because everyone else is probably going to give the same kind of talk and will not want an aggressive tone applied to theirs.

Finally, your tutor may be the person who marks your essays, especially in Year 1. So he/she is in an ideal position to give you constructive feedback, directly on your essays and more indirectly on your general progress. If you feel that the feedback is not detailed enough to be really useful, don’t be afraid to ask for elaboration. After all, it is only through constructive criticism that you can build on the things you are already quite good at and improve where you are rather weaker.

So, although tutorials are an expensive way to teach you, they do have clear aims that many geography departments value highly enough to justify continuing to teach in this way.

You will learn a lot from tutorials but only if you participate in them fully.

KEY TIPS**In a tutorial:**

- ✓ **Listen and learn.**
- ✓ **Speak and contribute to the work of the group.**
- ✓ **Speak early on, so are a part of the process.**
- ✓ **Enjoy working with staff and student colleagues.**

PITFALL 7 I → N DIMENSIONS

‘Edinburgh is a tourist centre.’

Of course, but Edinburgh is also:

a capital city, cultural centre, financial centre, university city, historic place, a city with slums, poverty, drugs and HIV, a port, etc.

Images are often one-dimensional; they miss out a lot about a place. But despite their partial (even caricatural) nature, they are often very influential for people’s behaviour. Is that true of the process by which you chose or are choosing your university?

4.3 SEMINARS

‘When I use a word,’ Humpty Dumpty said in a rather scornful tone, ‘it means just what I choose it to mean – neither more nor less’.

Lewis Carroll

A seminar can take various forms but it usually means that a large group of students (perhaps the whole class or a third or half of them) meets for an hour or two to listen to one or more students giving a presentation on some aspect of a course. You may already have been asked to give a short talk (say, 10 minutes long) in the informal setting of a Year 1 tutorial. That will be good practice if you have to give a seminar which will be a more formal presentation, usually in the later years of your degree. It will

be more formal in the sense that it may last longer (say, 15–30 minutes), you may have to present the talk from the front of the class (as the lecturer would) and you may be expected to use presentational aids such as a slide projector, overhead projector or handouts. In the past every student might have given an individual seminar presentation. Ever-rising student numbers may mean that today you will be part of a group of students giving a group presentation. So the question is this: how are you going to use the nerve-racking business of a formal presentation to maximum advantage? Remember, your presentation may be assessed by the tutor and/or the class, so it is important to do it well.

PITFALL 8 *Ad hominem*

‘Smith was opposed to birth control because he was a Catholic.’ It may be that Smith’s Catholic faith predisposed him to this position, but he may also have had other reasons for being against restraining population growth. These other arguments also need discussion. Try to avoid personalising (that is, *ad hominem*) arguments in essays and in seminars.

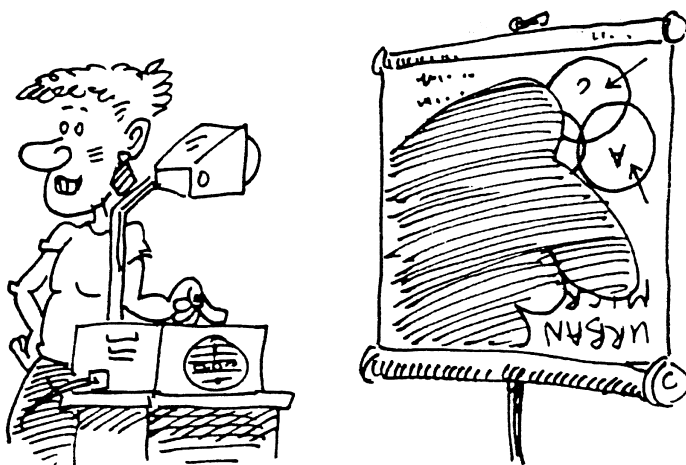
To give a good talk you need to progress stage by stage.

- 1) As you would for an essay, analyse the question or topic. Pick out the key ideas, events or approaches to it – your background reading will help here.
- 2) Write out fully what you want to say, highlighting the key points. But do not read out your text; talk to your audience. Remember that this talk is to be listened to, not read, so keep your sentences shorter than you would in an essay. Also, listeners cannot go back and re-read – they hear it once only. So help them by having a clear structure and giving them audible clues (e.g. ‘First, I want to talk about . . .; then I shall move on to . . .’). Remember also to recap, so that points which your listeners may have missed can be picked up.
- 3) A talk will often be helped by visual material. This could be a handout that summarises the headings and sub-headings of your talk, and shows the audience complex or detailed material such as maps, graphs, formulae, dates and statistics. A collage of material can be produced for

a handout using the scale-reducing facility of a photocopier and scissors-and-paste. You may well find the raw material for this handout in the books or articles you read or on the Internet.

This material might also be presented to the audience as overhead transparencies (OHTs) or 'foils' – your tutor can advise you on the different sorts of transparencies and the photocopiers locally which will make OHTs. They are a particularly effective means of showing the audience the main features of your talk, using headings and sub-headings that you can talk to. They can also act as a prompt for you, the speaker, so you are not tied to your script line by line and have something to fall back on if you 'dry up' for a moment. Just make sure they are legible – a minimum of 20 point typeface and not too many words crammed on to each OHT.

If you have access to a reliable computer display system, then a PowerPoint presentation can be impressive, but have a set of OHTs as back-up in case the system crashes – it often does!



'How not to use an overhead projector'

Giving the talk is tricky; at the front of the class, you are rather 'on stage'. Experienced speakers would give you this advice.

- 1) Practise the talk several times so that you have confidence that you have enough material (but not too much) for your allotted period of time.

- 2) Perhaps get a friend to listen to one of your practice sessions. Does your friend think that you spoke too slowly (boring) or too quickly (a gabble that was hard to follow)? If so, adjust your speed of delivery and perhaps the amount of material you are trying to cover in the time.
- 3) Speak a little more slowly than normal and build in pauses so people can take notes. Repeat key points and summarise what you have said.
- 4) Try to look up and talk to the audience as much as you can, as opposed to reading from your notes all the time. The use of OHTs helps here (but don't stand between the overhead projector and the screen, so blocking the audience's view!).

If your talk is as a member of a team, your group will need to meet regularly to plan the whole talk, divide it into sections and allocate these to speakers. However, a single handout is still needed and each speaker should 'hand over' the rostrum smoothly ('... and now I hand over to Sam who will talk about ...').

If your presentation is going to be marked, the criteria usually employed will include: audibility, clarity, structure, use of visual aids and handouts, and interest. So bear these issues in mind as you prepare your talk. Further details about how talks are assessed are given in Section 5.7.

When the seminar presentation is over, reflect on the fact that the next one you give will be a little easier as you build up experience and confidence. Being able to give a coherent and interesting talk (whatever the subject) is a useful skill for job interviews and later life generally, which is why geography departments make you give seminars. So, having gained the experience, remember to note it in your curriculum vitae or résumé as another proven skill to your credit. Further advice on giving talks can be found in Hay (1994) and Young (1998).

KEY TIPS

- ✓ **Practise your talk beforehand.**
- ✓ **Visual aids will help you and your audience.**
- ✓ **Talk to your audience; don't read out your script.**

4.4 LEARNING WITH THE INTERNET

The Internet – the global network of interlinked computers – is potentially a very valuable resource because it can help you in four ways. First, you can use the Internet to send e-mail messages. E-mail can keep you in touch with:

- your tutor (particularly useful if he/she is hard to get hold of or if you are a distance-learning student);
- fellow students, perhaps including those working on group projects with you;
- and perhaps your family and friends.

E-mail also lets you send whole documents over the Internet (called ‘attachments’) as well as short messages. So, you might be able to submit your essays by e-mail rather than by post or handing them in personally. It is well worth getting familiar with how to use your local e-mail system – your department or computer service provider will show you the current procedures.

Secondly, it is possible to join discussions over the Internet using online conferences, tutorials and discussion groups, perhaps with members from all over the world. These can be a very useful way of joining the debates on key issues and getting a fresh perspective on geography.

Thirdly, your university will use the Internet to provide you with information about your courses, the library and the various departments. You can use the local system to check what is in the library catalogue, to recall books out on loan or check the university’s rules and regulations. Some courses will have their lectures and other material on the web so that you can use these anytime.

Finally, the Internet is useful as a source of information – a global library which never closes, but is so vast it can be very hard to find what you want.

Using the web critically

The web has many advantages as a resource for studying geography because it makes a vast ‘library’ of study materials available to you wherever you are and whichever type of computer and modern software you are using.

Unlike a library, the web does not shut down in the evenings. Its contents are never unavailable because someone else has borrowed them. The web can give you access to resources even if your library is small and even if the resources you want are specialised (those from a foreign country, for example). Most of the time the web gives you quick access (particularly with the fast machines and connections found in universities) though morning access in the UK tends to be faster than that in the afternoons when North American users have come online. The web is also huge. The amount of material available from the web is still expanding very rapidly indeed.

However, one's enthusiasm for the web also needs to be tempered because not everything is on the web. Most academic books are still available only in paper form – how else is the publisher to make a profit other than by selling books? On the other hand, because publishers receive subscriptions from universities, online versions of some journals are becoming more readily available. Statistical material is less well represented on the web than on paper and much historical source material can be consulted only in its original paper form or on microfilm/microfiche.

Finding appropriate material on the web can be problematic. Whereas libraries are traditionally well catalogued by author, subject and title so you can rapidly find items, the web has grown up in a quasi-anarchic fashion. Search engines, available through most PCs, allow you to search the web for key words but these do have the tendency to produce thousands or millions of 'hits'; certainly far too many for you to inspect to see if they are what you need.

You can try to narrow down the search process by using more precise terms. So if you wanted to research urban tourism, searching for *urban* AND *tourism* together (the AND all in upper case) would give a more manageable set of results than either term searched for separately. Better still may be to search for "*urban tourism*" (the words being together in double quotation marks), which should bring forward only those items which contain that exact phrase. Also, rather than search for *urban* or *city*, search for a specific city (say, *London* or *Paris*) and then follow up links from that site. Using an asterisk in your search term (e.g. *Americ**) will bring up all materials relating to America, American and Americans, which is useful if you are not quite sure of the exact search term you need to use. As a rule of thumb, if what you want is not in the first 50 items presented to you by the search engine, it is unlikely that you are going to find it through that search. Better to try another search. Avoid – or at least be

aware of – ambiguous search terms like ‘ford’ (the river crossing, vehicle manufacturer or ex-US president?), ‘port’ (a harbour, the drink or nautical term) or ‘corn’ (wheat, maize or painful foot condition). Some web users believe that the Google search engine (<http://www.google.com>) is better than others.

You may know the exact name of the organisation you want to contact. Most web addresses use the organisation’s name or acronym (e.g. BBC) followed by a code for the type of organisation (.ac for universities; .com or .co for businesses; .gov for public authorities; and .org for non-profit-making groups). The address ends with a country code such as .uk, .fr, .ca, .de (Germany) and .ie (Ireland). US addresses uniquely have no country code and use .edu for universities. Using this pattern you can often guess correctly an organisation’s web address.

Another way to find what you want is to use a portal. This is just a website where a wide range of individual web addresses that may be useful to a particular group has been gathered into one place. Here are some useful portals for geographers.

- The CTI Centre for Geography at Leicester has a very good set of links for most branches of the subject
<http://www.geog.le.ac.uk/cti/info.html>
- Fundamentals of Physical Geography
<http://www.geog.ouc.bc.ca/physgeog/links/links.html>
- Site linked to P. Kneale’s book, *Study Skills for Geography Students: a Practical Guide* (1999)
<http://www.geog.leeds.ac.uk/staff/p.kneale/skillbook.html>
- CYBERGEO – a French site but in English
<http://www.cybergeog.presse.fr/revgeo2.htm>
- The ‘Geography for the New Undergraduate’ project at Liverpool Hope University
<http://www.livhope.ac.uk/gnu/>
- GEOsources is a Canadian site with a good range of source materials
<http://www.ccge.org/geosources/Jumpstn.htm>
- The Social Sciences Gateway gives you access to a very wide range of useful material.
<http://www.sosig.ac.uk/>

In Appendix D we provide a list, correct as of early 2002, of websites which we feel can be useful for geography undergraduates. Bookmark the websites that you find useful.

Caution

You need to be aware that websites can disappear or be radically altered at any time. So, websites (including all those referred to in this book) will sooner or later cease to operate. Books, in contrast, may go out of print but they are never ‘unpublished’; they still exist and can be read.

Referencing websites

If you want to refer to material on a website in an essay, it is important to give the correct reference to where you found the information. The reference for a website should have three parts:

- *the real name of the site, including its provider’s name (which is what appears in your text as the cross-reference to the full reference at the end of the essay);*
- *the full address/URL of the actual files or pages you used;*
- *the date when you visited the site since, unlike paper publications, websites can be changed after publication.*

Here is an example.

In the text of the essay you might write this:

‘Hurricane Zebra caused 1,000 deaths in Ruritania in January 2002 (BBC News Online, 2002)’

In the References section at the end of the essay you give the full website reference:

BBC News Online (2002) [http:// www.bbc.co.uk/news/\(the additional filenames to this story\).html](http://www.bbc.co.uk/news/(the_additional_filenames_to_this_story).html) (30 March 2002)

So, the web gives you excellent access to material, but is that material any good? Is it reliable for your studies as a geographer? The books in your

university library have all been checked by the publisher and recommended by the geography staff because they are known to be worth reading. With the web, however, no one may have checked the material for its truth, authenticity or reliability. At worst it may be wrong, out of date, biased or even totally misleading. It is virtually the case that anyone can put anything on the web. So you need to check web material for its validity. Here are some useful checks.

- 1) Is the author of the material a reliable, trustworthy body or person?
- 2) Even such reliable bodies may give a slanted view on the issue, so what might that slant be, and which other bodies might give the issue a different slant? Try to find their websites to get a balanced view of the evidence and arguments.
- 3) Are there references to other work and independently checked research backing up what is said? This does not guarantee that the website is fair but it may help you spot highly contentious sites.
- 4) As you read web material check if the presentation seems to be giving you the whole story or only a careful selection of words, images, evidence and argument.

Of course, these checks and this alertness to what you are reading should be something you display with everything you read (books and articles as well), but it needs to be kept particularly in mind with web material.

A useful website to help you to evaluate other websites (!) can be found at *The Internet Detective* (<http://sosig.ac.uk/desire/internet-detective.html>).

The future university?

If you put together all the facilities of the Internet you could create a virtual degree course using the web (and a few already exist). You read lectures on the web, join online tutorial discussions, search the web for information, submit essays over the Internet and even go on virtual field courses to distant places without ever leaving your computer. All of these aspects of the Internet already exist individually and many are now routine.

ACTIVITY 11

If you can get access to the Internet, find a website (say, that of your own town, school or university) and see how accurate, up to date and fair it really is.

- 1 Is it clear, interesting and easy to use, or is it a jumble of information?
- 2 Is it telling current and potential visitors or students what they need to know or is it just public relations and hype?
- 3 What does the site contain and what is missing?
- 4 Is it fully up to date?
- 5 Does it give interesting links to other Internet sites?

4.5 FIELDWORK

Work expands to fill the time available for its completion.
C. Northcote Parkinson ('Parkinson's Law')

Fieldwork is fun (even when it is done in the pouring rain). It is one of the distinctive features of a geography degree. Yet it inevitably takes up a lot of staff and student time; organising it safely is demanding; and it can place considerable financial burdens on students and departments. In general, students are now required to do less fieldwork during their geography degrees than previously. Some fieldwork, formerly conducted during the classic week-long residential field course away from the university, is now being replaced by day excursions in the university's local area. There are even some early attempts at virtual field courses during which you never leave your computer yet 'travel' to distant places. These rather lack one of the important unspoken merits of residential field courses – the way they let staff and students get to know each other well – which is often cited as one of the reasons for the generally good staff-student relations you find in geography departments.

Many will argue that fieldwork is central to geography. It shows you how places work and how they differ from each other. It lets you practise investigating the real world and it focuses attention on the way economic,

social and physical processes are integrated and interact in particular places. Fieldwork, perhaps inevitably focusing on relatively small field sites, emphasises the smaller scale of geographical processes (people, businesses, local organisations) and the way (inter)national forces affect small areas, and how small areas react to these external forces.

Yet within geography there are debates on the role of fieldwork today. Some human geographers will argue that fieldwork is unnecessary since, like other social sciences, human geography is concerned with processes and theoretical approaches which have little need for real-world verification. Geography should be an intellectual training and not a practical one. Fieldwork, they might argue, concentrates too much on the unique and the specific to the detriment of our understanding of general spatial processes. This group would seek to minimise the fieldwork component of geography degrees, hence saving on staff time. Other human geographers and many physical geographers would still subscribe to the traditional justification for fieldwork given earlier in this section, particularly when it is carried out in distinctive and unfamiliar environments. They might also argue that fieldwork needs to be better integrated into the

EACH GENERATION LEAVES A DISTINCTIVE IMPRINT ON THE LANDSCAPE.



FIGURE 7 *Neolithic village at Skara Brae, Orkney Islands, Scotland*

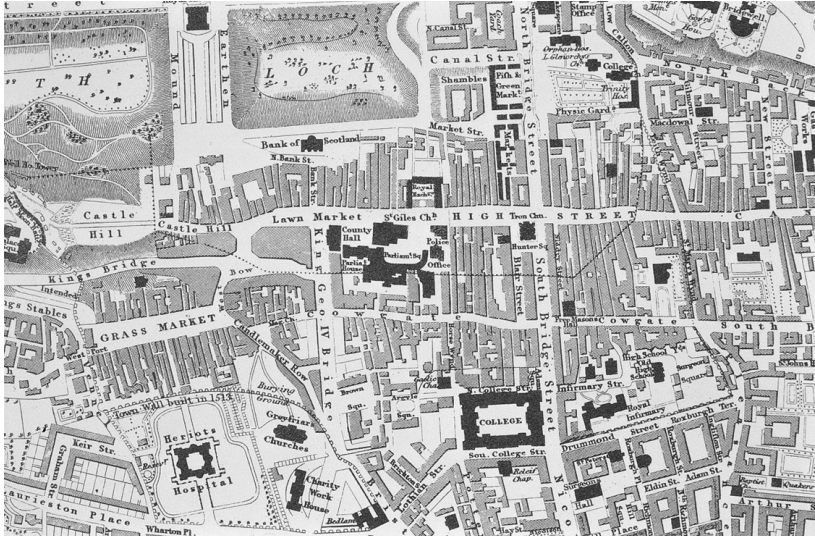


FIGURE 8 *The Old Town, Edinburgh, Scotland*

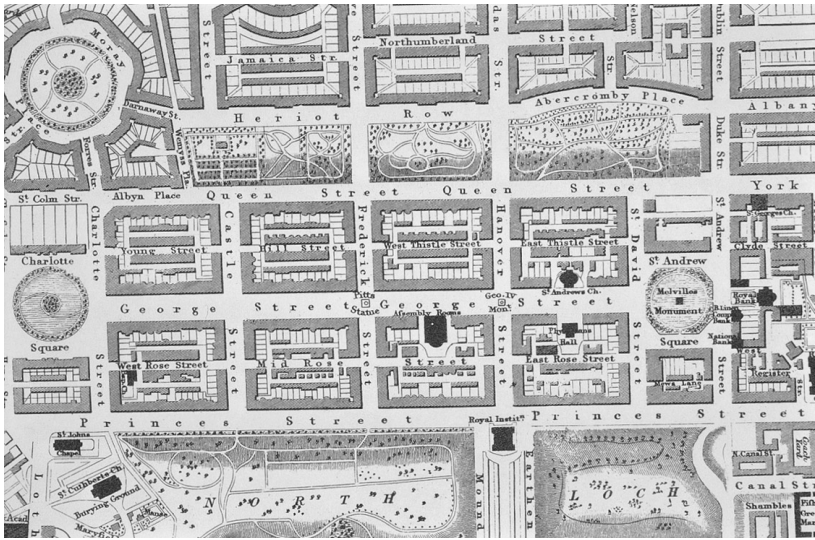
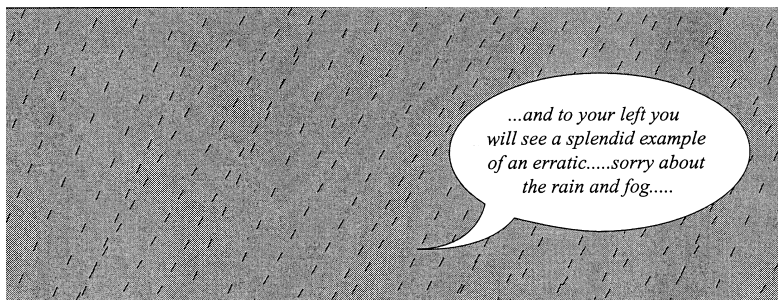


FIGURE 9 *The New Town, Edinburgh, Scotland*



FIGURE 10
Motorway junction,
Perth, Scotland

'Rain'



curriculum in terms of project design and skills acquisition than it is currently. So the role of fieldwork is the subject of some debate among geography staff.

Whatever the balance of opinion on fieldwork in your department, the main things to try to gain from fieldwork (on day excursions and residential courses) are these:

- learning about places;
- learning specific skills;
- learning how to structure a field project;
- discovering how to work around practical difficulties;
- appreciating the limitations of field methods.

These are your tutors' objectives when they take you on field visits and courses.

Learning about places

Fieldwork is fun because it takes you to new places and gives you the chance to study them in detail. You get to see why that place is distinctive, how it is changing and 'what makes it tick'. It teaches you how to observe and be curious about places and that is how research often starts – observation and asking questions.

Learning specific skills

A field excursion can be used to teach you how to use a specific method of research or piece of equipment which cannot be demonstrated in the classroom. You have to go out into the real world to learn how to conduct a questionnaire survey of the public in the street or how to measure the speed of a river's flow. The range of skills you may be taught in the field is wide – for example, mapping, surveying, sketching, identifying plant communities, sampling soils, measuring landforms, surveys and interviews of the public or officials. You may not know which of these will be useful to you in the future, so note carefully how they are carried out and any pointers to good practice in their use. Even if none turns out to be directly useful, you have at least demonstrated your ability to learn practical skills and that is a skill in its own right which is worth having.

Learning how to structure a field project

Most days, the work on a field course will be structured as you would a small research project, with a number of phases.

- Set out the aims, research problem or research questions for the day; all research, including your dissertation, needs to be clear about what it is trying to achieve.
- Select the appropriate method to tackle this research problem. Every method has its strengths and weaknesses, so choosing the best one requires an appreciation of the various methods and a reasoned argument as to which is best under particular circumstances.
- Implement the field methods – actually using the methods or equipment in the real world to collect the data or information that you need to meet your aims.
- Collate and analyse the information you have collected so as to make sense of it and see what light it sheds on the original research problem.
- Write a concise report describing the four stages above and your conclusions, illustrated as appropriate by maps, graphs or photographs (see Lewis and Mills (1995) for more detailed advice).

If these stages have not been clearly set out in a handout or briefing session, ask the tutor to explain what you are being asked to do.

Other research-type projects, and particularly your dissertation, will probably follow the same five stages, only on a bigger scale. So each day's work on a field course is an example in miniature of how to plan a project. In that sense it is worth looking behind the immediate detail of the work to see how the lecturer has constructed each task.

Discovering how to work around practical difficulties

Fieldwork is about practicalities. Things will go wrong from time to time: the tide is too high for the beach survey; your interviewee is not in when you call; the rain prevents your photography; the equipment you were to use breaks down. Fieldwork should be faultless but rarely ever is. Learning how to work round such problems is a key skill in effective fieldwork. Employers like practical people who can show that they can cope with difficulties.

Appreciating the limitations of field methods

All field methods are good for some things and worse for others. They work better in some circumstances than in others. There are better and poorer ways of putting them into practice. A good field worker appreciates

these points and so is able to choose the best methods for any particular research situation. That is a useful skill to learn while on field courses.

Notes on safety during fieldwork are given in Section 4.11.

So to summarise, fieldwork is a surprisingly ‘deep’ experience. There is the surface level of exploring a new place – travelling somewhere, carrying out an investigation and finding out why that place is different from others and how it works. Then there is the deeper level of acquiring new research skills and learning how to structure a piece of research anywhere in the real world. Finally, there is the level of critical appreciation of both specific research methods and of the use of case studies and fieldwork: you learn to assess how far they can improve our understanding of geography. Fieldwork has its limitations; you need to have done some fieldwork to really appreciate them.

PITFALL 9 DETAIL AND SCALE

Below is the course of the River Lune, north of Kirkby Lonsdale, Lancashire, as shown on the Ordnance Survey maps at the scales of: (a) 1:625,000; (b) 1:250,000; (c) 1:50,000.

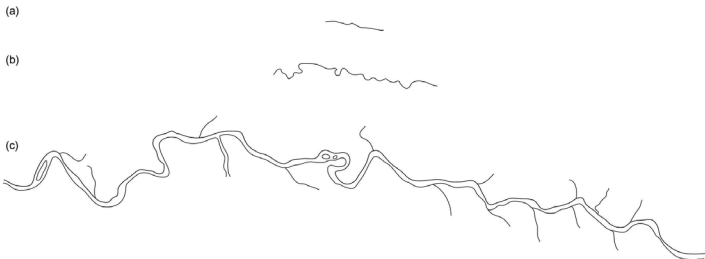


FIGURE 4 ‘The River Lune’

The bigger the scale of the map, the more detail you get. The detail may lead you to understand better the process that created the feature. Maps are deliberately-constructed versions of reality for their scale, not reality itself. Similarly, social surveys conceal behind their averages and totals the details of the wide range of conditions among the individuals who comprise the survey.

KEY TIP**When in the field, ask yourself:**

- ✓ **What makes this place different?**
- ✓ **How has this place changed?**
- ✓ **Why is this place changing?**

4.6 PRACTICAL CLASSES

In many geography courses/modules, you may be required to undertake 'practicals'. Practical classes can be found right across geography but they are most prevalent in physical geography and the teaching of methods of geographical research (e.g. statistics, cartography, computer-based methods and GIS). They are usually based in a laboratory of some kind (rather than a lecture theatre or seminar room) and they may last for 1–3 hours. You may be able to do some practicals in your own time; others may require staff to be present to instruct or for safety reasons. The practical exercise may be given to you as a handout, in a work-book or online and you will be expected to work through each exercise.

There are four main reasons why practicals are used.

- 1) They can illustrate a theoretical concept in a real-world situation. You often find that this makes the theory much clearer as well as showing how diverse and complex the world really is; it is often not as simple as in the textbooks.
- 2) Practical classes show you how to do research. They train you in defining problems, testing hypotheses, making observations, using analytical techniques and equipment safely and accurately, and presenting the results clearly and concisely.
- 3) Practical classes train you in specific skills (such as designing a questionnaire or measuring the speed of flow of a river) which are key skills in parts of geography.
- 4) Finally, practical classes can be fun, breaking down any barriers among students and between students and staff.

There is a very wide range of activities that can benefit from some practical application. In physical geography you might analyse the composition of soil or water samples. You might study maps to examine the links between the physical environment and land use. You might use computers to prac-

tise the statistical analysis of data, simulation modelling or analysing text qualitatively. The computer might give you access to the Internet which might be the source of information you quarry. In human geography practical exercises might involve creating a video documentary, practising interviewing skills on fellow students, compiling questionnaires or working on historical documents. Some of the most imaginative types of teaching can be found in the practical exercises staff devise to help you appreciate geography.

Practicals are just that – sessions to teach you how to do practical things. You need to understand what you are being asked to do, why a given procedure is useful and, in a critical sense, what its strengths and weaknesses are. Above all, you are learning how to do something carefully, precisely and successfully. Practical exercises are more likely to have a single right answer than essays or examinations. Usually practicals are assessed by writing up the aims, methods and results in a concise report with data, output or diagrams attached. Section 5.5 gives you more details on how to write up a notebook.

In addition, practicals are useful not just for a particular course, but also as a way of building up a set of skills that will come together again in your dissertation – the ultimate geography practical. Getting the most out of practicals really involves regular attendance, attention to detail, clear notes, a crisp write-up and a critical approach that leads you to appreciate when a practical skill should or should not be used and, when it is, what its limitations are.

Practicals may be done by a group of students rather than individually so the ideas on group work in Section 4.2 are useful.

Notes on safety during practical classes are given in Section 4.11.

Learning new skills is important. Learning how to learn a new skill is even more important.

PITFALL 10 FALSE PRECISION

'38.347962% of the sample had taken a foreign holiday in the last 12 months.' 'The mean river speed was 10.786351 kph.' Your calculator or computer probably calculated those figures correctly, but an answer to six decimal places is usually excessive – a spurious level of precision given the limited sensitivity of the equipment and survey methods you were using. '38.35%' or '10.79kph' should be adequate precision for most purposes.

4.7 DISSERTATIONS AND PROJECTS

If you steal from one author, it's plagiarism; if you steal from many, it's research.

Wilson Mizner

In most geography departments you are likely to have the option of producing a project or dissertation. Often it is a compulsory part of the geography degree, which shows you how highly geography staff value the dissertation.

The terminology varies but a project might be a research-based piece of work 5–7,000 words long, while a dissertation will be longer, perhaps 10–15,000 words long. Both will be the equivalent (in terms of your final degree classification) of 1 or 2 full units of study. Dissertations are often started in your penultimate year at university and handed in sometime during your final year. The summer vacation between the last two years can often be used to carry out field research for your dissertation. Many geography staff would view the dissertation as the most important single element of the geography degree, because it is here that you bring together all the skills and intellectual maturity you have acquired. The dissertation is your chance to show that you are a good all-round independent geographer. Many departments place considerable importance on the dissertation and expect you to put a lot into it. It is your chance to work on something that really interests you, and develop the study in the way you want it to go.

Fortunately, given its importance, you will probably be given specific training in how to produce a dissertation. There are also several very good books to help you with your dissertation which will repay study (Bell, 1993; Parsons and Knight, 1995; Burkill and Burley, 1996; Flowerdew and Martin, 1997; Kitchin and Tate, 2000).

A dissertation is as much a process as a product. The product is the final long report and the process is how you create that report. It is on the process that we shall focus in this section.

Choosing a topic

Probably the biggest decision comes right at the start: What are you going to study? What will your topic be?

- It has to be interesting to you.
- It should offer you scope to be creative and show the examiners your skills.
- It must be feasible for you to undertake.
- It must be safe to do.

Where might you look for ideas on your dissertation topic? Clearly a list of past geography dissertations in your department might be a useful source of ideas, though the poorer of these may not be very good role models! Your lecture courses may well have thrown up ideas about the key areas in geography today. Are there issues in the media you could explore? Another tack is to consider your possible career and then devise a project that would let you work in that sector or with that sort of employer. Alternatively, you could choose first where you want to do the research (your home area, perhaps) and then focus on what seem like the most interesting current issues there. However you generate the ideas for your dissertation, it is always useful to write them down and show them to a tutor for a quick reaction.

The research proposal

The next stage is to expand your preferred dissertation topic into a linked set of stages. The key questions now are: What? Why? And how?

- *What* are you going to study?
- *Why* is it important to study this?
- *How* are you going to study it?

The answer to the ‘what’ question will eventually become Chapter 1 (the Introduction) of your dissertation. The ‘why’ question’s answer will become Chapter 2 (the Background to your study) and the answer to the ‘how’ question will become Chapter 3 (your Methodology).

Planning something as large as a dissertation is complicated. You need to be organised so you get everything finished on time. Therefore work

backwards from the submission deadline, week by week, to fit in all the activities. You need to make plans that are feasible for you. Do you have the time, resources, skills, equipment and transport to do all that you want? How could you acquire these facilities? Is the topic safe and, if there are risks, how could you reduce them to an acceptable level? Finally, envisage the things that might go wrong – your computer breaks down, a key interviewee is unco-operative – and sketch out contingency plans for coping with these, as far as you can.

Literature review

Reviewing the literature is designed to set your dissertation in its academic and policy context. It sets out where research and understanding of a topic have reached, and what the unanswered questions are, one of which you will tackle in your dissertation.

Once you have defined a very broad area in which you wish to do your dissertation, it is advisable to read widely around the subject to see what the key questions are. It is often helpful to envisage your dissertation as being at the point of overlap between several big sets of literature. So, for example, if your dissertation was going to be about farming and pollution, then the relevant sets of literature would include the following:

- EU and national legislation on and approaches to pollution;
- trends in agriculture;
- agricultural pollution specifically;
- policy evaluation.

You will not need to read everything on each of these large topics (you would not have the time to, anyway). Only read those aspects which will affect your farm pollution topic. The advice on reading and taking notes in Sections 4.1 and 4.10 will be useful here, as is the advice on essay writing in Section 5.4.

As you read around your subject, always keep your topic in mind. You are not reading for its own sake; you are reading specifically to find material that will be relevant to your research, that can include ideas, models, data, references, examples, techniques or paradoxes. You are not so much reading as hunting through the literature, and you have thought enough about the topic already to be able to recognise your prey when you come across it.

During your reading you need to look behind the actual literature and consider what theoretical stance it is taking and what principles or positions it is based on. Does it take a free-market or communitarian position? Is it concerned with sustainability? Does it support a particular theoretical position or approach to the topic that you may already have come across during taught modules? Is it clearly process-based, quantitative, qualitative, mathematical or experimental in approach? Are there moral dimensions or practical consequences explicit or implicit in what you are reading? You may want to follow or question these underlying assumptions about how your topic should be approached; you will certainly benefit from being aware of them.

It is important to look widely for items relevant to your dissertation, utilising the World Wide Web, GeoBase, library catalogues, review articles (e.g. in *Progress in Human/Physical Geography*) and the latest journals and books on your topic. Whenever you find something useful, remember to note carefully its full reference as well as the interesting material itself.

Research design

Research design is about specifics and so it is particularly difficult to give general advice on it. However, there are four issues worth raising – theory, topic, practicalities and argument. Your chosen methodology will have to be consistent with, and appropriate for, all of these.

1) *Your theoretical stance* This will have some effect on your methodology. If you are a positivist and realist who admires the ‘scientific method’, then you will tend towards types of enquiry and methods (field measurement or experimental/laboratory studies) which produce statistical data and which emphasise sampling and inference, replicability of results, simple explanatory models and the identification of general trends or processes. If your theoretical position is more idealist or social constructivist, then you will use different methods designed to achieve a better understanding of how individuals interact with each other and perceive and understand their world.

Here are some questions which may help you to define your theoretical position.

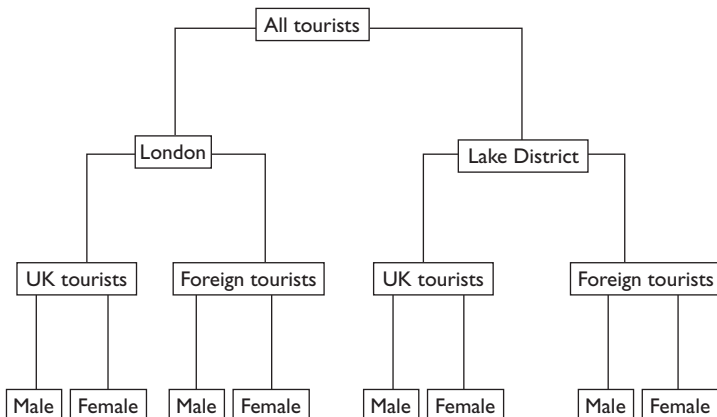
- How objective are you hoping to be?
- How representative of wider conditions do you want your results to be?

- Do you want to fit your work into a wider structure?
- Do you want the reader to empathise with the people studied?

2) *Your topic* Your topic will also affect your methods. A focus on land use, political struggle or pollution will lead to different types of research question and you will seek to find or use certain sorts of data specific to that topic. A study of agricultural land use in Ireland will need different types of data (and different ways of collecting it) than a study of environmentalism among new-age travellers in France. It is ‘horses for courses’ when it comes to research design and the reading you have already done on the topic may suggest some research designs and methods you could use.

3) *Practicalities* Can you find the people or data you want? Is it possible to travel to the field sites or to obtain the equipment needed to carry out certain research procedures? Can you learn the key skills required (for example, to operate a piece of equipment or learn a foreign language)? These issues will constrain what is feasible given the time and other resources available to you.

4) *Your argument* Finally your style of argumentation will also affect your research design. If you want to compare two areas or sets of firms or social groups, then your research will have to be structured in sections to cover these areas, sets or groups. If you want to compare those who have participated in a scheme with those who have not, the survey method will have to be able to identify and study these two groups separately. Look at the design below.



By carrying out sub-surveys of tourists in two places (London and the Lake District) you can compare different sorts of tourist experience (metropolitan and rural), which you cannot do if you confined your research to one case-study area. By separately studying UK and foreign tourists in each area you get a better view of which perceptions of place and tourist attitudes are common to all tourists and which are specific to particular nationalities in particular places. The gender division not only allows you to compare the general experience of being a tourist for men and women, but also lets you see whether that difference varies by nationality and for urban and rural holidays. A design as complex as the one above gives you a great deal of scope to tell an interesting story about tourism. It also requires you, when planning the study, to think ahead to the kinds of arguments and the structure of the results chapter long before you actually start the fieldwork.

The complexity of the research design above should probably be paralleled by a diversity of study methods. A study of tourism in London and the Lake District may need a general survey of large samples of UK and foreign tourists to find out what they think and do. It may also be helped by a more detailed study with a few tourists in both areas to appreciate their attitudes to these areas in more depth than a fleeting on-street survey can hope to give. You would probably want to interview key officials dealing with tourism and perhaps gauge the residents' views on the industry. A study of old maps and photographs and the media output about the area could also prove useful, as might an examination of the area's tourist image as promoted in brochures, guidebooks, photographs and souvenirs. In short, you should use a variety of types of survey and enquiry, each able to provide you with a distinctive slant or type of information and understanding on the topic.

PITFALL II ECOLOGICAL FALLACY

If regions with a lot of well-educated people have many cases of burglary, this does not mean that the well-educated are burglars. Features which are associated with each other at one spatial scale (here, educational attainment and burglary at a regional scale) are not necessarily associated with each other at any other scale (well-educated people as individuals being burglars).

In 2001 the World Bank showed that low-income countries which traded a lot had grown faster economically during the 1990s than low-income countries which traded less. From this result you might conclude that countries benefit more from free trade (a key feature of globalisation) than from protecting their home markets or aiming for self-sufficiency. This does not mean that all (or even a majority) of the individuals or regions within a country can expect to benefit from free trade. Whether that is true can only be determined by studying the trade/benefit relationship separately at the level of individuals or regions.

Different explanations and interpretations are often needed for different geographical scales.

The concluding chapter

This is perhaps the most difficult chapter to write and should not be rushed. You need to leave enough time to draft this chapter and then review it a few days later. The concluding chapter is not just a summary of the preceding chapters. Rather it is:

- a considered review of the key questions you set out early in the dissertation;
- an assessment of the effectiveness of your methodology for answering those questions;
- telling the reader what you have learned on the basis of your research results.

Avoid just repeating your results, survey by survey. Focus on the key questions, such as:

- what happened?
- why did it happen?
- which policies worked and which did not?
- how is the process (human or physical) working?
- is the situation (human or physical) improving or worsening in any sense?
- who has gained or lost out?
- what is affecting what?

This chapter is also the place where you might set out your recommendations for future policy or comments on the future course of events. These recommendations should be based on your results and not just on your personal views.

Some examiners may regard the quality of the concluding chapter as indicative of the overall quality of the whole dissertation.

Summary of advice

The keys to a successful dissertation are really quite straightforward – it is just tricky to remember and implement them all:

- a good topic with lots of potential is essential;
- tell your examiners which general geographical issue your dissertation is a case study of;
- be bold in your planning (it may not all come off but aiming too low at the start is far worse);
- examiners are often impressed when a student approaches a topic from different scales and uses different approaches;
- tell your examiners what you have learned from completing your dissertation;
- be boringly organised (it's quicker in the long run) since a dissertation is really as much a planning and management exercise as it is an intellectual one;
- expect something to go wrong, and don't panic when it does;
- keep in touch with your supervisor (he/she will help keep you on the right lines and up to the right standard, and his/her advice will be vital if there is a crisis);
- *and finally remember to enjoy your dissertation – it is the main part of your degree where you really are in charge and can develop along your own lines.*

More details on how dissertations are assessed are given in Section 5.6 and Appendix F. Notes on safety and risk assessment during dissertations are given in Section 4.11. Your ethical responsibilities while carrying out research are discussed in Section 4.13.

During your dissertation you will inevitably learn a lot about organisation, problem solving, independence and, indeed, about yourself. These lessons can be used to enrich your curriculum vitae or résumé. Details on this are given in Section 6.8.

KEY TIPS

- ✓ **At last, you're in charge of your studying!**
- ✓ **Be bold in your planning and careful in your work.**
- ✓ **Be clear on the aim of your work.**
- ✓ **What is the 'big issue' to which your dissertation will relate?**

4.8 OTHER METHODS OF TEACHING GEOGRAPHY

So far, we have looked at the principal ways in which geography is taught at university. In addition to these, there are other methods which are used less often.

Work-based learning

You might be given a period of work experience (sometimes called work-based learning) where you work outside the university with an employer or organisation on a project of mutual interest. Usually the department will set up the link and the project, and then train you in how to work with the employer. Work-based learning can be used to give you an appreciation of how real-world organisations operate and it may also require an end-of-placement report which will be assessed. Clear oral communication and good team-work will be important for the success of a placement, as will meeting deadlines and being a congenial colleague. Work-based learning can take many forms but you need to ensure that you record on your curriculum vitae or résumé what you did and what you gained from it. At the end of the placement you can prove to potential employers that you can work successfully in the real world.

Reports and the media

You may also be set various other types of exercise – writing a newspaper report in the style of a journalist on a geographical issue; producing a poster (see Vujakovic (1995) for advice); producing a video (see Lee and Stuart (1997) for guidance); or writing a guidebook to an area. Each of these exercises is giving you practice in different styles of writing for different audiences, and in Section 5.8 we expand on how to do well in these tasks.

Foreign exchanges

A few departments will have foreign exchanges where you spend part of your degree studying geography at a university in another country. Exchanges between the UK, North America and Europe are the most common examples. Aside from practical matters – the cost and possible foreign-language requirements – perhaps the key advantage with foreign exchanges is the way they let you experience another national culture and another university system. They are well worth considering, if available.

4.9 LEARNING TO USE OTHER RESOURCES

Among the other resources you can use to learn geography are the following:

- newspapers
- printed study packs
- computer-based modules and computer-assisted learning (CAL)
- collections of slides and photographs
- maps
- audio/video cassettes
- material on CD-ROM (such as statistics)
- microfilm/microfiche (for example, historical records).

Newspapers

Newspapers can be a useful source of information for the geographer interested in events and their portrayal. Newspapers used to be available for study only in paper form. Most libraries had the space to store only a few newspaper titles (perhaps one or two major national ones and some local ones). The arrival of microfilm and then microfiche copies of the newspapers from the 1960s reduced the storage problem, but 35mm roll film and microfiche are awkward media to use. Finding material was always difficult because, unless you knew the date an event happened or was reported, it was laborious to search through the newspapers to find all the material relevant to your study. In the UK only *The Times* had a complete printed index to articles; for other newspapers, their index, if they had one, was selective and limited.

This is one area where technology has transformed the usefulness of the source material. In the 1990s came CD-ROM versions of newspapers. These take up even less space so university libraries can increase the number of titles they take. The CD-ROM format also allows automated searching. You can type in some key words and all the articles on your topic will be listed for you to read. National newspapers are more likely to be available in CD-ROM format than local ones. However, the CD-ROM format often omits the advertisements and other minor elements of the newspaper and you cannot see the original layout. Photographs, graphs and diagrams are often not included either.

The advent of the Internet has allowed newspapers to put their editions on the web. This gives you rapid, user-friendly access to the latest issues. You can access a very wide range of newspapers from across the world (you are not limited to those your university library can afford to buy) and search facilities for key words are usually available.

Newspapers are useful in two senses. First, they provide sources of information of types not available in official statistics or textbooks – current affairs and local events, for example. Secondly, they are interesting for how they portray the news – indeed, for what they consider to be newsworthy. This in itself is a fascinating study. You can compare how a story is covered (if at all) by left-wing and right-wing newspapers, by local and national ones, by the broadsheets and tabloids, and by those in your country and in foreign ones.

Study packs

You will usually be guided towards the study packs and computer-based modules by staff at the appropriate point during your course. The collections of slides and maps and the other resources are more likely to be useful during projects. Some of this material may be kept in your department, and some of it will be in the university library. There is more to geography than words in textbooks and journals, and these other resources can expand how you study places and communicate your findings.

Study packs and computer-based modules have the advantage that you can access them when convenient for you and work through them at your own pace. This can be particularly helpful for part-time students and those with other commitments. The chance to find your own materials to support projects is good training in being creative and learning how to find

what you need – both of these are good career skills as well as enjoyable in themselves.

4.10 THE LIBRARY AND ICT

The true University of these days is a collection of books.
Thomas Carlyle

The library and information and communications technologies (ICT or computer systems) will be important resources for you throughout your geography degree. These are where you will find the references to supplement your lecture notes and the background reading for your essays. They are complementary sources. Libraries tend to be well catalogued (it is easy to find out what is in the library) but it may be difficult to get hold of the actual item when you want it, if it is in heavy demand. The contrast is with ICT. The information resources available through ICT are not well catalogued (it is not easy to find relevant, good-quality material for essays on the web) but once you do find something you want, it is usually easy to get a copy by downloading it (providing the computer system has not crashed!). So you will need to use both your library and ICT facilities to get the reading material you need.

Libraries – finding things

Each university differs in how it organises its library services: one central library or several departmental libraries; different classification systems for the books; different opening hours and borrowing arrangements. Yet there are a few general tips for using university libraries to best effect, bearing in mind that they are big, complex and heavily used facilities.

- 1) As soon as you arrive at university, learn how the library works. Pick up leaflets which describe the layout of the library buildings, their opening hours, and the length of time you can borrow different types of material. Walk round the library to get its layout clear in your mind. Practise using the online computer catalogue to track down books and practise finding them using the ‘classmark’ as your signpost to where they are shelved. Attend any training sessions on the library run by the university or your department. The library probably has web pages that will tell you a lot about how it works.

- 2) If a book or article is given as an essay reference it is likely to be in heavy demand. The library have may put it in a special collection with short loan periods. It is very useful to do the reading well in advance of the deadline for submitting the essay, even if you leave writing the essay until nearer the deadline.
- 3) If the library does not have the item you want (or someone else has borrowed it) you can use the catalogue to do a 'subject search' to see what else they have on that topic. Browsing along the shelves at the classmark where the missing item should have been may also help you find other relevant material on the topic. The library catalogue is often available through its website so you may not have to be in the library building to check its stock.
- 4) When you borrow books from the library, make sure you return them on time so that others can use them.
- 5) If you get stuck, ask the library staff for help; they are there to answer your queries.

ACTIVITY 12

Go to your university library and check that you know how to do the following:

- use the computer catalogue to check whether the library has a book or journal on the reading list of one of your courses;
- find the item on the shelves;
- borrow it.

You will need these skills throughout your degree course, so it will save you a lot of time if you learn them as soon as you can.

Having found the items you need to read, what next?

How to read (an academic article or book chapter in 20 minutes)

At university you will be given long reading lists for each module and will be expected to read widely on that subject. So, having found the books and articles in your university library, how do you read them quickly enough to get the work done on time and still have a social life?

There is not enough time to read carefully every word of every reference you are given. The faster you can do the reading, the more you can read in a given amount of time. Speed here does not mean speed reading. It means reading at normal rates but reading selectively so you find the key points quickly and make good notes on them.

- *Think why* you are reading the article or chapter, and what you expect to learn from it. What does the title of the article or chapter tell you?
- *Carefully read* the abstract/summary, the introduction to the article or the first paragraph of the chapter – this will give you the background and aims. (5 minutes)
- *Skim read* the other sections (literature, structure, methods, the rest of the chapter), noting examples or what seem to be key facts, arguments or examples. Often the maps, diagrams or graphs will be immediately helpful. (5 minutes)
- *Carefully read* the conclusions/discussion or final paragraph of the chapter. This will summarise the key results and the author's conclusions and interpretation of the issues. (5 minutes)
- *Make brief notes* (<100 words) on what you have learned from the article or chapter. This will summarise the message in your own words, which is useful for essays and examinations. (5 minutes)

So, 20 minutes to read an article and extract the key points.

Some of the tips on layout and contractions given in Section 4.1 on taking notes during lectures may be helpful here too.

ICT

As with the library, ICT services are organised differently in each university and these arrangements often change every few years as computing equipment, networking facilities and software are updated. The first step is to get your computer username and password when you enter university. These unlock the other facilities which are available via the computer system.

- 1) As with libraries, find out how the computer system works and what is available. So, pick up leaflets, attend training sessions and, armed with your computer username and password, log into a computer and explore the system.

- 2) If you bring your own computer to university, it is helpful if its software is compatible with the university's system. If you don't have your own computer, find out quickly where the public-access computer laboratories are and their opening hours (some will have 24-hour access).
- 3) You may already know how to word-process, but if not, learn as quickly as possible, preferably using the software which is standard in your university system. This will help enormously with your essays. Look for courses in your department or elsewhere in the university or use online training courses. Or even learn with a friend.
- 4) ICT may also help you get access to background material for your essays, perhaps using the Internet. You can do searches to see what is available on computers around the world on 'development', 'Africa' or 'glaciation'. The answer is likely to be that there is a huge amount available and that much of it is either irrelevant, too basic or produced by biased sources. It is difficult to find good relevant material via the Internet for university-level essays. If you do manage to find something, remember to mention in your essay the source of this information, using the web page's address (technically called its Uniform Resource Locator or URL) – see Section 4.4 for the details. Keep a notebook of the URL addresses of useful websites or 'bookmark' them if you have your own computer.
- 5) Use your ICT facilities to the full. Explore the available software and try it out. Some familiarity with a wide range of software will be useful in career terms.
- 6) If you get stuck with the ICT facilities, remember to ask for help from computer staff or fellow students; that is how to learn more about the systems.

ACTIVITY 13

Which new ICT skills have you learned in the last six months? This could be a single skill (such as sending an e-mail or creating a spreadsheet) or the use of a new piece of computer software. Add these skills to your Personal Record.

Which new ICT skills would you like to try to learn in the next six months?

KEY TIP

- ✓ **For a good degree in geography you need to know things and you need to know how to find out new things. Libraries and ICT can help with both of these.**

4.11 SAFETY AND ASSESSING RISKS

Every geography department should have taken care to ensure that everything it asks you to do is fully safe, especially in terms of laboratory practical classes, fieldwork and off-site projects and dissertations. Absolute safety can never be guaranteed, but staff should have taken all reasonable precautions against all reasonably likely risks. This includes your safety with respect to accidents in the laboratory, natural hazards (for example, when working near rivers or cliffs) and dangers to your personal safety while in rural and urban environments. You could ask to see the risk assessment of your impending fieldwork. You and your tutor should work through a risk assessment of any fieldwork or projects before you start.

If you ever feel concerned about your safety or the precautions that have been taken or should have been taken to minimise risks, you should bring your concerns to the attention of your tutor, course leader or someone in authority in your department. Equally, the department has the right to expect you to behave sensibly when in potentially risky situations and to take all the precautions you were told to take as well as exercising normal commonsense.

Assessing risks

There are some safety risks in studying any subject which uses more than just lectures and tutorials. When staff ask you to take part in practical classes, particularly those in physical geography laboratories, they will have checked the tasks carefully to ensure that they are safe when you follow their instructions on what to do. Similarly, when staff take you out in the field they will have assessed the route and activities to avoid any dangers, again assuming that you follow instructions.

Of more concern is when you plan your own fieldwork or laboratory activities – perhaps for a project or your dissertation. Here you are setting

the agenda and so only you can accurately assess the risks. Most departments will actually require you to fill in a Risk Assessment Form and discuss it with a member of staff before you begin the work. The aim is to ensure that you have thought through all the stages of your work, reviewed each step for dangers, and have done all that is feasible to minimise those dangers.

Total safety is as unattainable on fieldwork as it is in any other aspect of life, but you can ensure that all reasonable steps have been taken to avoid unnecessary risks. 'Reasonable steps' might include the following:

- checking all laboratory practices with staff before you start them;
- not working alone in a laboratory;
- ensuring that you have been trained formally in the use of all the equipment that you might need;
- leaving a written note of your itinerary for the day with someone else and reporting back to them periodically;
- wearing a life jacket/vest when near rivers, lakes or the sea;
- taking a mobile 'phone with you when on fieldwork;
- checking whether the area in which you will be working has adequate signal strength for your mobile 'phone system;
- being accompanied on fieldwork by a companion;
- not working in dangerous areas in terms of physical hazards (for example, snow, cliffs, rivers) or in danger of personal assault.

Your tutors will have been trained to use their experience to ensure that you don't miss any safety-critical aspects of your work.

It is also important that you and your tutor bear in mind that issues like your normal level of mobility and the condition of your health may lead to a different assessment of risks for you than for some other students. If you are prone to epilepsy or suffer from diabetes or a heart condition, one may take a slightly different view of the 'reasonable steps' that should be taken, even when your condition is fully under control and not an issue during normal classroom and university activities. Your tutors need to know such things if they are to advise you fully.

4.12 COMPLAINTS

Franklin: *Have you ever thought, Headmaster, that your standards might perhaps be a little out of date?*

Headmaster: *Of course they're out of date. Standards are always out of date. That is what makes them standards.*

Alan Bennett

It is unlikely that you will have a serious complaint about how you have been treated by your department, but occasionally things do go wrong. Each department should have both a code of practice of how ideally it should treat students and a formally approved complaints procedure. Both these documents should be widely advertised on departmental noticeboards and in handbooks given to students. It is usually advisable to pursue complaints according to your local complaints procedure, once you have satisfied yourself that something really is amiss. Sometimes it is best to take the matter up initially with the member of staff most directly concerned – the course tutor, for example, if you feel that an essay has been marked unfairly. In other cases (for example, if you are being harassed) the head of department might be a better person to contact. You could ask your year representative to raise the issue at the next meeting of the staff–student committee or Board of Studies. Your Students' Union may be another source of advice.



The exact procedure will depend on the nature of the problem, but most departments now accept that occasionally things will not happen as they should and that it is in everyone's interests that complaints are dealt with promptly, fairly and according to an established procedure.

4.13 RESPONSIBILITIES

It is hard to avoid this section seeming very stern. This is unhelpful but 'responsibilities' are a serious matter. Going to university implies a set of *mutual* responsibilities. On the university's part, they have to teach you well, provide the necessary resources for your studies, and support you academically and personally while you learn your subject. They need to strive continually to update the education they provide.

Your parallel responsibilities are worth setting out here. You are responsible for your education and making the best use of the university's teaching facilities (including the staff) and support services. You share with the university the responsibility for ensuring your safety (see Section 4.11). You need to act fairly on plagiarism and collusion (see Section 5.4). Try to avoid the use of language which may offend others (sexist or racist language, for example). You may meet opinions with which you seriously disagree; and others may disagree fundamentally with you. That starting point for academic debate needs to be handled carefully and with respect for others' sensitivities otherwise grave hurt can ensue. You have responsibilities to your fellow students generally, supporting their learning (getting a degree is not a competitive sport where everyone loses except the one winner) and you should certainly not impede other students' studies or harass them. Abide by the rules of the library and computing service. Also you need to work fully with fellow students during group work.

When you do research (projects, fieldwork or your dissertation) you have important responsibilities to act ethically.

- Don't study people covertly; their informed consent is needed.
- Respect local cultures.
- Keep information you collect safe and confidential.
- Be particularly careful when dealing with vulnerable groups who may not be able to give their informed consent (the young and elderly, for example).

- Protect the physical environment by avoiding erosion or damaging plant communities or animals.
- Don't endanger or frighten others by your behaviour.

Recognising these responsibilities and living up to them will help everyone at university.

Geography has traditionally used a wider range of teaching methods than many other subjects and the range has tended to expand further over the last few years. This is a major strength of geography at university, since it will give you a more varied experience of higher education than if you had chosen any other subject. Nothing but lectures, essays and examinations, year after year, might get rather tedious. This chapter has tried to explain the methods of teaching and learning geography and suggest how you can get the most out of them.

Of course there is also the question of how, as a geography student, you will be assessed, and the next chapter describes the different methods of assessment used in geography departments, and how you can do well with them.