WEDC Water Engineering and Development Centre

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Study Guide

Advice and information for distance learners

September 2021

Loughborough University

Welcome!

Thank you for choosing to study with WEDC.
We hope you enjoy your distance learning programme.

To get started, please familiarize yourself with the contents of this guide, which you will find useful both for your first module and throughout the course of your studies.

The *Study Guide* has been designed to:

- introduce you to learning with WEDC;
- offer you a variety of approaches to help you learn;
- help you develop more effective ways of learning;
- support you to plan and carry out your coursework assignments, making the most of the time available; and
- help you produce work of the highest quality.

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1 Becoming a distance learner

In this section:

- understand what it means to study by distance learning with WEDC
- identify factors that will help you learn

What does distance learning with WEDC involve?

We believe our postgraduate programmes are unique in your area of study, which is why we have received so much interest from over 50 countries across on the globe.

For the distance learning option, the module materials will be made available online via the WEDC website once the module session has started and payment has been received. We will then issue you with a username and password to access the materials. The welcome page will direct you to our web-based learning management system (LEARN) where the materials are stored.

There is also the option to print the core learning materials (those that are not interactive) as we understand that some parts of the world may not have easy access to computers, the Internet, video, DVD players or audio equipment. The entry page to all our programmes is available here:

https://www.lboro.ac.uk/research/wedc/programmes/

Access to email or the Internet will also be necessary for submitting an electronic copy of each assignment. We need an electronic version because we use this with the TurnitIn software to check for plagiarism (see Section 7).

For the *Research Dissertation* module, occasional access to the Internet and/or a good library will be necessary.

Learning with us

Our programmes involve you, the learner, and us, your tutors, in a cycle of study, directed assignments and feedback.

Find out up-to-date information about distance learning here: https://www.lboro.ac.uk/research/wedc/programmes/

Study

Core texts in a module present you with defined learning objectives, detailed yet focused information about the subject, and references to the accompanying resources. Once you have enrolled on a module, you will receive everything you require to get started.

Assignments

As your module progresses, you will be required to submit assignments. An assignment is your response to set questions based on the materials you have studied up to a particular point. The mark for each assignment contributes to your module mark. There are usually two assignments to submit for each 15-credit module.

Feedback

Feedback is essential to the learning process. It gives you information you need to progress with your study by answering two basic questions:

- How am I doing?
- How can I improve?

Feedback takes the form of constructive advice provided by your tutor when you have submitted each assignment. You may also ask for advice about areas of a module that may or may not be related to an assignment. You can do this by emailing or telephoning the Module Leader directly, or sending a request by post. Contact via Skype or a similar system can often also be arranged.

For contact details refer to 'Module Information' tab on the module home page on Learnand select 'Module Leader'.

For further information turn to Section 5: Assignments and Assessments

Learning how to learn

Within the context of your distance learning programme, the learning process consists of a cycle of events. Learning takes place at every stage of this cycle, pictured on the right.

Read

For most modules' your main source of learning is through reading the module notes and supporting material. Whilst increasingly there are interactive learning materials (captured lectures, video, animations etc.) reading is still a core requirement. Many module notes are highly illustrated which presents certain information in a condensed and accessible form, as well as giving you an opportunity to take a short break from reading!

Reading efficiently, however, is an important skill that will be of benefit throughout your studies. There are several skills involved with this process.

For further information turn to Section 3: Reading efficiently

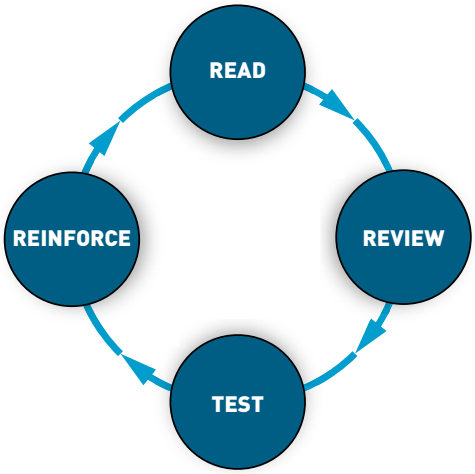
Review

The ability to reflect on what you read is one of the most important skills you will need to develop throughout your studies. Note-taking is one approach that will help you reflect and review your thoughts. The actual process of making notes helps you gain a deeper understanding of the subject and capture the essential points of a topic.

For further information turn to Section 4: Making notes

Reinforce

Relating what you have learnt to a real life situation reinforces your learning. This is why case studies are an important feature of our modules. Another way of reinforcing your learning is to consider how it relates to your own current working situation.



Recommended book

The final module in the MSc programmes is the *Research Dissertation*. One of the books that we suggest you read is *The Good Study Guide* by Andrew Northedge, which is published by The Open University in the UK.. One student suggested that we strongly recommend that book to distance learners right at the start of their studies, so we do so here.

2 Organizing yourself

In this section:

- identify the amount of time you may have to spend working on a module
- identify your main activities
- break down activities into tasks
- prioritize effectively
- relate tasks to time
- make action plans

Time management

Time management is an essential skill to develop for distance learning — you are obliged to take responsibility for your own work, ensuring that it arrives at WEDC by stated deadlines.

Through the discussion of simple time management techniques, this section will help you to use time effectively. Effective time management can be broadly defined, but in this section, we will focus in particular on the need to manage individual tasks arising from your studies.

Study time

It is difficult to manage time without knowing for how long you will be studying. We are often asked how much study time is needed to complete a module. Unfortunately, there is no single answer that applies to all students, as people learn at different rates and some may have more background knowledge of a subject than others.

We offer the following as a guide:

Study of module notes, and additional resources:	50-65 hours
Supplementary reading:	10-25 hours
Assignments:	40-50 hours total

Each 15-credit module is of a fixed duration aligned with the University's semester timetable so you will need to plan your study accordingly.

Research Disseration is a 60-credit module which is studied over a period of several months, with a total estimated study time of 450-600 hours.

Key stages in managing time

The following key stages will help you manage your time:

Be aware...

...of all of your commitments — study, social, family...

Be realistic

- What time demands do these make?
- What order of priority are they in?

Make plans

- What actually needs to be done?
- When does it need to be done by?
- When will you do it?
- How will you do it?

Evaluate your progress

- How are you getting along?
- Are you on schedule?
- What can you do swiftly and efficiently to get back on schedule?

Time management revolves around one essential rule: that time is not allocated randomly.

You must actively distribute time among your activities.

Be aware

What broad activities take up your time?

One key to successful time management is to be aware of all the demands upon your time. Only then can you plan time around them. When considering such demands you should include course requirements, spare time activities, work and family commitments as well as time for eating, sleeping, shopping and so on.

Make a list of your key activities. Try to express these activities in seven or eight key areas. This will help keep the list manageable.

What do these activities involve?

Once you have identified all of the demands on your time, try breaking them down into smaller tasks. For example, when planning a coursework assignment, the main activity can be broken down into clearly distinct tasks as follows:

- **Think** — time to develop an overview of the assignment, establishing aims and objectives.
- **Plan** — time to draft an outline of the assignment, what to say at the start, what to say at the end.
- **Write** — fleshing out the plan, putting in the detail.
- **Check** — reviewing and revising the draft.

These tasks can also be subdivided into smaller tasks.

The simple identification of key activities and the subsequent division into tasks presents you with a more realistic approach to allocating your time.

Be realistic

Time management is the process of allocating tasks to the time periods available. You will need to estimate how much time any one task will demand in order to slot it into an available time period.

However, there are different sorts of activities which demand different sorts of time. You should consider the type of work which needs to be done and the amount of continuous time needed to do it.

For example:

- Writing the first draft of an assignment is best done in a longer time period with short breaks to help concentration, but with few distractions to break continuity.
- Once you have identified specific areas to cover in an assignment, you can allocate shorter periods of time to spend on each area.
- Pre-reading the module notes (i.e. skimming through a unit to see what it covers) can be done in a short period of time.
- The time it takes to read and take notes can vary, depending on the familiarity you have with each topic.

You may also like to think about where you need to be to carry out tasks. While it may be convenient to carry out most of your study at a desk, not every study task needs to occur in a particular environment. If you think that you are going to have 20 minutes spare at the airport, for example, this might be a good time to review the module materials on a laptop or a tablet, or smartphone.

When identifying tasks, you will need to ask:

- What type of task is it?
- Where do I need to be to carry out this activity effectively?

Making plans

Plans can be an essential tool in structuring your work and can take many forms. However, plans should be used to help get work done, rather than dominate your work time and should ideally be suited to your working preferences.

The work sheets at the end of this document are suggested formats that might help you with your planning.

Module plans

We also recommend that you make a plan for the whole module. You will note from information given alongside the module materials, the dates by which your assignments have to be submitted. These dates are important and should form the basis of your module plan. WEDC will accept full electronic copies of assignments by the submission deadline. Note that although they are running concurrently, different modules may have different submission dates.

Sticking to plans

Plans should be as realistic as possible. As your experience of studying grows, you will have a greater understanding of how long each particular task will take.

Where possible, try to complete the tasks on your daily, weekly and module work plans. Avoid letting too much carry over from one day to the next as this creates backlogs that may be difficult to resolve.

Coping with small tasks

Some tasks can appear too trivial to timetable. They can be handled in a variety of ways:

- Some people bunch a few together and put aside some time each week to work through them all. This may be particularly useful when you can sit down for 30 minutes and deal with a whole series of small tasks.
- Other people prefer to tackle them in quick five-minute breaks in larger areas of work. Even though you are taking a break you are still being productive.

Setting priorities

When you are faced with many different demands on your time it is essential that you are able to prioritize your workload.

There are many different factors affecting individual priorities, including:

- personal motivation/interest;
- forthcoming deadlines;
- confidence with the task/skill; and
- difficulty of the task.

Prioritizing your time involves juggling each of these, relating individual tasks to each other and putting these in the wider focus of all your commitments and responsibilities.

Ask such questions as:

- What is urgent?
- What is routine?
- What can be prepared in advance?

In other words, you need to be aware that:

- some things demand immediate attention;
- some things can be predicted and routinely planned for; and
- some things can be prepared in advance.

It may help to gauge your activities and tasks on a table such as the urgent/ important grid below. Where does each task fit? Is it urgent and important or important but not urgent?

Important Urgent	Important Non-urgent
Urgent Non-important	Non-urgent Non-important

Now apply this to your work plans, tackling urgent and important things first and allocating time ahead for important but non-urgent work. If you make every step of an activity explicit, you will get an overview of all of your commitments and be better able to prioritize these accordingly.

Multiple tasks

You will rarely have the space and time to focus on one particular area of work. You will therefore need to juggle multiple tasks and activities within a constrained timetable.

If you have effectively highlighted all of the tasks demanding your time and planned for each of these, you are less likely to become overwhelmed by the amount of work you need to do.

Motivation

A common barrier to motivation is a lack of certainty or focus. How can you be motivated if you are not clear about what you will be doing?

- A clear focus is important for your motivation, as is some indication of when you will be finishing.
- Take real breaks. Leave your work area completely, have a stroll outside, make a drink. Avoid being drawn into things that you will find difficult to break away from, such as a conversation. Save these for the end of the work period when you can break your concentration completely, and when they can help you to unwind.
- Variety also needs to be introduced so you are not always doing the same activity. Vary the types of task that you are doing. Intersperse small tasks with larger ones. If you can, change an area of work completely to re-stimulate your mind.

Occasionally you may find it hard to be motivated to complete some of the tasks you are asked to undertake: they are just not interesting to you! These may also be tasks, however, that you *have* to handle. Try to set aside some time at the start of a work period to tackle these tasks, rewarding your mind with more interesting work later on.

It can be helpful when planning your work to consider your level of interest in each task. Do you want to spend three hours tackling 'boring' work? Or would a mixture of tasks be more productive, alternating the 'boring' with the 'interesting'?

Completing a task

Try to avoid distraction if possible. When you have settled down to work, acknowledge that this is actual work time. Many potential distractions can be left until later.

If you really find yourself losing interest, reassess your work plan. If you are tackling a task that is particularly tiresome, reward yourself afterwards.

Summary

Time spent planning your learning will pay off in the end, in two main ways. First, you are more likely to avoid last minute rushes if you have divided work into smaller tasks. This avoids treating an impending assignment as one unmanageable task that you may never feel able to tackle.

Second, taking some time to plan a piece of work will give you a chance to develop an overview of the activity, which is likely to produce an improvement in the quality of your work.

The planning sheets at the end of this document can be used to help plan your working weeks and days. You may find it useful to print them out to use.

Checklist

Try using this time management checklist to help you to organize your learning.

What activities are you involved in?

- Study?
- Spare time?
- Eating, sleeping, shopping?

What tasks are involved?

- Break down the major activities into their constituent parts.

Establish priorities

- What is urgent?
- What can be done over time?
- What is routine?

Relate tasks to time

- What types of tasks are they?
- Do they need continuous time?
- Can they be be done during small breaks?
- Where do you need to be to complete the task?

Make work plans

- Plan each week — be prepared, get an overview.
- Plan each day — be active, use checklists.

Stick to these plans

- Make sure they are realistic.
- Try not to develop a backlog.

Get motivated

- Be focused — always know what you want to achieve.

Stay motivated

- Introduce variety — do not slog away at one thing for too long
- Take real breaks but avoid distractions.

Complete tasks

- You will feel better in the end!

Reward productivity

- You have earned it!

3 Reading efficiently

In this section:

- identify different reasons for reading
- use different reading styles
- choose the right reading style to suit your needs
- reduce the time spent reading
- increase understanding and recall

Reading efficiently

Reading efficiently is an important skill that will benefit all of your studies.

There are several skills involved with this process, including:

- the actual reading itself;
- prioritizing the information; and
- recording that information in a useful way.

This section will help you minimize the time you spend reading by helping you to read more efficiently.

Why are you reading?

We read for many different reasons and purposes. The reading that you do for your studies is often different from reading for leisure.

Perhaps the most important difference is the way in which you actually work through the materials. For example, you open a novel at the first page and read right through to the end.

However, in an academic textbook you might only refer to a particular chapter, or flip through for a diagram or chart containing the information you require.

In each case, you are reading for different reasons. Why are they different?

These two ways of reading suit different needs. When you read for leisure, you often need do nothing but enjoy what you are reading and pass the time. Reading for study, however, has to inform you of particular issues, and you will need to apply this knowledge when you are working on your assignments. It is easy to forget the contents of the novel you read recently, but your academic reading needs to reinforce your knowledge constantly.

Passive reading

Often the reason why you have not retained the detail from a novel is that you have been reading passively.

In other words, you have been passing the time or filling spare moments by following a linear thread. You let the book guide you — you follow the story.

Clearly this approach is rather limited for efective study.

Active reading

Active reading is when you actually make demands of the text, where you deliberately search for a particular strand among all the information it contains.

Reading becomes most active when you are pursuing the answer to a question.

For example:

- How can I read more efficiently?
- What reading skills will I need to develop?
- Is all reading the same?
- Do I need to read everything?

Example of reading questions

If you establish reading goals, posing questions that you need answering, you will read more effectively.

What will this article tell me about pit latrines?
This question is too general to be of much help; it does not help you to sort and 'pigeonhole' the information, but leaves you with the same disordered mass that you started with.

The questions below are more specific and should allow you to file the information in an ordered way in your mind.

- What is a pit latrine?
- How does a pit latrine work?
- In what situations can pit latrines be used?
- When are pit latrines not suitable?
- What problems are encountered with the use of pit latrines?
- What are the advantages of pit latrines?
- What are the disadvantages of pit latrines?

Prioritizing information

Reading goals will help you to prioritize the information you read. You should only read that information which seems necessary, asking such questions as:

- What is centrally relevant?
- What is partially relevant? and
- What is irrelevant?

This will help you learn more in the process, enhancing your ability to retain relevant information

We have prioritized the module notes for you, at least as far as we can. They are comprehensive, however; so if you already have a background knowledge of some of the topics, you will need to prioritize your reading still further.

Reading with a pen or keyboard

When you are reading for your studies you will need to take notes, sifting out information that will be of use both in the long and short term.

It is, therefore, essential that you 'read with a pen' (or computer keyboard) and actively take notes throughout your reading.

There are many ways of ordering and structuring your notes. These can be found in Section 4 of this guide: Making notes.

Different ways of reading

As we established at the start of this section, there are different modes of reading – either reading fully from beginning to end, or flicking through until you find the piece of information you want.

Once you have established your reading goals, you can choose the mode of reading most suited to your task, which will make your reading more efficient.

Choose the method to match the task.

The following types of reading are commonly used. You are likely to recognize many of them:

Skimming (or browsing)

The main aim is to discover how useful the text or book might be and for what purpose you wish to use it. Skimming involves going through a text rapidly, probably at two or three times your normal reading speed, and being selective.

3 Reading efficiently

Look at the index, chapter headings, introductory and concluding paragraphs, as well as skimming through the main content by reading the first line of each paragraph. This will give you a feel for the 'flavour' of the book.

Skimming is useful for deciding whether you are going to use the book, in much the same way that you would flip through a book or magazine to see if you are going to buy it.

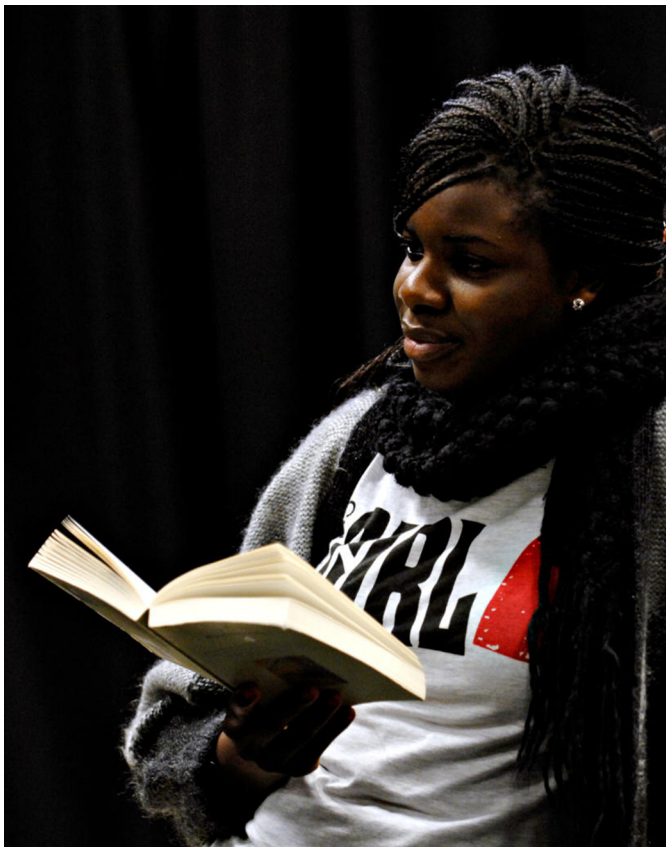
It will also help you get some idea of the way the text is organized, its tone and style, to get the gist of the writer's meaning or to review something you have already read, refreshing your memory.

Scanning

Scanning is used when you know exactly what you are looking for – for example, a telephone number in a telephone directory or the times of trains in a timetable. It is little more than a visual matching task; find the name you are searching for and then follow the text across to find the number or time.

Search reading

Search reading is used to look for key words and phrases which will help you locate specific information. Look in the index to find the location of key words and topics, then locate these in the main body of the text by passing your eyes



through your text until you find the words or phrases you are interested in. Words and phrases which are not closely related need no more than a passing glance. Remember to be flexible as the author's key words may not be the same as yours. When reading electronic documents on a computer you can often automatically set up a 'search' of the document for certain words and phrases.

Receptive reading

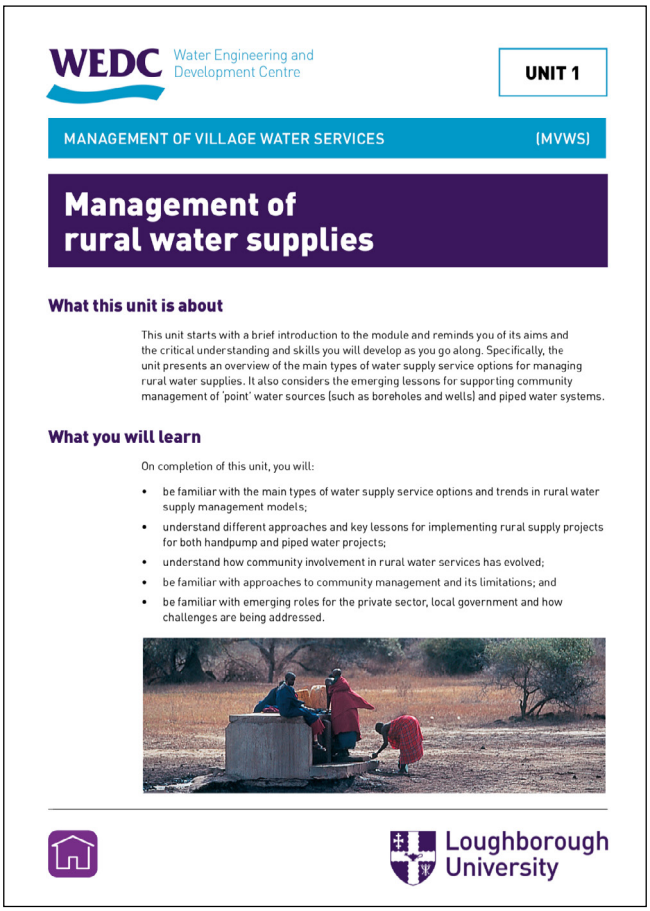
This is used when you need a good general understanding or to discover accurately what has been written, and is the reading style most appropriate for assimilating the information contained within the WEDC module notes. Reading receptively may also be used to give you 'food for thought', or prompt you to think creatively and reflectively.

When reading receptively, you need time to pay close attention to the text, perhaps allowing for periods in which to reflect on what you have read, working through the text in sequence, at a moderate speed. You will probably have skimmed through the text previously to see what it contains. Also, take appropriate notes of your own.

Remember that even with this type of reading practice you can improve your reading speed without affecting your level of comprehension.

The amount of reading required for a module

WEDC expects distance learners to read all of the module notes, questions and answers and usually all of the additional resources (unless you are told otherwise).



WEDC Water Engineering and Development Centre

UNIT 1

MANAGEMENT OF VILLAGE WATER SERVICES (MVWS)

Management of rural water supplies

What this unit is about

This unit starts with a brief introduction to the module and reminds you of its aims and the critical understanding and skills you will develop as you go along. Specifically, the unit presents an overview of the main types of water supply service options for managing rural water supplies. It also considers the emerging lessons for supporting community management of 'point' water sources (such as boreholes and wells) and piped water systems.

What you will learn

On completion of this unit, you will:

- be familiar with the main types of water supply service options and trends in rural water supply management models;
- understand different approaches and key lessons for implementing rural supply projects for both handpump and piped water projects;
- understand how community involvement in rural water services has evolved;
- be familiar with approaches to community management and its limitations; and
- be familiar with emerging roles for the private sector, local government and how challenges are being addressed.

Loughborough University

We do not expect you to read all of each text book recommended for a module. Certain parts of the text book will usually be referred to in the module notes and you should look at these parts. It may be helpful to read other parts of the text book to help you with assignments or to find answers to questions you have about a topic.

You should be able to find relevant sections by 'skimming', 'scanning' or 'searching'.

Summary

Efficient reading is more than simply reading everything at a greater speed. You will save more time if you ask why you are reading and adopt a reading strategy to suit that need. This process will also help you learn more from the texts you are reading.

Checklist

Establish a purpose for your reading

- Define reading goals

Ask questions of the text

- Why are you reading?
- What exactly are you looking for?

Adopt a reading style that reflects your needs

Be methodical

- Do not simply read for long periods — plan your activities for each text and each subject.

Prioritize information

What is centrally relevant?

What is partially relevant? and

What is irrelevant?

If you can, control your environment

- Make sure you have sufficient light, but avoid glare.
- Reading is best done with light coming from above or over one shoulder, and it should not be reflected back at you. Avoid too harsh a contrast between your reading pool and the light in the surrounding area.
- If you suffer from eyestrain or headaches, take regular breaks.

Remember to adopt a comfortable reading position and posture to reduce body fatigue and mental strain. This will enable you to work more effectively and, if necessary, for longer.

4 Making notes

In this section:

- identify different ways of making notes
- use different note-taking styles in your work
- reduce the amount of notes you take
- make more useful notes
- organize your notes to aid understanding and long-term use

Why make notes?

The ability to make clear and concise notes is one of the most important skills you will need to develop. The actual process of making notes helps you to gain a deeper understanding of the subject and capture the essential points of a topic.

This section shows you several different ways of making notes. The following suggestions will help you to make notes more effectively.

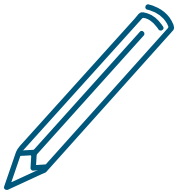
We make notes for a number of reasons.

Notes are:

- a memory-aid for revision;
- a reminder of the main points of a topic; and
- an important source of material for an assignment.

Note-taking:

- aids concentration;
- builds up an understanding of the topic;
- prompts questions; and
- reinforces knowledge.



Active reading

A common mistake when making notes is to write down too much as you are unsure about what you will need later. You can improve your note-taking efficiency by taking some time to consider precisely what you are looking for before you start to write your notes.

Prioritizing information

Setting goals for your reading and note-taking can point you in the right direction, allowing you to restrict the amount of material about which you make notes.

You can set such goals by asking yourself questions.

For example:

- What are the sanitation options for a rural, low-income community?
- What needs to be considered before a decision about improving sanitary conditions is made?
- Who should be involved in the decision-making?
- What are the possible problems that may be encountered if a particular option is chosen?

Further advice on reading styles and the setting of reading goals can be found in Section 3: Reading efficiently.

You can cut down on the amount of notes you make by simply answering the questions you pose. If you are focused on the information you are looking for, you are halfway to producing focused notes.

However, there are a few things on which you should take care:

Do:

- be thorough and search properly; and
- consider the amount of information you need.

It is important to make notes only according to your needs. Do not make notes for the sake of it!

Don't:

- ask questions that are too vague — this will only leave you where you started off; or
- be side-tracked by irrelevant information — stick to your questions.

Note-taking styles

The reason for taking notes may affect the way in which you record them. Whatever the reason or the method that you use, your notes should:

- include the source of the material (author, date, title, publication, page number etc.); the importance of quoting references is discussed later in Section 7;
- be in your own words, as this will aid your understanding of the material; and
- only include relevant material.

When making notes from a piece of written work it may be helpful to mark the text with a highlighter pen or similar. Of course, you must only do this with books or journals that you own or on personal photocopies of material. Library books and other material that you have borrowed should be treated with respect and left unmarked. In electronic documents you can aso highlight text using colours.

If you adopt this method of taking notes, you should not mark the text as you read it. Rather, you should read through a section first, make sure you understand it and then go back and highlight the key points. Marking text on the first read-through often results in too much material being highlighted. Once you have an overview of the complete section, it is usually much easier to identify the important issues. In this way, you are more likely to mark only the relevant details. Using different colours to highlight different sub-topics of interest to you can help you at a later stage to identify relevant information in your notes.

There are different styles of note-taking and you should experiment with different methods, choosing whichever approach suits you best. You may find that one style is better for certain circumstances and another one for other situations. Two very different styles in common use are described below.

A linear format, with headings and sub-headings arranged in a logical order, is shown right. However, in order to develop a logical sequence to the notes, it is necessary to have a reasonable overview of the subject under consideration. This may only come after you have read a significant amount.

Some people are happier with a visual method of recording information, such as 'mind maps' where they can actually see the diagram or structure in their mind.

A 'mind map' is an annotated diagram sometimes known as a 'spider diagram'. It starts with the central idea and branches out, as shown in the example on page 16. This allows you to add subsequent ideas, where appropriate, and enables you to show links between different themes. In addition to using this technique for making notes, it can be very useful for planning

Options for urban sanitation

On-plot

Pit latrines — low cost, low water use.

Simple pit latrines — problems with flies and odours.

Ventilated improved pit latrines (VIP) — reduces problems.

Pour flush latrines — water seal reduces problems.

Twin pits — use where not possible to dig deep pit.

Septic Tank — higher cost, used with flush toilet, high water use, requires household connection.

Off-plot

Sewerage — expensive, requires networked infrastructure.

Reduce costs by reducing number of access chambers, gradients and pipe diameters (simplified sewerage), using interceptor tanks, or condominial sewerage.

Linear note-taking format

the structure of a document and the sections it contains. You can find out more about using mind maps at http://cmap.ihmc.us/ where they are referred to as 'concept maps'.

Whatever method of note-taking you adopt, it is far better to write your notes in your own words than copy the source word for word. In the process you will develop a greater understanding of the material and will be able to recall much more.

However, sometimes you may also want to keep photocopies or cut portions from important sections of the documents you read. Microsoft's 'Snipping Tool' is a useful for this.

Ensure that you write down the full details of any literature that you are studying when you first start to use it to make notes. Then, at a later stage, you will not have to hunt for these details to provide the information required in the list of references (see Section 7).

As you make notes, use page numbers alongside sources you are likely to want to find again or refer to in your assignment answer or document.

The essence of good note-taking is that it breaks up the subject and the page into small sections. This allows you to clearly group notes under topics, rather than treating the page as a solid piece of text with a beginning and an end.

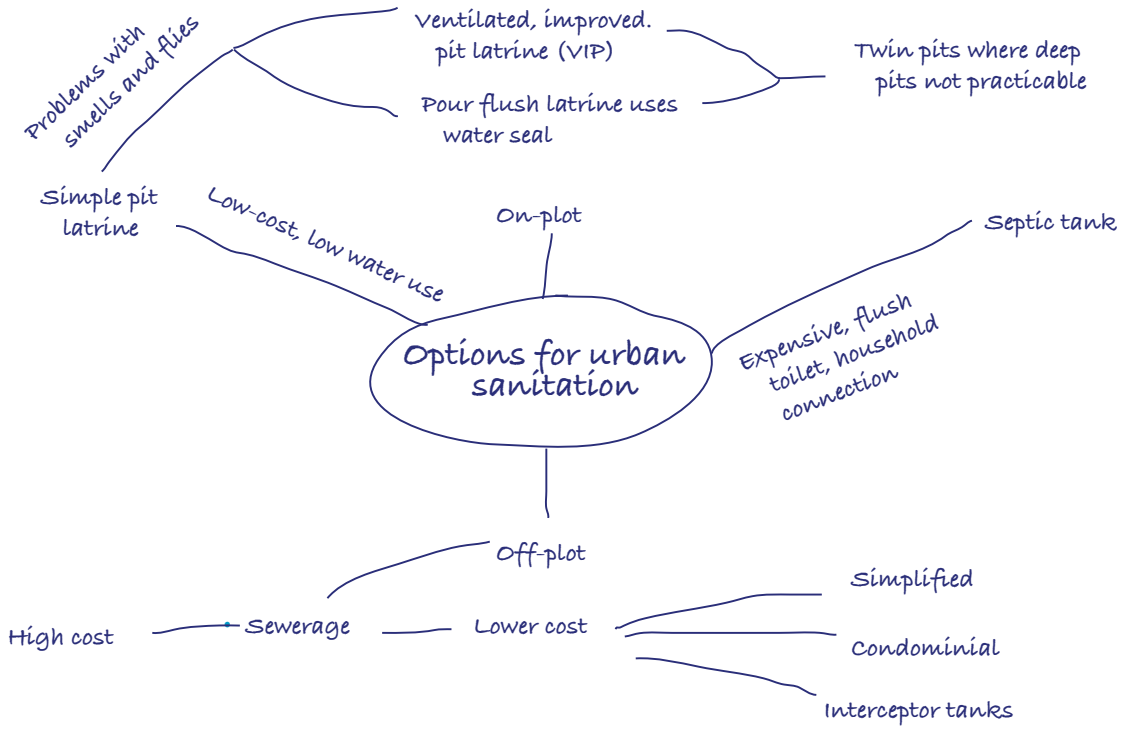
Storing your notes

Although the very act of taking notes has its own benefits, as discussed above, there are also benefits from being able to refer back to those notes later. To this end, your notes must be both legible and accessible. The storage and retrieval systems that you adopt are therefore important.

Suitable formats that enable you to do this are:

- loose leaf paper that can be stored in one or more ring binders, together with coloured subject dividers;
- a card index system that may be stored either alphabetically in a card index box, or using a colour-coded system of arrangement; and
- on a computer that will allow you to input a keyword into the search feature, available in most word processing packages, to find the relevant notes.

One method of grouping your notes is to file them under keywords related to subject matter. This requires more thought at the time when you are making the notes, which has the added benefit of aiding understanding and recall. Remember the basic techniques of dividing large topics into smaller ones. Try cross-referencing: e.g. 'sewerage' might be stored under 'sanitation' with another reference under 'environmental health'.



An example of a simple 'mind-map'

Another way to group your notes is to file them under the author's name; this can make life easier when compiling references. Whichever approach you adopt, the source of the material should be included on the card or computer record so that the necessary information can be found again.

If you type your notes into documents stored on a computer, make sure that you back up your files. The advantage of making electronic notes is that you can at some later stage use the search feature on your word processor to locate notes that include specific words of interest.

As mentioned above, using a text colour or coloured highlighting to identify different themes in your notes may also be useful.

Remember that the notes you take are for your benefit alone, so use whatever systems suits you best. There is no right or wrong way of storing your notes.

Summary

Brief, well-structured notes will be very helpful throughout your studies, giving you more immediate access to the key themes and issues that you have been working with.

Checklist

- Why are you taking notes?
- What amount of information do you need?
- What precise detail are you looking for?
- Find a note-taking style that suits you.
- Start actively reading with a pen in your hand or ready to type up notes on a computer.
- Answer your questions as you go along — be systematic.
- Only take down notes that you really need.
- Photocopy or cut and paste relevant sections.

5 Assignments and assessment

In this section:

- details of the weighting of each assignment for the assessment of the module
- why assignments are important
- ways of playing an active role in your assessment and making the most of feedback

Module assessment

Assessment is used in UK higher education for many different reasons, and each type of assessment — from formal to informal, from self-assessment to written examinations — caters for a different need.

As a WEDC distance learner, for the 15–credit modules you will usually be formally assessed on a series of two or, for certain modules, three coursework assignments that are directly related to the module you are studying at the time. The assignments are important because they are the only means of assessment that contribute to your final module mark.

For the 60-credit Research Dissertation there is only one means of assessment through the final report that carries 100% of the module mark.

Assignment weighting

Each module specification will explain how the coursework assignments are weighted. The weighting.may vary from this in future, so check the figures given on the first page of each assignment when you receive it. The 60-credit *Research Dissertation* module has four times the weighting of the usual 15-credit modules, so the mark you obtain for it can have a large impact on your overall programme mark.

Why have assessment?

Reasons for assessment include that it:

- maintains standards of output against a predetermined quality;
- validates your work, highlighting your level of achievement;
- gives you the chance to practise and develop your skills;
- acknowledges the work you have done;
- helps diagnose difficulties and misunderstandings;
- gives motivation to study and establishes priorities; and
- feedback encourages you to reflect upon your work and ability.

The process of assessment

From a learner's perspective, assessment can be seen as a three-stage process:

1. Preparation
2. Implementation
3. Evaluation

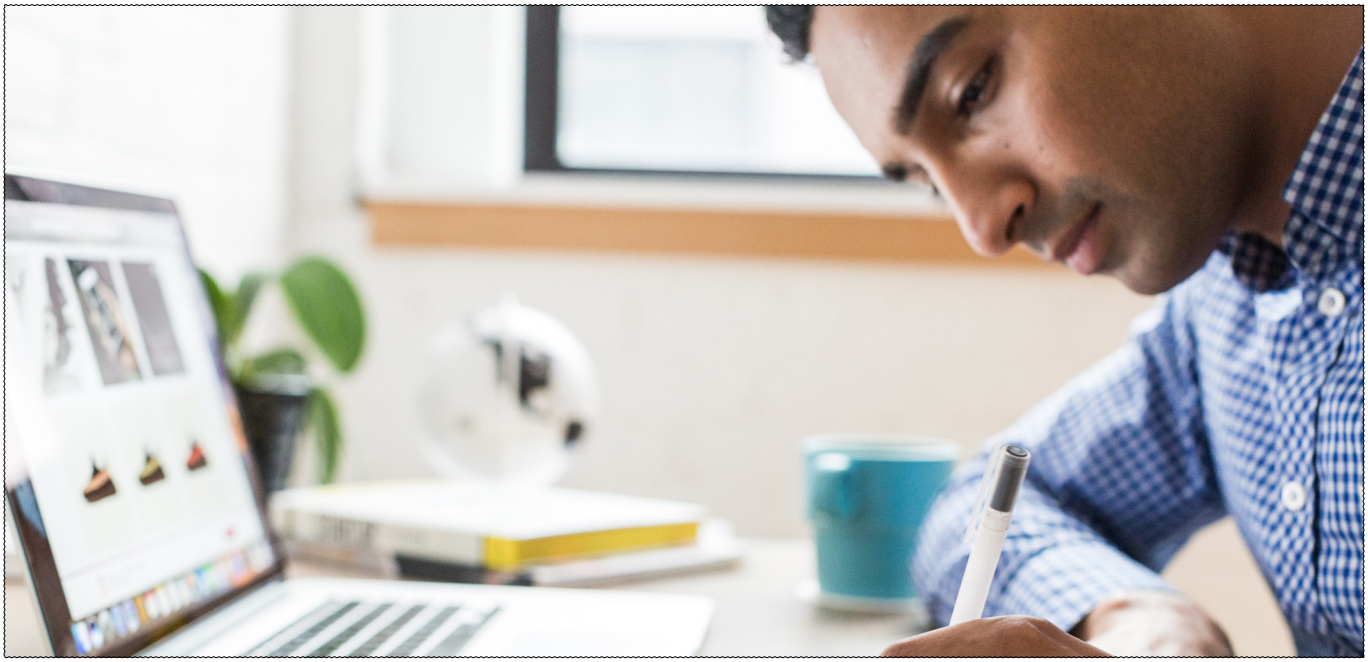
Preparation

Most assignments demand some preparation. This gives you a chance to consolidate your learning through:

- considering broad subject areas;
- prioritizing important areas; and
- pursuing areas of interest.

Implementation

This is the actual challenge or test of your ability; distilling information, structuring information, and applying understanding. The implementation stage requires you to perform to a given brief, focusing your learning through specific demands.



Evaluation

Evaluation stems from your engagement in a process and the subsequent appraisal of your personal performance. You will be provided with feedback with which you can objectively assess your performance. The evaluation stage of the assessment cycle encourages you to reflect upon your work with a view to developing your ability. Reflecting upon how well you have done consolidates your learning, preparing you for the following units or a new module.

Your role

Assessment is a process in which you play an active part and over which you have varying degrees of influence. There are many ways to take more control of your assessment, which will help you improve your performance and get the most out of the process.

Establishing criteria

One of the most important aspects of assessment is to consider how your work will actually be assessed. Often there are pre-arranged criteria, which establish the guidelines against which your work will be assessed. Your assessment criteria will be written into the assignment brief.

Criteria commonly reflect the following themes:

Scope: What is the broad subject range to be explored?

Key details: What actual information might you need to include?

Presentation: How should the information be presented?

Skills demonstration: How effectively have you developed and implemented skills?

Use of methodology: Can you apply complex methods of working to solve a problem?

Understanding of concepts: Have you understood and applied complex concepts?

Accuracy of method: Have you accurately undertaken the exercise?

Drawing conclusions: Have you clearly structured a balanced argument and effectively summated your thoughts?

Length restriction: Have you complied with any stated length restriction and formatting requirements?

If the assignment question or task is unclear to you, ask the responsible examiner Module Leader to clarify what is expected.

Assessment criteria and individuality

You may feel that you should display a certain amount of personal innovation when you are preparing work for assessment. This is important, as it can be tedious to produce work solely to a prescribed formula. In displaying personal innovation, however, you will still need to plan your work in the context of the assessment criteria.

Criteria also ensure that you are applying your learning in an appropriate manner, in a way that is useful to the particular subject area.

You should not necessarily tie your work down only to the assessment criteria. Your tutor may be looking for flexibility and imagination; factors which may be implicitly written into the assessment criteria.

Where you are aware of the criteria, however, make sure that you accommodate them in the planning and implementation of your work.

We know the value of discussing ideas and work with others who are of a like mind and/or who may have greater experience. Our campus-based course participants benefit from exchanging ideas and experience, and we know they also discuss assignments prior to submission. Each module has an electronic Social Forum that WEDC distance learners are subscribed to, so they can correspond with each other.

However, we do not expect any assignment submitted to be joint, either in part or in total. There have been some instances of collaboration and copying with distance learning assignments. This is not acceptable.

The statement you sign on the Declaration Form asks you to certify that the work is your own except where otherwise acknowledged. If copying or collaboration is detected, the penalties are severe and may result in the termination of your studies. Please see the university's regulations regarding Academic Misconduct:

http://www.lboro.ac.uk/students/welcome/handbook/examsandassessment/academicmisconduct/

Playing an active role

There are steps you can take to play a more active and therefore effective role in the assessment cycle:

Setting personal goals

With realistic personal goals you can more fully reflect on feedback and relate your work to your own ambitions.

Setting subject goals

These are already defined by the units. You can refer to these to draw up your own work plan.

"By this stage I should have completed this ..."

Evaluating your own work

Reflect upon your achievements and realistically assess your own level of attainment. How advanced are your skills? How efficiently did you carry out the assignment? How confident do you feel in the use of complex terminology and theory? After you get feedback on your assignment, re-evaluate your work.

Reassessing personal goals

Working from your evaluation, draw up plans for further developing your skills. Ask: "How will I get better at...? How will I improve my...?" Set goals for your development.

What does the question mean?

In most assignment briefs there will be key words which guide you towards the required treatment of the subject matter. In order to successfully answer the question you will need to highlight and interpret these key words, targeting your writing accordingly.

Below are some of the most common key words and a suggested meaning for each.

Account for	Explain the cause of.
Analyse	Separate down into its component parts and show how they interrelate with each other.
Annotate	Put notes on (usually a diagram).
Assess	Estimate the value of, looking at both the positive and negative attributes.
Comment	To make critical or explanatory notes/ observations.
Compare	Point out the differences and the similarities. This question needs to be carefully organized to produce a logical answer.
Contrast	Point out the differences only and present the results in an orderly fashion.
Describe	Tell the reader what something is like.
Discuss	Present arguments for and against the topic in question. In discussion questions, you may also give your opinion.
Distinguish	Identify the difference between.
Evaluate	Estimate the value of, looking at both the positive and negative attributes.
Explain	The word 'explain' means that you have to give reasons for your answer, rather than only a definition.
Justify	Here you will need to present a valid argument about why a specific theory or conclusion should be accepted.
Outline	Give the main features or general principles of a subject, omitting minor details and stressing structure.
Relate	Either: Show how ideas or events are linked into a sequence or: compare or contrast.
Review	To make a survey of, examining the subject critically.
Suggest	This question may not have a fixed answer Give a range of responses.
Summarize	State the main features of an argument, leaving out everything that is only partially relevant.
To what extent	Asks you to justify the acceptance or validity of an argument stressing the need to avoid complete acceptance.
Trace	Follow the development or history of a topic from a defined point or origin.

Submitting assignments

Full details of how to submit assignments and advice about claims for impaired performance, time extensions and deferral of completion of a module visit the University's web pages.

For each of the 15-credit modules you will find the assignment questions in the module pack. Each assignment will have its own special requirements (such as the submission deadline) that are described on the first page of each assignment.

Electronic versions of assignments should be uploaded via the Internet to the relevant module page of the university's learning platform called 'Learn'. For each assignment, we will tell you how to do this. '

Learn' shows you the electronic submission you have uploaded successfully, and you can open the file to check you have uploaded the right one.

Electronic versions of assignments are automatically uploaded to TurnItIn, the plagiarism checking software that the university uses..

In case of unexpected problems with electronic submission through Learn, then a copy of your assignment can be emailed to wedc.distl@lboro.ac.uk. Someone from the DL Administration Team will email you to confirm safe arrival of any emailed assignment.

It is your responsibility to ensure that assignments are submitted on time.

Feedback on assignments and grades awarded

During the module we will email feedback on your assignments to your university-supplied email account.

Other than for the final assignment in each module, we aim to send the feedback within 21 days of the submission date. Anticipated dates for feedback are shown on the front sheets of all assignment questions.

We retain assignments for inspection by the external programme assessor who helps monitor the quality of WEDC's courses. Therefore, so you can better understand the feedback provided, please keep a copy of each assignment.

Assignment marks are guided by the descriptions shown below.

These marks should always be regarded by students and staff as provisional, since marks may be subject to moderation before being fixed at a Review Board.

Mark range	Desription
80% or above	A mark 80% or above will be used on individual assignments which show exceptional merit.
70-79%	Upper end of range described. Very good grasp of material that displays thorough comprehension, informed criticism and analytical skill. The overall presentation is concise and well-expressed, without any major errors.
60-69%	Upper end of range described. A middle range answer which shows familiarity and comprehension of many of the salient issues and some critical dialogue with the material. Answers at the lower end of the range may contain a few errors, omissions and insufficiently well expressed ideas.
50-59%	Upper end of range described. An adequate answer which demonstrates an elementary understanding of the basic issues involved. Nevertheless is deficient in terms of material covered or level of comprehension. The answer is insufficiently researched and not well presented.
40-49%	Upper end of range described. Some major points are included, but lack of understanding is shown, together with use of irrelevant points.
Less than 40%	Very few or none of the major points present; many irrelevant or incorrect points included and the answer shows a serious lack of understanding.

Numerical questions are normally marked for analytical method and accuracy using a marking scheme for specific steps in the solution. Assignment marks are compiled for the Review Board, which then awards module credits to candidates whose total weighted marks are not less than 50%. For all WEDC's distance learning modules 15 credits are awarded, except for the *Research Dissertation* module.

Note that we will email feedback to your university-supplied email account, not to another email address. However, you can arrange for emails to be automatically forwarded from your university account to your preferred email address.

Making use of feedback

Feedback from the marker of your assignment is essential to the learning process. It gives you information you need to progress with your study by answering two basic questions:

- How am I doing?
- How can I improve?

Feedback takes the form of constructive advice provided by your tutor when s/he has marked your assignment. You may also like to explore the following sources of additional support:

WEDC

If you ask yourself the two questions posed above and find that you cannot answer either of them, then it is likely that you would benefit from further feedback on your assignment from the Module Leader. You may ask for advice at any time about any topic in a module. You can do this by emailing or telephoning the Module Leader directly.

Use your family, friends and colleagues too!

It is often surprising to find that talking through problems can help us to focus our minds on possible solutions.

Compare the feedback you receive from tutors and others. For example:

- Highlight areas in which you have done well.
- Highlight areas you need to improve.
- Plan how you will improve. Draft further objectives, e.g.
  - talk to tutor
  - discuss problem with colleague
  - re-read a particular unit
  - read more widely.

Results

At the end of a module, individual assignment marks are combined (applying the appropriate weighting to each (see Section 5) to produce an overall mark for the module. This

Tips on receiving feedback

The key to responding in a positive, open way to feedback is to recognize that you could learn from the experience. Feedback is vital. How else can we find out if what we have done is right?

Feedback is about the past, so it always offers the possibility of discovering something valuable, which can help you to change your approach for the better in the future.

Our motive for giving you feedback is to encourage you to continue successfully with your studies.

Remember:

- Check your understanding. If you are confused by the feedback, ask for clarification.
- Look for the lesson. When you feel you have the message of the feedback clear in your mind, ask yourself: "Is there something here worth accepting?". Explore the feedback as honestly and non-defensively as you can. Examine the options for change. Ask yourself: "What could I do differently next time?"

mark is then presented to the next Review Board along with any claims for impaired performance. Once a mark has been agreed by a Review Board, a DL Administrator will email you to say that the result can be accessed on the university's 'Learn' platform (http://learn.lboro.ac.uk/).

Reassessment in a module

If you do not achieve an overall mark of at least 50% in a module, you will not obtain any postgraduate credits for it. In certain circumstances, you may be able to re-sit a module on payment of the relevant fee.

Award criteria for programmes

Refer to the WEDC website to find out about the awards available for the distance learning programmes and the maximum time periods for study of any programme.

Summary

Assessment is an important and invaluable aspect of your studies. You can see your assessments as opportunities to greatly enhance your output both through the increased motivation and focus that assessment demands and the opportunity for feedback and reflection once assessment has taken place.

You will need to think about each assessment procedure for each area of study to help you plan effectively and make the most of your assessment.

6 Writing for assignments

In this section:

- interpret questions successfully
- plan personal objectives
- actively search for information
- construct a logical essay plan
- prioritize information
- write clearly

Introduction

The following section explores the process of writing in essay form, from establishing the assessment criteria to using your tutor's feedback. Note that many of the distance learning assignments will not require formal essays. Also, length restrictions applied to the answer will mean that you cannot always follow the advice provided in this section.

Essays are usually written in response to a pre-prepared question that demands a critical appraisal of the subject at hand.

Stages in essay writing

There are several stages in the production of a high-quality essay:

- preparing;
- information gathering;
- structuring;
- writing; and
- checking and revising.

Essays

- help you to consolidate your understanding;
- allow you to delve more deeply into a particular subject area;
- stimulate your mind by assembling an argument;
- give you practice in using technical or specialist terminology;
- enable you to express your thoughts clearly and logically; and
- encourage you to think and read widely and deeply.

Preparing your essay

The following advice will help you establish what and how you are being asked to write. As you prepare your essay, you will need to identify the precise subject area you will be writing about as well as the treatment you will be applying to it.

The ground rules

Note any restrictions in length

Focusing your thoughts into a shorter essay may require more careful consideration than verbose, lengthy 'ramblings'.

Explore the criteria

Have you been given any indication of what will be assessed? What in particular is your tutor looking for in this essay? Can you ask for clarification?

Examine the question

The essay question usually indicates the required approach. For example, the following question:

Consider the advantages of introducing a programme of latrine upgrading into a remote rural community and describe how you would justify the need for such a programme to community leaders.

...is asking for two different elements — the consideration of the advantages, and then the justification of these to community leaders.

With every essay question you attempt, you will need to identify and decode the key words.

6 Writing for assignments

Make it clear for yourself

Write a quick version of what you think you are being asked to do. Rewrite the title or question in your own words.

You may like to discuss this with friends. Have you understood the question? What areas, if any, need clarifying?

Preparing your response

Once you have clarified what you have been asked to write about and how you should treat the subject matter, you need to consider what material should be included in the essay.

Start with what you already know, focusing on your own interests and experiences.

Brainstorm your ideas

To brainstorm, focus your mind broadly on the topic at hand and let your ideas flow onto the page. Do not make any judgements about relevance at this stage; the aim is to find out how much you already know.

It may help you to structure your ideas in the form of a 'mind map' or other method. See: Section 4: Making notes.

Ask questions

Once you have established your existing knowledge you will need to identify the 'empty' areas in your brainstorm and pose these as questions.

- What don't I know?
- What do I need to know? and
- What detail would support my argument?

These questions can then form the basis for your information research in the next section.

Gathering your information

Based upon your brainstorm questions you will need to identify:

- what sort of information you are looking for; and
- where would be the most appropriate place to find it?

In most cases, your module notes and accompanying publications will provide much of the information you will require, but there are many different sources of information, including:

- serials/ periodicals /journals;
- theses;
- published texts;
- CD ROMs;
- the Internet;
- the radio;
- the television, videos, DVDs;
- your own notes; and
- the minds of friends and colleagues.

Don't be afraid to look as broadly as possible, but remember the following:

- always search actively;
- do not take too many notes;
- take structured notes (see Section 4); and
- keep a record of your sources (e.g. author/s, publisher, date, page number).

Structuring your essay

Now you can put together a plan for your essay based on:

- your interpretation of the question;
- your personal thoughts and opinions; and
- the information you have gathered.

Put together a logical structure for your essay as follows:

Introduction

Comment upon:

- the subject you will be discussing;
- the main points you will be raising; and
- the treatment you propose to apply.

Your introduction should also relate your essay to a wider academic context/discussion.

Note that, as mentioned in the Introduction, often with the distance learning assignments there will not be a need for, nor space for, an introduction to your answer.

Main body

- Present your argument in a few main points.
- Write a paragraph for each main point.
- Support your ideas with examples and references (see Section 8).
- Develop your argument coherently.
- Ensure that your emphasis is balanced.
- Avoid stressing your opinion at the cost of more considered reasoning.

Length restrictions on the answers to many of the distance learning assignments may mean that you cannot follow all of the advice given above, particularly the second bullet point.

Conclusion

Summarize your main points in the conclusion:

- offer a firm answer to the question;
- relate to your introduction; and
- identify wider implications or further lines of investigation.

When you are asked to provide a short answers to an assignments it will not usually be necessary to provide a separate conclusion.

Sorting your information

Using your outline plan, sort through the material that you have collected and prioritize this by asking the following questions.

- What is centrally relevant?
- What is partially relevant?
- What is irrelevant?

Relate the material to your outline structure.

Remember that such information should enhance your argument, not dominate the essay.

Your examiner is looking for your ability to select relevant material to support your answer.

Writing style

Here are a few recommendations that can make a difference to your work and will lend a professional feel to it.

- **Use short words:** 'after' instead of 'following', 'but' for 'however'; 'show' for 'demonstrate'.
- **Avoid unnecessary words:** e.g. strike action (strike); cutbacks (cuts); weather conditions (weather); the fact that (that); substantially finished (incomplete).
- **Jargon:** Don't use words that are unlikely to be known by the reader unless absolutely necessary; and then, on first use explain what they mean. If you are writing your research dissertation then include a 'Glossary' at the front in which such words are listed and defined.
- **Avoid slang:** e.g. 'Thumbs down'; 'gravy train'; 'the likes of'; 'flavour of the month'.

Abbreviations

Use of abbreviations can make your work easier to read (e.g. for Water Supply and Sanitation Collaborative Council use WSSCC.) However, on first use explain what the abbreviation means.

Capital letters

Use capital letters in appropriate places:

- **People:** Prime Minister May, or 'the Prime Minister'; The Minister of Finance.
- **Organizations:** The African Development Bank; Students' Committee.
- **Places:** Kenya; southern Africa; western Europe; North America.
- **Trade names:** Sony; Peugeot; Nokia.
- **Electronic expressions:** email; cybercafé; Internet; World Wide Web.

Figures

Spell out figures from one to ten.

Use numerals for figures from 11 onwards, and for all figures that include a decimal point or fraction (e.g. 4.25, 5½).

Use all numerals when mixing numbers in one sentence (e.g. 'there have been 14, 6 and 2 cases of malaria in the past three years'.)

Italics

All foreign words should be shown in italics (e.g. *kamukunji*) apart from where they are in such common use that they have become anglicized (e.g. safari; apartheid).

Newspaper and periodicals e.g. *The Sun*; *The Daily Nation*.

Court cases e.g. *Odhiambo vs Blenkinsopp.*

Useful words to indicate transition

Addition:	Moreover, furthermore, in addition, incidentally, again.
Contrast:	However, in contrast, on the other hand, nevertheless.
Comparison:	Likewise, similarly.
Cause:	Therefore, thus, hence, consequently.
Example:	For example, for instance.
Time:	Afterwards, later on, soon, meanwhile.
Place:	Here, there, nearby, beyond.

Writing a draft

It is time now to write a draft of your essay. A draft engages you with your material and allows you to take an overview once it has been completed. You can then evaluate your draft, making any amendments as you go along. Make sure you do not exceed any length restrictions mentioned in the question.

Setting aside enough time

It is important that the thoughts and ideas flow freely throughout the essay. When approaching the first draft of your essay you may need to set aside enough time to write it completely without any interruptions. Any significant breaks in concentration may break your line of thought.

Writing for others

When you are writing an assignment, remember that your tutor must be able to understand what you say!

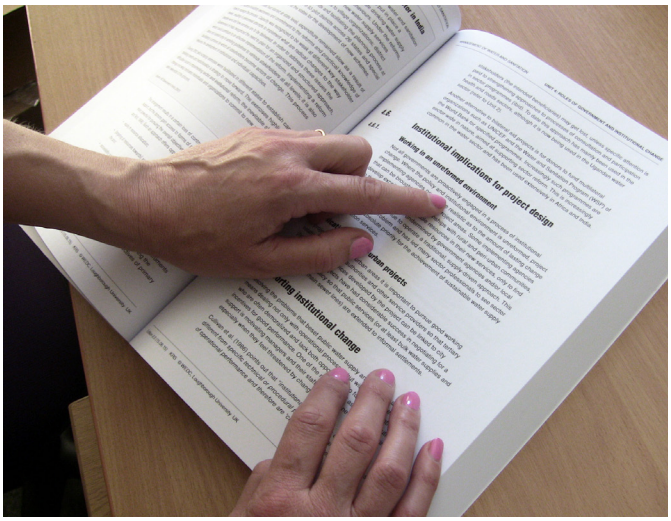
- Write simply and directly.
- Limit your sentence length.
- Ensure that each paragraph has a focus.
- Use clearly-labelled pictures (graphs, diagrams, etc.) if they will save words.
- Use sub-headings to define each section.
- Take care to properly acknowledge the work of others. Plagiarism will be penalized (see Section 8).
- List the sources you have referred to for other information;.
- Follow the advice given on the width of page margins; this space may be used for your tutor's comments. Also follow the requirements for minimum font size and style. Show your student number on each page (e.g. in the 'header' magin) if you are asked to do so.

Checking and revising

To check your essay, compare it with your original question interpretation, draft outline, and any assessment criteria that have been prepared by your tutor. Use the checklist at the end of this section as a prompt to help you evaluate your own essays.

Problem solving

When you have established any problems with your draft assigment, ask yourself how these could be most easily resolved. Be realistic. It may not always be possible to start again. If you are having real problems with your writing consult your tutor. Always consider that your essay has to be read and assessed by somebody else.



A clear presentation needs a good and clear structure, which can be indicated by making use of suitable titles, sub-titles, lists and bullet points etc...

Avoid spending too much time on extravagant presentation.

Tutors spend a lot of time marking many essays at once. Anything that distracts or discourages them from reading your essay in a favourable light, such as poor English, should be avoided. Use of a word processor not only makes your work legible, but also allows you to make frequent changes as you compose your answer. The spell check used by most word processors is also useful!

Referencing and plagiarism

Every time you refer to somebody else's thoughts and arguments you need to both identify clearly who you are referring to and from where you found this material. You do this by providing a 'citation' (e.g. 'Skinner (2013, p. 33)') in the text, just after the information that you obtained from it..

Correctly referring to each of your sources of information is a very important issue that is dealt with in Section 8 of this Guide.

Bibliography

It may be helpful to include a bibliography in addition to a list of references, although this is not essential and will not usually be appropriate for distance learning assignments. A bibliography is a list of sources of information that have not been used for direct references but that you have used and recommend for relevant background reading. Clearly distinguish it from your list of references

Checking

Please take time to check that every 'citaton' in your text is found in the same format in the list of references. In addition to an author's name, check that dates and specific page numbers where the information is to be found are shown correctly.

Also check that there are no documents in your list of references that are not mentioned in the text. You can do this by putting a mark against each reference in your list as you read through the text, and then at the end checking for any unmarked ones.

You can use the 'Find' feature of a word processor to search in your document for any particular word (such as an author's

surname), or groups of letters or dates. This is useful for double-checking for references that seem to be missing from the text of a long report such as a research dissertation. If you search a file containing your complete document and do not find the author's name, then you know that you have not used it, or have misspelled the name. See Section 9 for more details.

Using feedback

Your final task is to reflect upon the feedback received from your tutor. This may be invaluable in helping you improve your essay writing skills for future assignments.

Summary

Essay writing is an invaluable tool in the development of understanding. Through the construction of detailed, reasoned and balanced arguments you consolidate what you have learned and apply key principles and theories in such a way that is both interesting to you and informative to the reader or assessor.

Essay writing also develops your communication skills as you distil large amounts of information onto the pages of your assignment in a structured format.

The following checklist can help you evaluate your own essays, improving your essay writing skills and helping you check for simple mistakes.

Checklist

Introduction/Conclusion

- Does my introduction (if used) detail what I will be doing and how?
- Does my conclusion (if used) summarize my main points and offer some outcome?

Content

- Have I met the demands of the question?
- Have I met the fixed criteria (e.g. length and style of answer)?
- Have I clearly identified my key points?
- Are they presented in a logical sequence?
- Are each of my points supported by sufficient information and examples, particularly in view of any weighting of marks indicated in the question?

Use of supporting material

- Is the material centrally relevant?
- Does the material endorse or detract from my argument? and
- Does the information flow with, or disrupt my central argument?

- **Originality, referencing and plagiarism**

- What is the ratio of my ideas to the ideas of others?
- Have I distinguished between my ideas and the ideas of others?
- Have I acknowledged quotations?
- How have I identified the ideas of others within the text?
- Have I fully referenced each quoted phrase or idea? and
- Have I included a list of references and, if appropriate, a bibliography listing all other background reading?

Presentation

- Is the format used (font size and margin widths etc.) as specified?
- Is the structure and layout clear enough?
- If I have handwritten anything, is it readable?
- If it is typed on a computer have I spell checked my work?
- Are my sentences short and focused?
- Are each of my paragraphs clearly focused?

7 Referencing and plagiarism

In this section:

- accurately reference printed and electronic materials
- use our recommended method of citing and referencing to show the original source of all information
- ensure that you do not plagarize the work of others
- understand that the university considers plagiarism to be a very serious offence
- identify ways to avoid being accused of plagiarism

Why is referencing important?

Most of what we know we learn from other people, often without questioning it. As your learning progresses to the level required to study towards a university degree, you are expected to consider what you are learning critically – judging the evidence and questioning what is presented. Being able to locate, organize and compare different sources of information is a core skill required during your studies. You also need to be able to correctly cite (refer to) and fully reference those sources. This guide will help you to do this.

The consequences of not referencing other people's work correctly can be serious and is now very easy to detect. This short guide presents the key messages you need to know to ensure you follow the required standards and conventions, while still making use of other people's work to support your learning. In addition, the University Library has extensive resources available to help you. Please take a look at https://www.lboro.ac.uk/services/library/students/learningsupport/referencesandcitations/

As you progress through your studies, your level of learning becomes more complex and specialized. You will move from learning about 'generally accepted facts' to study subjects where the 'right' or 'correct' information is not clear. When researching, you may find that the subject has gaps in what is known or is based on theories that are not proven. As a student, you will need to bring together different sources of information, critically evaluate the quality and relevance of each, and express your own findings in your own way.

Learning from others

When studying at school or for an undergraduate degree, a main source of knowledge and information is often the teacher or lecturer. They will select and present topics in a way that hopefully makes them easier to understand. This may be supported by a few textbooks that cover similar information. Some of the material will be objective and factual, that could be considered as either 'right' or 'wrong'. Other material will be subjective, based on opinions or perceptions, so open to discussion.

When studying or researching new knowledge, the topics may become less certain and more subjective, as theories are put forward and hypotheses tested. You will need to carefully consider and assess each of the subjects, using evidence that comes from a variety of different sources so that you can compare and analyze the information.

Presenting arguments

As a university student, you are expected to make use of other sources of information. When writing assignments, you need to provide evidence to support your facts, statements, arguments, and conclusions. You can use the ideas and discoveries from other people as 'building blocks' on which to develop your own knowledge and justify your work. Rather than presenting all the original information in detail, references allow you to indicate what is already known that you have identified, so that the reader can take note of that as part of your presenting a new narrative. The reader can either accept that pre-existing knowledge (especially if it is from a reputable source) or can use the information in the full reference to find and read the original work. The reference therefore saves time but also provides evidence to support your own ideas.

Study skills

At university, you are expected to learn more than facts. You need to consider, reference, and explain the information you think is relevant to your studies and that is reliable. As part of this, you are expected to assess, analyse, appraise, evaluate, question and debate – not simply repeat existing knowledge.

When marking your assessed work, lecturers are looking for evidence that you have developed good study skills, to the level of a university student. If you were solving a numerical problem, you would need to present how you work out and reach your solution, showing each step involved. The same process is required to support your work when writing a report or an essay. By using, citing and referring to existing publications correctly you demonstrate that you have learned how to find, select, read, critique and present what you have understood from those publications in your own words. The lecturer is looking to see that you have not just relied on one or two books, or module notes, for this learning. They are looking to see whether you have found and selected a range of sources that are relevant and trustworthy, perhaps including a range of different views. By citing and referencing other work, you can explicitly present your own thoughts and ideas alongside the referenced work of others.

Plagiarism

Copying other people's work without giving them credit is called "plagiarism". This could be using another student's work, copying work from publications or from the Internet. This is a serious issue, as it is a combination of intellectual theft and fraud. The offender is presenting the work as if it is their own, and so is stealing other people's ideas. Plagiarising other people's work also restricts the opportunity to learn for yourself and to demonstrate this learning.

If you were to work together on coursework (such as an essay) that is meant to be individual and not a piece of group work, you would be guilty of collusion. Although you may write separate essays, shared ideas and references mean that your work is not the result of your own individual effort. Sharing information in this context is also considered to be cheating.

Allowing others to copy your work, or providing them with references to it, means that you are helping the other person to plagiarise your work, so you are colluding in an offence. There is a distinction between a general discussion and debate around a topic amongst a wide group of students (which is encouraged) and two or three students working together on what should be individual assignments. Where coursework is designed to demonstrate your own skills, receiving help from other students could be considered as unfair.

The University regulations are very clear that plagiarism and collusion are unacceptable and are stated here: http://www.lboro.ac.uk/governance/regulations/18/current/.

Penalties for plagiarism

Plagiarism is regarded as academic misconduct. The consequences for your studies can be serious. Students will typically lose marks for a given piece of coursework, but in major cases they can be dismissed from the University if they are considered as trying to gain a qualification through fraudulent means.

Citing and referencing

Using references well is both an art and a science. Selecting who and what to quote requires judgement and expertise that comes from experience. However, providing the correct citation and reference requires an understanding of the standards and conventions being used. This can be easily learned. If you were to put a comma in the wrong place in a quotation, this would be seen a minor problem; missing out some information in the full reference needed to find the original source is frustrating; not acknowledging the source of the information at all is plagiarism.

A fundamental issue to understand is that you need to distinguish between the contributions of others and your own work very clearly. Once this is made clear through the appropriate use of "speech marks" around directly copied text, you also need to provide two further levels of information to make it clear to the reader where to find the original source material: the citation and full reference. To make it easier still, citations and references should follow the same style and format.

Elements of a reference

There are three elements to a reference.

- The information or data that is either quoted directly, summarized, or alluded to indirectly in the text.
- The citation (written with the body of the text, so also known as the in-text citation) that links the information in the text to the full reference. The full reference would interrupt the flow of the main text, hence the shorthand method of using citations.
- The full reference providing all the required details of where the information can be found.

Quotations

It must be very clear to the reader what information is your own work and what you have used from other sources. Given that the great majority of the marks are associated with your interpretation and critical evaluation of information, rather than its reproduction, quotation should be used sparingly in your assessments.

The most obvious use of someone else's work is in a direct quote. This can may range from including a single word to complete a section of text – for example writing:

> Smith (2015) uses the term 'septage' rather than 'sewage' for this process.

If a quotation is less than about four lines long, you can place it in "double quotation marks" and incorporate it into your main text – for example writing:

> As Smith (2016) notes: "This is not always the safest approach to take when removing sludge from a septic tank, but it is still widely practiced" (Smith, 2016 p.4).

Where long sections of quotations are used, you may need to edit the text to make it easier to understand. Any alterations are shown using [square] brackets and sometimes by changing the font to italics. You can remove some text from the middle of a quote and acknowledge this by using an ellipsis (that is, three full stops ...) between the end of the first part and the start of the next part. Such edits can make your quote easier to understand, while also making it clear what has been added or removed. An example would be writing:

> As Brown (2018) notes: "While less than half of households selected piped water [into] the home during the focus group discussion ... the survey showed that over 75% [of respondents] have a tap in their house that is connected to the [utility] water supply" (Brown, 2018 p.47).

For longer quotes, you may choose to place the text in a separate box, cross-referencing to the box in the main body of text. An example is given in Box 2.

Normally authors will summarize what other writers have written, providing enough information to present opinions and facts. This can flow smoothly, with the authors' names being included in the narrative as if a discussion was being recorded. In this case, the dates provide the citation – for example writing:

> Betts (2012) states that this is true in all cases, while Clarke (2015) disagrees showing how in particular situations, such as when there is a lack of a clear government policy, the approach fails.

Images

Figures, graphs, photographs, illustrations, and diagrams also need to be credited to the originator. These may have to be re-drawn or amended in which case the credit should use phrases like 'source:', 'from...', 'adapted from ...', 'based on...', or 'data from ...' depending on the extent of alteration from the original. If all illustrations are credited at the start of a report each individual image does not need to be cited again.

How to cite correctly

The quotation or other information used in the text needs to be linked, via the citation, to the full reference. A common method is to use the name and date system, also known as the Harvard system.

The name and date method provides more than just a link to the full reference, as it also shows when and where the information was produced. This allows the reader to get an idea of how recent the information is, or see how different citations relate to each other without looking up the full reference – e.g:

> Sansom (2001) stated that this was true, however Fisher (2003) later disagreed.

Knowing the author's name can also add another dimension to the citation, as the person marking your work may be familiar with their previous research.

Names

The Harvard system notes the original creator of the information and the date it was published {e.g. Jones, 2003}. The original text may show the first name (or initials) of the author first, followed by the surname (family name). Only the author's surname (family name) is used in the citation. For example, Dr J Fisher would be cited as Fisher and R.E. Scott would be cited as Scott.

If a text is written by up to two authors, then they are all cited {(Smith, 1988) or (Smith and Jones, 1990)}. Where there are three or more authors, 'et al.' is written after the first author's name. 'et al.' is the Latin phrase meaning 'and the others'. An example of each is shown here:

> Earlier work in the field (Smith, 1988; Smith and Jones, 1990; Smith et al., 1992) had indicated that …

Acronyms, such as WEDC rather than the Water Engineering and Development Centre, are usually preferable for citing in the text. You should use the same acronym in the reference list.

Note that the above example is where the citation is the object of the sentence and is included in brackets. When the citation is the subject of the sentence, the year is in brackets:

> Smith (1988), Smith and Jones (1990) and Smith et al. (1992) have indicated that …

Secondary referencing

It is always best to use a primary source, but if this is not possible (or you want to show how the primary source is being used by others), then you need to use secondary referencing. The secondary author (i.e. the one you are reading) is quoting from a primary source and both the original reference and the person who quoted that reference have to be cited. For example, writing:

> Early indications of the water quality problems were provided by Martin (1984), as quoted by Peters (1993, p.127).

In this example, only the publication by Peters would appear in the reference list.

By including a citation in your work, you are implying that you have actually read the relevant parts of the original source. It is not acceptable to copy references from someone else's work, or to simply list them without any evidence that they have been used to support your own work.

In general, any material that is not correctly and fully cited and referenced in your text is assumed to be your own, original material. Content that you have specifically developed can be referenced by using phrases such as: 'in the author's experience' or 'from the author's knowledge of the area'. Diagrams, flow-charts, computer software listings etc. can be similarly referenced by including 'Source: Author (year)', including your own surname in place of Author.

Repeated citations

You can include a general statement at the beginning of a section to acknowledge the same sources without constantly repeating the same reference. For example, by writing:

> Material in this section is based on studies made by Desai (1993, pp.68-102) and Chapman (1995).

Except where other sources have been indicated, material in this chapter is taken from: Hale and Snow (1989, pp.20-32), Tempest et al. (1996, pp.57-80) and Fogg (1994, pp.17-23).

The text that follows is then a summary of the source material. Note that any direct quotations would still require explicit citations.

Full references

The citation given in your main text is not sufficient to find the original document. You need to include a full reference list at the end of the work. This list contains all the sources of information (including photographs and diagrams) that have been referred to (and cited) in your text, so that anybody can find the original sources.

Order of reference list

Your references should be listed in alphabetical order, based on the surname (family name) of the first author, and not the order in which they appear in your work. If you have referenced several works from one author in your text, then the references should be arranged according to the date of publication. If a number of publications by the same author occur in the same year, you need to list them with the letters a, b, c, etc. after the date (e.g. 2012a, 2012b). If an author also wrote with other people, the single authored publications are placed before the multiple authored ones. Your reference list should not be numbered or shown in a bullet pointed list.

Bibliography

Your reference list should not include references to general literature that you have not cited in your text. This additional literature could be listed in a separate bibliography, if it is required or would improve understanding for the reader. However, in general, there should be a reference list and not a bibliography.

How to reference print media

Book

AUTHOR(S), Year. *Title*. Edition [if not the 1st] Place of publication: Publisher.

Chapter from an edited book

AUTHOR(S), Year. Title of chapter. In: AUTHOR(S) / EDITOR(S), ed.(s.). *Book title.* Edition. Place of publication: Publisher, pages.

Journal article

AUTHOR(S), Year. Title of article. *Title of journal*, Vol. no.(Part no./Issue/Month), pages.

Paper in conference proceedings

AUTHOR(S), Year. Title. In: EDITOR(S) *Title of conference proceedings*. Place and date of conference (unless included in title). Place of publication: Publisher, pages.

Newspaper article

AUTHOR(S), Year. Article title. *Newspaper title.* Day and Month (abbreviated), pages.

British Standard

NAME OF AUTHORIZING ORGANIZATION, Year. *Number and title of standard*. Place of publication: Publisher.

Thesis or dissertation

AUTHOR, Year. *Title*. Designation (Level, e.g. MSc, PhD.), Institution.

Exhibition catalogue

ARTIST, Year. *Title of exhibition*. [Exhibition catalogue]. Place of publication: Publisher.

Map

SURVEYOR/ CARTOGRAPHER etc., Year, *Title of map*. [scale], size, series, Place of publication: Publisher. Other information e.g. projection, orientation.

How to reference other types of media

Image

ARTIST, Year. Title of the work [Material types]. At or In: [where found, for example in a book or museum] In: AUTHOR/ EDITOR of book, Year. *Title.* Place of publication: Publisher.

Media (video, film, or broadcast)

Title, Year. [Type of media]. ORIGINATOR (e.g. director). Place of production: Production company.

Podcast

BROADCASTER (if available), Year. *Name of podcast* [type of resource e.g. podcast]. Organization/publisher responsible (optional), [date accessed]. Available from: web address

Website

AUTHOR(S), Year. *Title of document*. [online]. Organization responsible (optional). [date viewed]. Available from: web address

Electronic message from a public domain. e.g. discussion boards or conferences

AUTHOR (of message), Year. Title. In: *Electronic conference or bulletin board.* [online] [date viewed]. Available from: web address

Weblog (Blog)

AUTHOR, Year. Title of the posting (if applicable). In: *Title of the blog*. [online] [date viewed]. Available from: web address

Wiki

WIKI NAME, Year. *Title of article.* [online] [date viewed]. Available from: web address

Examples of references

Books

Single author

SHAW, R.J., 2005. *Drawing Water: A resource book of illustrations on water and sanitation in low-income countries.* Loughborough, UK: WEDC, Loughborough University.

Edited

PICKFORD, J.A. (ed.), 1991. *The Worth of Water: Technical briefs on health, water and sanitation*. London: IT Publications. (Now: Rugby, UK: Practical Action Publishing.)

Multiple authors and a second edition

CAIRNCROSS, S. and FEACHEM, R., 1993. *Environmental health engineering in the Tropics: an introductory text.* 2nd edn. Chichester, UK: John Wiley and Sons.

By organizations

WATER SUPPLY AND SANITATION COLLABORATIVE COUNCIL (WSSCC), 2009. *Public funding for sanitation: The many faces of sanitation subsidies.* Geneva: WSSCC.

(If an organization has changed its name after the date of publication, then it may be helpful to state the new name and location at the end of the reference, as in the edited example above.)

Other media

Websites

WELL, n.d. WELL Publications listing. WELL Resource Centre Network. [online] [Viewed: 23/06/21]. Available from: https://www.lboro.ac.uk/orgs/well/resources/Publications/Publications%20list.htm

Compact discs

DREISEITL, Herbert, 2002. Water in our cities. In: HARTUNG, Hans (ed.), 2002. *The rainwater harvesting CD*. [CD]. Walkersheim, Germany: Margraf Publishers.

Email

LANE, Jon, 1997. (Director, WaterAid, London). Personal communication [email 07/01/97].

Examples of series

Journal article

PEARSON, J. and McPHEDRAN, K., 2008. A literature review of the non-health impacts of sanitation. *Waterlines*, 27(1), 48-61. Rugby, UK: Practical Action Publishing.

Conference paper

BUDDS, J., CURTIS, V., HOWARD, F. and SAYWELL, D., 2001. Social marketing for urban sanitation: opportunities and challenges. In: PICKFORD, J.A. (ed.) *People and Systems for Water, Sanitation and Health, 27th WEDC Conference, Lusaka, Zambia.* Loughborough, UK: WEDC, Loughborough University. [Viewed: 23/06/21]. Available from: https://repository.lboro.ac.uk/articles/conference_contribution/Social_marketing_for_urban_sanitation/9591878

Appendices

In this section:

- managing stress
- glossary of symbols
- daily task sheet
- weekly planning sheet
- programme summaries

Stress factors in study

When you are studying, one of your concerns is the importance of your results in relation to the career path you want to follow. Distance learning may seem very different from other forms of learning you have previously encountered and sometimes it can be difficult to know how you are doing because you may not be getting immediate feedback.

However pressured you feel, you have made a choice to study, so tasks can only be managed and not reduced. Nevertheless, if you can guard against the negative impact of stress through effective control measures then it is less likely to make you ill and affect your study.

Stress — signs and symptoms

Physical

- Breathlessness, dizziness, nausea
- Appetite changes
- Frequent indigestion
- Constipation/diarrhoea
- Trouble getting to sleep
- Waking up early
- Persistent tiredness
- Fidgeting, nail biting
- Headaches, persistent neck pains

Mental and emotional

- Feeling weepy and emotional
- Irritability
- Inability to decide
- Feeling unable to cope, failure
- 'People don't like me'
- 'I don't like myself or others'
- Fear of something dreadful happening
- Difficulty in concentrating
- Inability to complete one task before going on to another
- Loss of sense of humour and lack of interest in life
- Unable to tell others how you feel

If you experience a group of these symptoms on a regular basis then you may well be working ineffectively and may even be heading for illness. Consider consulting a doctor.

Three key control measures will help you to minimize stress in your life:

Get organized — Look after your health — Learn to relax

Get organized for study

- Plan a timetable for completion of coursework assignments as soon as you know the requirements.
- Plan to complete coursework a week ahead of the submission date.
- Be realistic about deadlines you set yourself.
- Decide your priorities and stick to them.
- Make sure task requirements are clear to you.
- Complete one task before moving on to another.
- If a task is large and complicated, tackle it in small chunks.
- Do not feel you have to strive for perfection — be satisfied with 'good enough'.
- If there is a major crisis in your personal life, let WEDC know so that work can be rescheduled if necessary.

Look after your health

- Allow time to eat properly.
- Try to keep to a well-balanced diet.
- Develop a regular exercise programme.
- Be warned — coffee, alcohol and smoking all exacerbate stress!
- Avoid taking non-prescription drugs.

Learn to relax

- Take five-minute breaks away from study to do something different.
- Spend time alone each day doing nothing.
- Learn to recognize potential sources of stress.
- Learn and regularly practise some relaxation techniques.
- Talk to friends regularly.
- Allow for some fun in your life!

Relaxation strategies

Relaxation techniques can help you by providing mental, emotional or physical release.

Mental

Doing a different type of mental exercise may be just what is needed:

- If you have any knowledge of the classic techniques of yoga, Zen, meditation, then use them — or find out about them.
- Focus on a fantasy journey.
- Focus on an object in the room, for example a lighted candle. See the object and think only of that.
- Focus on breathing: breathe deeply in through the nose and out through the mouth in a regular rhythm, gradually allowing your breathing to adjust its own depth. Try using this in conjunction with other focusing exercises mentioned above.

Emotional

Learn to identify the way you respond when you are under stress:

- Express those feelings appropriately, perhaps through writing or talking to others.
- Emotional catharsis through listening to the radio, watching TV, or through drama, music or art.

Physical

Soundness of body and soundness of mind:

- Exercise is valuable because it helps to reduce the levels of stress-creating hormones in the bloodstream. You do not need to be a great athlete to keep fit. Jogging, for example, has been used as a treatment for depression in the USA.
- Find out what you enjoy doing and then do it. Set up your relaxation programmes before you experience stress. Then it is likely that you will avoid the worst problems.

Additional resources

Although primarily focused on meeting the needs of Loughborough-based students, the university's student Counselling Services can offer some support to distance learners; see https://www.lboro.ac.uk/services/cds/wellbeing/counselling/ for more information.

This section is based on an earlier version of the student advice note *Minimising Stress.*

Glossary of symbols – lines

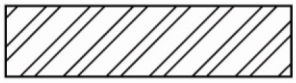
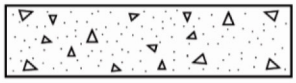
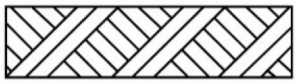
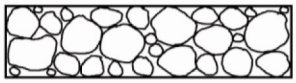
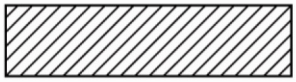
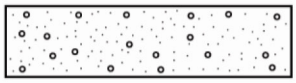
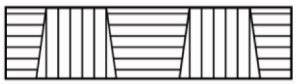
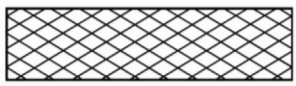
This appendix presents you with a glossary of symbols used in the module illustrations.

Conventions (or standard practices) are used to govern the way information is recorded in drawings to prevent misunderstanding or misinterpretation. In the UK, the British Standards Institution has published engineering drawing conventions in British Standards BS308 and PD7308.

WEDC distance learning modules use these standards but you should note that there are variants. Some of the more common civil engineering drawing conventions are illustrated here.

Lines		Use for
Continuous – thick		Visible outlines
Continuous – thin		Dimension lines; projection/ extension lines; hatching; sectioning
Short dash – thin		Hidden detail
Long chain – thin		Centre lines
Long chain – thick		Cutting / viewing planes
Short chain – thin		Adjacent parts
Continuous wavy – thick		Irregular boundaries; shortbreak lines
Ruled and short zig-zags		Long break lines
Curl		Pipe ends in plan
Flags		Section references
Dimension lines		
either:		
or:		
or:		

Glossary of symbols – shading

Brickwork	
Concrete	
Earth	
Hardcore	
Metal	
Mortar	
Rock	
Sand	
Tarmac	
Wood	
Wood	

Daily task sheet

Hour	ACTIVITY / TASK	NOTES
07–08		
08–09		
09–10		
10–11		
11–12		
12–13		
13–14		
14–15		
15–16		
16–17		
17–18		
18–19		
19–20		
20–21		
21–22		
22–23		
23–24		

Small tasks:

Weekly planning sheet

Hour	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
07–08							
08–09							
09–10							
10–11							
11–12							
12–13							
13–14							
14–15							
15–16							
16–17							
17–18							
18–19							
19–20							
20–21							
21–22							
22–23							
23–24							

What our students say

" I've come to appreciate the social, technological, economical, institutional, environmental and political dynamics involved in the provision of sustainable WASH facilities and services in low- and middle-income countries. Professionally, I am a more disciplined person with a better sense of time management and self-control. Due to my enhanced capacity in the WASH sector, my career growth has been steady over the last three years from a Water and Sanitation Engineer to a Project Manager and now currently a Senior Programme Coordinator. I am optimistic that more is yet to come."

"It is, and has been, of significant value to my current position to say the least and has turned out to be an extremely interesting course so far. I feel that I have greatly increased my understanding of some fundamental issues relating to management in a development country context as well as boosting my personal confidence. This is paying dividends in my work and in people's opinion and confidence in me!"

"The distance learning modules undertaken so far have been very useful and I have applied a lot of the knowledge to my work."

"It was a great experience ... and I have fully enjoyed and benefited from the course materials provided for various modules."

"Well structured, clearly presented."

"My WEDC studies are not complete but, boy, have they prepared me already for this!"

"I'd like to thank you for all the support you've been giving throughout this course, turning it into a very useful experience."

"The programme has benefited me to significantly improve my technical capacity in all dimensions of water and sanitation fields. The programme has helped me to plan, implement and monitor WASH activities in a more effective manner. I have supported technically other partners working in my area through provision of training, designing of WASH facilities and planning and responding to WASH emergencies."

About this *Study Guide*

This *Study Guide* has been produced by WEDC. Parts of it were originally produced in association with the Flexible Learning Initiative and the Faculty of Engineering Teaching and Learning Support Unit at Loughborough University in the UK.

Designed and produced by WEDC Publications

September 2021

Water Engineering and Development Centre
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