

## **Learning Unit 4**

# **Conduct research, analyse and present findings**

After completing this Learning Unit, you will be able to conduct research, analyse and present findings, by successfully completing the following:

- Identify and define appropriate or relevant topic and scope.
- Plan and sequence research steps appropriately.
- Apply research techniques.
- Sift information for relevance.
- Classify, categorise and sort information.
- Analyse research findings and present it in the appropriate format.
- Make conclusions and recommendations in the appropriate format.

## ***Conduct research, analyse and present findings***

Any research, if it is correctly designed and undertaken, will build knowledge, because it is basically an objective investigation of the facts about a certain subject.

Research is a lengthy process that involves many steps such as choosing a topic, gathering information, writing the research paper and so on. In order to ensure that our research is effective, we must follow a structured, step-by-step approach. That way we can manage ourselves and our time and ensure that we complete all the necessary activities in the most efficient way.

### **The step-by-step approach**

The paper is your final product, but the research to generate the product (the paper). The steps below will guide you through this process, from getting the assignment to writing the paper.

For each step, we will consider:

- the goal of that step
- your likely feelings
- your thoughts and actions related to the step

Here is an overview of the main steps in the research process:

Step 1 – Identifying and choosing a topic

Step 2 – Getting started: planning the process

Step 3 – Looking for and forming a focus

Step 4 – Gathering information: detailed research

Step 5 – Preparing to write

Step 6 – Writing and revising the paper

Let's consider each step in turn. As you will see, there are several smaller steps within each of these main steps.

## **4. 1 Identify and define appropriate or relevant topic and scope**

The research process has various stages that allow you to systematically gain information in an effective manner. If you have a method that you use, this will allow you to save time and do a more effective analysis of the topic that you are planning to research.

### **Research Process Step 1 – Identifying and choosing a topic**

- Goal

Your goal is to discover and choose a topic for your research.

Your information search at this stage takes the form of "surveying the territory". Picture yourself piloting a helicopter, at times soaring over the landscape, then hovering for a while over an interesting area and maybe even dipping down for a closer look.

- Feelings

You may feel confused, adrift in a sea of information. You may be anxious to pick a topic and get on with it. Once you've made a choice, you'll probably feel elated and excited for a while, at least.

- Thoughts and actions

Follow the steps described below to get an idea of things you should be thinking about and doing, and some of the strategies that will help to achieve that. Note the type of information search you should be doing at this stage.

Teachers of writing and research use the word *topic* to mean anything from the very general subject matter to the very specific "thesis statement". In this course, the term topic is broadly defined, while *focus* means a narrower perspective on the topic, and *thesis statement* is the main point of your paper, which you cannot determine until you have completed your research and analysis.

Here are the smaller steps that make up Step 1:

- Information search – browse, read, relax.
- Relate the topic to your prior experience and learning.
- Write down your questions and ideas about possible topics.
- Brainstorm, alone and with others.
- Information search – browse, read, relax.

Start by skimming textbooks, books and magazines. Browse the table of contents, chapter headings and subheadings to get an overview of the subject matter. Visit your library and browse in the catalogue and reference room to find out what sources are available there.

To get a broad overview of a subject, you can also browse the internet. Once you feel that you are familiar enough with the subject that you have identified some key words or concepts, you can use them to run a quick search. Use one of the many search engines available, such as google or yahoo, and see what results you get. Look at both the quantity and the quality of the first few pages of hits to get some idea of how easy or difficult it may be to research that subject in more depth in the internet if you choose it as your topic.

Your objective in this step is to get a bird's eye view of the general subject matter to give your brain some ideas to work on while you're getting ready for the step of choosing a topic.

- Relate the topic to your prior experience and learning

Successful research and writing means building on what you know. You don't need to know a lot about a subject in order to use it as your topic, but choosing a subject that you are totally unfamiliar with could be a mistake. It may take so much time and effort to become informed about the subject that you don't really have time to get into the depth required by your assignment.

- Write down your questions and ideas about possible topics:

Use your notebook to start recording questions that interest you or ideas for possible topics.

You'll end up with a list of ideas, some of which are obviously ridiculous and not reasonable topics for your paper, but don't worry about that at this point. Think about things that interest

you and that build on some experience or knowledge you have, or things you are currently learning.

- Brainstorm, alone and with others

Toss ideas around in your mind. Bounce ideas off of your friends and colleagues to get their reactions and ideas. Often another person will have a fresh perspective you might not have thought of, or something they say will trigger an idea for you.

## **4.2 Plan and sequence research steps appropriately**

The research process has a beginning and an end, with many stages or steps in between. Each one of these steps is built upon the foundation of information. Carefully completing each step will create a well-defined and thoroughly researched paper or presentation. You may need to also be flexible; if you on occasion have to go back a step or two, it will refine your research.

### **Research Process Step 2 – Getting started: Planning the process**

- Goal

Your goal now is to plan for the assignment and get ready to narrow the focus of your topic.

- Feelings

Many people, as they start a research project, get worried about the amount of work ahead and feel a bit unsure of them. Don't be surprised if you feel like that! You might also feel a little excitement, anticipating the project – or may not.

- Thoughts and actions

Follow the steps below to get an idea of things you should be thinking about and doing, and some of the strategies that will help. Note the type of information search you should be doing at this stage.

Your information search at this stage involves clarifying the assigned topics and planning your research process.

Here are the smaller steps that make up Step 2:

- understand the assignment and its format
- report
- issue analysis
- advocacy or persuasion
- consider the process you'll use
- set deadlines for each step of the assignment
- research and reflect
- Understand the assignment

Read over the instructions for the assignment to make sure you fully understand what the instructor has in mind and on what basis you will be graded. Are you required to produce a report, to analyse an issue, to advise or persuade? Let's look briefly at the different options.

- (a) Report

Sometimes the facilitator will assign topics to specific students or give a range of topics to choose from and ask that you write a report on your research. This type of research paper is really a form of individual study. The measure of success is how well you can conduct research, analyse and organise the information and communicate it clearly in writing form. Sometimes, reporting means that you have to do an oral presentation as well.

- (b) Issue analysis

A research paper may highlight a particular issue or problem in a field of study. You may be asked to analyse the issue and its solutions, possibly from both a historical and a current perspective. Often you are expected to be a neutral observer, not to promote a particular position. The success of the paper is often based on how completely and clearly you have identified the key aspects of the issue and their significance to the field to which they relate.

- Advocacy or persuasion

A research paper may require you to take a stand on an issue and defend it against opposing points of view. You will then research the issue and read others' arguments for and against. Your paper has to anticipate and deal with arguments against your position, while presenting supporting evidence in favour of your position. Your success will depend on how persuasively the paper makes its case and defends against possible opposition.

Be sure you understand what kind of a paper you have been asked to write, since the approach you'd take could be vastly different, depending on the purpose of the paper and the expectations of your instructor!

- Consider the process you'll use

The paper is your final product, but a research paper involves an extensive process before you can generate the product.

If you focus too quickly on the end product, you may miss some of the important research steps and find yourself writing a paper without understanding enough about the topic to do a first-class job. Browse over the rest of the steps suggested in this section to get an idea of the process and think about how you'll approach each step. Start a journal or notebook and begin jotting notes about not only *what* you plan to do but also *how* you plan to do it.

- Set deadlines for each step of the assignment

Time could be one of your biggest challenges in completing a successful research paper. Take the time now to plan your deadlines. It will help you to get going and tell you when to wrap up one step and move on to the next.

Step-by-step research and writing	Portion of time*	Date to complete this step
<b>Step 1</b> – Identifying and choosing a topic	<b>10%</b>	

<b>Step 2</b> – Getting started: Planning the process	<b>5%</b>	
<b>Step 3</b> – Looking for and forming a focus	<b>20%</b>	
<b>Step 4</b> – Gathering information: Detail research	<b>25%</b>	
<b>Step 5</b> – Preparing to write	<b>10%</b>	
<b>Step 6</b> – Writing and revising the paper	<b>30%</b>	

- Suggested time for each step

The suggested percentages of time are to give you a general idea of how you may want to divide up your time between now and the time your paper is due. As you can see, we have given the research steps 60% of the total time, while writing gets 40%. Depending on how complex your topic is and how much you know about it at the start, your time could be more or less heavily weighted toward research as opposed to writing.

- Research and reflect

As you work through the step-by-step approach, you will find that you need time for reading and research at almost every step. This means a trip to the library, or an internet session on your computer, so be sure to plan enough time for those activities. Also, the whole process works best if you have time to think and reflect – time for you to put the project aside and "sleep on it". If you possibly can, build these times into your schedule. Your final paper will be a better product and you are likely to be happier with the whole process.

### 4. 3 Apply research techniques

This step is crucial in your "gathering" process. This is where you begin to collect information in order to gain a wider overview of your topic.

#### Research Process Step 3 – Looking for and forming a focus

- Goal

Your goal now is to explore your topics, and find and form a focus for your research.

Now that you have a topic, you need to learn about it! Instead of piloting a helicopter over the landscape, you're now on the ground. Picture your topic as a square kilometre of land. Your task is to explore it, which will require going around, over and through it several times to see what's there, looking at it from different perspectives.

- Feelings

You're probably still feeling uncertain, even though you have a topic. As you dig around in your topic, you may have your darkest hour in the whole process, feeling threatened by the choice of a focus – what if you pick the "wrong" one? Be confident. You may even have an "Aha!" experience, but don't worry if you don't – there isn't an Aha! in every top-grade paper.

- Thoughts and actions

Follow the steps below to get an idea of things you should be thinking about and doing, and some of the strategies which will help. Note the type of information search you should be doing at this stage.

Here are the smaller steps that make up Step 3:

- exploring your topic
- preliminary note-taking
- purposeful thinking about possible focuses
- choosing a focus or combining themes to form a focus
  
- Exploring your topic

Before you can decide on a focus, you need to explore your topic, to become informed about the topic, to build on your knowledge and experience. You'll be finding books, articles, videos, internet and other resources about your topic and reading to learn! You're looking for an issue, an aspect, and a perspective on which to focus your research paper.

This is the first step in which you'll probably be taking books out of the library. Encyclopaedias won't be much help here. You're looking for texts on your topic which are either more comprehensive or more specific than what an encyclopaedia offers, with various authors' summaries, analyses and opinions. But until you've chosen a focus, you're not really on a mission of gathering information. If you gather information on a topic as a whole, you'll waste a lot of time doing it and have way too much to sort through when you are ready to write your paper. Until you have chosen a focus, resist the temptation to "gather".

- Preliminary note-taking

While you read, start taking notes of what you're learning about your topic concepts, issues, and problems, areas where experts agree or disagree. Keep careful track of the bibliographic references for the information you're using and write down a note or two about what's contained in the book, article or website. There is nothing more frustrating than having to look for it again when you decide it is indeed something you need.

- Purposeful thinking about possible focuses

While you're learning about your topic, make a point of looking for possible focuses in the material. You could spend enormous amounts of time reading, especially about an interesting topic, without being any closer in a focus unless you deliberately keep that goal in your mind while you read.

- Choosing a focus or combining themes to form a focus

Try out your various choices of focus, as you did with your topic. Which ones fit the assignment, the size, scope and type of the paper? Think about which of your possible focuses have the best chance of making a successful paper. If you find several themes within your topic, you may want to combine them to form a focus.

#### **Research Process Step 4 – Gather information: Detail research**

- Goal

Your goal in this step is to gather information that clarifies and supports your focus.

Your information search at this stage is focused and specific, and you are keeping a careful record of what you find. Instead of the square mile of land to explore, you've roped off an acre. You are walking it systematically, bending down now and then to pick up something and toss it in your backpack, then recording in your notebook what you found and where you found it.

- Feelings

Many people feel interested and challenged at this stage. The agonising part of choosing what to research is over. The task of finding the specific information you need is more like solving a puzzle or going on a treasure hunt. This is the part of the research process that is most likely to be fun.

- Thoughts and actions

Follow the steps below to get an idea of things you should be thinking about and doing, and some of the strategies, which will help. Note the type of information search you should be doing at this stage.

Here are the smaller steps that make up Step 4:

- Find, collect and record:
  - in the library
  - on the internet
- Analyse your findings:
  - authority
  - accuracy
  - bias
  - currency
- Think about clarifying or refining your focus:
  - Start organising your notes.
  - Think about the main point of your research.
- Finding, collecting and recording

This is the step most of people think of when they think of "library research". It is a hunt for information in any available form (book, periodical, CD, video, internet), which is relevant to your chosen focus. Once you know the focus of your research, there are lots of tools and strategies to help you find and collect the information you need.

Your information search should be focused and specific, but pay careful attention to finding, by chance, valuable things you weren't even looking for. Keep your mind open to continue learning about your focused topic.

Now is the time to carefully record your sources in the correct bibliographic format. Every piece of information you collect should have its complete bibliographic information written down before you leave the library. Also pay attention to the *quality* of the information you find, especially if you are using information you find on the internet.

- In the library

To get a broad overview of a subject in the library, you will read and browse general sources of information discovered using three strategies:

- reference room browsing
- catalogue browsing
- shelf browsing

Suppose you're making your first trip to the library to get ideas for your research paper topic.

*Start in the reference room, with some general sources.* You may browse the encyclopaedia or current magazines. Ask the reference librarian to recommend sources to use for general reading in your subject area.

*Search the library's catalogue,* after getting some advice about specific subject headings to use. Browse the library's list of books and materials under several different subject headings

related to your course. Note how many items the library has and whether they look interesting to you. Are there interesting items other than books?

*Look at the subcategories used in the catalogue.* You can learn a lot about subject simply by looking at how it's broken down into subcategories. This will show you what issues the experts in this field consider important enough to treat separately.

Last, take a trip to the bookshelves. Browse the shelves in your subject area to see what titles are available. The shelves are probably arranged according to the Dewey decimal system. If you are unfamiliar with this system, ask a librarian to explain it to you and show you how to find your subject area. On the shelves, books with similar subjects will be located near each other. When you find a book you are looking for, also look at other books around that one. Pull some books off the shelf and look through the table of contents and index to get an idea of topics covered and how they are organised. Do a little skimming and look for interesting issues or ideas.

- On the internet

You can use a search engine to get started as we described earlier, or you may like to refer to some references to websites that you found in the bibliographies of other sources.

*Note how the subject is broken down into subcategories,* to see how information in that subject is organised and what some of the issues are. Spend some time following the links to examine the pages and sites that have been listed. It isn't easy to tell how thoroughly a subject is covered just by looking at the number of sites. Many thousands of web pages have little actual content and are mainly links to other pages, which may be links to other pages, and so on.

Following the links through to actual pages is like browsing the library shelves and pulling books off the shelf to skim the contents.

- Analyse your findings

Evaluate your information carefully. Use the criteria listed below to analyse the authority, accuracy and bias of the information you want to use in your research paper.

### **Authority**

- Who is the author?
- What are the author's qualifications, education, and occupation?
- Has the author written articles or books?
- Is the source peer-reviewed or edited? If so, by whom?
- Does the author or person being interviewed belong to or represent an organisation?

### **Accuracy**

- Are there clues to tell you the information is true?
- Does the author list sources?
- Can you verify the information by cross-checking against other sources?
- Are there obvious errors (spelling, grammar, typing)?

### **Bias**

- Does the information reflect a particular bias or viewpoint?
- What is the purpose of the information? Why was it written, and for whom? To inform? To sell or market the product or idea? To entertain? To persuade?

### **Currency**

- When the information was first published and last updated?
- Is the information current or outdated?
- When did you gather this information?

### ***Interviewing***

There is a huge base of information readily available through the internet and libraries, as well as through interviewing others. It is critical that we become educated and accomplished users of research, using effective research strategies, in order to promote our learning and development.

### ***Observing***

Observing is also known as direct observation. This implies that you are not involved with what you are observing. Another form of observation is immersing yourself into the actual area of study -becoming in some way a part of it.

There are ethical considerations that arise in an immersion of study – it could overstep the boundaries of consent.

Both immersion and straight forward observation are excellent ways to gain information first hand, and then compare your findings to other observant research to verify what you have seen.

### ***Using appropriate electronic sources***

Internet research is one of the quickest manners of obtaining information. However, there is also the risk of having information that could be out-dated, or not scientifically verifiable. A good rule of thumb to follow is:

- Is it **Current**? Check dates on articles.
- Is it **Reliable**? – from a University Source vs a personal blog
- Does it come from an **Authority** that is an expert in the field?
- Does it fit the **Purpose** and **Point of view** of your research?

This process has a silly acronym (C R A P) - this ought to help you remember!

## **4.4 Sift information for relevance**

Once you have collected information, you need to become a little more ruthless in what to use and what to discard. Going through all that you have gathered will slowly bring forth clarity and focus to continue to the next step.

- Think about clarifying or refining your focus

As you gather information about your focused topic, you may find new information that prompts you to refine, clarify, extend or narrow your focus.

Stay flexible and adjust your information search to account for the changes, widening or narrowing your search or heading down a slightly different path to follow a new lead.

- Start organising your notes

Start organising your notes into logical groups. You may notice a gap in your research, or a heavier emphasis on one aspect of the subject that you had intended. Starting to organise as you gather information can save you an extra trip to the library.

- Think about the main point of your research

As you gather information and refine your focus, intentionally look for a main point to your findings. Sometimes, a main point emerges very obviously from the material, and other times you may struggle to bring together the parts into a sensible whole. The tricky part is to know when to stop gathering information – when do you have enough, and of the right kind? Seeking a main point as you research will help you know when you've finished.

#### 4.5 Classify, categorise and sort information

Simply put, **categorising** means **sorting** your research information into groups that work methodically. The categories in your research topic will be very specific and help you impose order in your findings.

Whereas **classifying** involves **sorting** your research material into known, fixed classes.

For example: Classifying is a key skill in reading and doing research because it helps people to focus on:

- what interests them
- what information they need to glean in your research
- what meets their specific research purpose
- what they can ignore

#### Research Process Step 5 - Preparing to write

- Goal

Your goal now is to analyse and organise your information and form a thesis statement.

Be prepared to go back to your information sources to fill in any gaps you find as you analyse and organise your information before you start writing.

- Feelings

You may feel uncertain as to where to start, or overwhelmed by information, but you can probably also see an encouraging glimmer of light at the end of the tunnel.

- Thoughts and actions

Follow the steps below to get an idea of things you should be thinking about and doing, and some of the strategies, which will help. Note the type of information search you should be doing at this stage.

Here are the smaller steps that make up Step 5:

- Analyse and organise your information.
- State the main point of your research.
- Weed out irrelevant information.

- Fill in the gaps.
- Analyse and organise your information.

Remember, the word "analyse" means to break something down into its parts. A meaningful analysis identifies the parts and shows how they relate to each other.

You may have information from different sources that examine different aspects of your topic. By breaking down the information, you may be able to see relationships between the different sources and build them into whole concepts.

When you are trying to make sense of the information coming out of your research process, you often have to look at it from different perspective and sometimes have to step back and try to get a "big picture" view. Some ways to do this are to try out different ways of organising your information:

- Compare and contrast.
- List advantages and disadvantages.
- Start from a narrow premise and build on it.
- Identify cause and effect.
- Order facts in a logical sequence.
  
- State the main point of your research

Before you begin to write your paper, write the main point in a statement. A well-written statement, usually expressed in one sentence, is the most important sentence in your entire paper.

It should both summarise for your reader the position you will be arguing and set up the pattern statement of organisation you will use in your discussion. A statement sentence is not providing proof for your argument.

The main point statement:

- declares the position you are taking in your paper
- sets up the way will organise your discussion
- points to the conclusion you will draw
  
- Weed out irrelevant information

Now that you have all those wonderful notes from your research, you are going to have to get rid of some of them!

No matter how insightful and interesting the information is, if it doesn't relate to and supports the topic you've chosen, you should not try to cram it into the paper. Writing the paper will be much easier if you do this weeding before you start.

- Fill in the gaps

Once you have identified which of your research notes you'll use, you may see some gaps where you need additional support for a point you want to make.

Leave enough time in your writing plan for an extra trip to the library, just in case.

#### **4. 6 Analyse research findings and present it in the appropriate format**

This is when you should connect all of your research findings together and indicate how they stem from the research questions. Make certain that your results allow you to present acceptable answers to your questions. Also be open minded and show why some elements of the answers are satisfactory and others are not as satisfactory.

Once you have analysed your research findings, you need to present it in the appropriate format, such as:

- report
- research paper
- presentation

#### **Research Process Step 6 – Writing and revising the paper**

- Goal

Your goal in this final step is to write, revise and finalise the paper.

- Feelings

When you have finished your paper, you will probably feel great satisfaction – or you may feel dissatisfaction, depending on how you feel about the end product.

- Thoughts and actions

Follow the steps below to get an idea of things you should be thinking about and doing, and some of the strategies which will help.

Here are some smaller steps that make up Step 5:

- Think about the assignment, the audience and the purpose.
- Prepare an outline.
- Have others read and assess critically the paper.
- Revise and proofread.
- Think about the assignment, the audience and the purpose

To prepare for writing, you should go over the requirements of the assignment once more to make sure you focus your writing efforts on what your course facilitator is expecting.

Consider the purpose of the paper, either as set in the assignment or as stated in your main point statement – are you trying to persuade, to inform, to evaluate, and to summarise?

- Who is your audience, and how will that affect your paper?
- What existing knowledge can you assume the audience has on the topic?
- What style and tone of writing are required by the audience and the assignment? For most academic papers, you are expected to use a fairly formal style – but use plain uncomplicated English.
- Prepare an outline

Develop an outline for the paper you are writing and then develop a rough draft. You can use your mind mapping skills to organise your thoughts. Here is a basic outline you can build on.

**Introduction**

Statement of the problem

Main point

**Body: Paragraphs 1 and 2**

History of the problem (Consider discussing past attempts at solutions. Include some sources. )

**Body: Paragraphs 3 and 4**

Extent of the problem (Who is affected? How bad is it? Include sources. )

**Body: Paragraphs 5 and 6**

Repercussions of the problem

**Body: Paragraphs 7 and 8**

Future solutions (Not necessarily your own. More sources. )

**Conclusion**

Summarise your findings

- Have others read and critically assess the paper

Read your paper out loud, to yourself. See if the arguments are coherent (hanging together), logical and conclusive when read aloud. Ask several experienced people to read and comment critically on your paper.

- Revise and proofread

Ask yourself:

- Have I kept the needs of my reader in mind?
- Have I developed the ideas adequately?
- Are all paragraphs unified and coherent?
- Does the placement of each paragraph show an inherent logical order?
- Do the paragraphs flow smoothly from one to another?
- Does each paragraph serve a logical purpose?
- Could I rewrite any of the sentences more concisely without losing meaning?
- Are the sentences clear and complete?
- Are there sentences that announce what I am going to say, or that sum up what I have already said, and therefore could be cut?
- Is the piece of writing fair to the subject and to the reader?

The above checklist begins with some general questions to help you step back and take a look at the overall content and structure of the paper. It then "drills down" to paragraphs, sentences and words for a closer examination of the writing style.

### **Format to present research findings**

When you do research, you can present your findings in various ways, depending on the purpose. For example, you could be asked to:

- write a report or research paper
- give an oral presentation

Let's look at each of these two basic formats of presentation in turn.

### ***Research report***

#### **Placement**

You can apply a few basic guidelines to help you make good formatting decisions. Formatting has to do with, for example, spacing, margins and pagination:

### **Spacing**

Most documents are either double-spaced or single-spaced. Mostly, single-spacing is used (unless a publisher specifies otherwise).

### **Margins**

Reports and research papers are formatted with top, side, and bottom margins.

Remember to allow enough space on the sides of the pages if the report or research paper is to be bound.

### **Pagination**

The body of the report or research paper starts with page 1 even though there may be several pages before it. This is because you usually prepare the preliminary pages only after you've completed the report or research paper. Therefore, you handle them as a separate document and number them with lowercase Roman numerals (i, ii, iii, iv ...) to avoid duplicate numbers. Have a look at the preliminary pages of this unit (before the ..... ) – you will see the page number (ii) on the copyright page. (The contents page is page (i), but we don't normally number the first page. )

### **Headings**

Headings introduce the material that follows and give structure to a report or research paper. Text attributes such as position, capitalisation, font size, bold, italics and underlining indicate levels of importance.

Headings also set segments of text apart and make the whole text easier to read. Leave a little space above and below headings so that your document doesn't look too cramped.

### **Source references**

Writers must give credit their sources when they use the work of others. Quotes or extensive use of published material must be referenced. Referencing helps the interested reader to find more complete information than the report or research paper contains.

Documentation can be provided in several ways. Within the text, you can use either endnotes (or footnotes) or citations to acknowledge the source you are referring to at a particular point. A list of references at the end of your document must give full details of all sources. Let's look at these three features more closely.

### **Endnotes**

When you use endnotes, you put a little, raised number (like this <sup>2</sup>) in the text to indicate that you have given details of the source at the end of the document. You then give all source references on a separate page at the end of the report or research paper, in numerical order. The endnotes come before the bibliography or list of complete references. Number the endnotes page in sequence with the previous page. Endnotes are single-spaced, with a double space between notes.

### **Internal citations**

Citations give the source of information within the body of the report or research paper. The author's name, publication date, and the page numbers are separated by a column and enclosed in brackets: (Van Huss, 1994, 10–12.) When you have already used the author's name as part of your text, you give only the date and page numbers in the citation. For example, "The theory formulated by Van Huss (1994, 10–12) is very interesting".

### **References**

The reference list at the end of the report or research paper contains all references, whether quoted or not, in alphabetical order by author name. We have already discussed how you should format the items in a bibliography.

### **Document assembly**

The components of a business report or research paper vary, depending on their formality. Reports or research papers are generally assembled in three separate segments. Generally, the body of the report or research paper is prepared first, then the material to be attached as appendices or annexures, and finally the front matter (preliminary pages), as we have already mentioned.

### **Preliminary pages**

Many reports or research papers begin with a title page, table of contents and executive summary. Other pages, such as a list of figures, may be added.

The title page makes the initial impression for the report or research paper; therefore, it deserves special attention. An effective title page is formatted attractively and contains the title of the report or research paper that it was prepared for, the name of the person who prepared it, and the date.

### **The body of the report or research paper**

The content and format of the body varies widely, depending on the type of report or research paper. Reports or research papers may contain numbered items, tables, charts and graphics.

### **Appendices**

If you have materials to support your report or research paper, such as questionnaires or tables, you can place them in an appendix at the end of the document. Often the material is segmented into several different appendices.

### ***Research paper***

The way you present and research papers can have a strong influence on the reader's response to your conclusions and recommendations. It is thus important to prepare them with great care.

Pay attention to each of the following factors when you format your document:

- placement – spacing, margins, and pagination
- headings – main, secondary, side and paragraph headings
- source references
- document assembly – beginning pages, body of report or research paper, and appendices

### ***Research presentations***

You have finally completed your document and have all the information in a sequenced and acceptable format. However it does not always end there. Presenting your findings often is part and parcel of moving forward in any arena of research.

Here are some general tips for your preparation and for the presentation itself:

- The audience's ability to remember information is reduced as a talk proceeds. So if you do want to make a series of points in your presentation, organise them from the most to the least important. That way, the people are more likely to remember the important points afterwards. You may even find that the less important points become irrelevant to the focus of the talk as you practise.

- Create "switch elements" to help your audience to follow the link from one issue to the next. These should be logical, and may be presented by posing a question, or explaining your own discovery of the link's existence.
- Use short, simple sentences. The concept will be made clearer, and the sentence structure is more similar to conversational styles.
- Run through the talk once beforehand. Go back and re-think the sequencing. Leave out non-essential elements.
- Don't assume the audience will be familiar with basic concepts that form the foundation of your talk. Outline these concepts briefly but clearly early on in the talk to avoid confusion.
- Try to identify problems or questions the audience may have and address them in the talk -before people in the audience become distracted and think of them instead of listening to what you have to say.
- Determine which elements would benefit from visual aids. Spend time working out the best way to present the material.
- When in doubt about which presentation medium to use (transparencies, slides, and videos, multimedia), choose the format that is the least complex. Keep in mind that the more technology you use, the more things can go wrong.
- The most important preparation factor is to rehearse! Do so in private at first. You can then try the presentation out in front of a few colleagues. Ask for feedback, and then act on that information. Select those who know a little about your topic, not those who know a lot. This will focus your attention on explaining your method and results in simple terms rather than giving details only specialists care about.
- If you start preparing early, you'll have plenty of time to refine the presentation based on your colleague's feedback. This is always a useful process.
- Don't waste your colleagues' time. If you are sincere about wanting that feedback, don't wait until the night before the presentation to ask for other people's input.
- Remember the shorter the talk, the more difficult it will be to cover the material for the clearly and completely. Be strict about including only what is essential for the presentation and remove all the non-essential pieces of information.

- Oral presentations

Oral presentations cannot provide as much detail as in written paper: most people cannot process as much information when they hear it as when they read it. So in an oral presentation, you need to leave out less essential details. It is also important to pay attention to presenting the big picture – place your presentation in context from the start, so that the audience is with you throughout the presentation.

Your oral introduction is likely to be the longest section, methods of research will be second longest, results is likely to be very brief, and the discussion section will probably be of short to medium length.

Fifteen to twenty minutes may sound like a long time for a presentation, but it really isn't. It takes about one minute just to describe the topic you've chosen; perhaps another two or three to explain why you chose it – and then you are almost a quarter of the way through.

Your main goal in the presentation should be to *convey an understanding of the basic questions and answers about your topic. Who, what, when, where, why, how?* As long as you communicate something interesting and relevant, you have fulfilled your obligations. So try to set up your presentation in a way that you at least find interesting.

Present your topic in a way that is comfortable for you. This may mean:

- reading a paper you've written before the time
- using note cards to remind you of topics you want to discuss
- getting the audience to participate
- using audio-visual aids such as a PowerPoint presentation; overhead projector transparencies or posters
- using hand-outs
- involving audience members in role-play

### **Initial planning**

The initial planning is when you begin to adapt the talk to the situation, so this stage is very important for a successful presentation. Talk to your host or facilitator and clarify all the necessary details that we mention below before you spend much preparation time.

If the environment and the audience are unfamiliar to you, this is a critical stage. You may even want to do a literature search on potential audience members to identify areas of common interest or potential questions that may arise.

Begin this stage early. The more planning time you allow yourself, the more time you will have to think up approaches to the topic and the more interesting your presentation will be.

Before you begin preparing the presentation, you'll need to determine:

- the type of talk you are expected to give
- the composition of the audience
- the time allotted for the talk
- expectation for information content

### **The type of talk you will be expected to give**

Ask yourself: will this be an informal chat, a seminar discussion, or a more formal presentation?

Different talks have different purposes; the purpose of a conference presentation is not the same as job talk. When in doubt ask for guidance from your facilitator.

### **The composition of the audience**

Ask yourself:

- Will I be speaking to a general audience or specialists?
- How many people are expected to attend?
- Is this likely to be a friendly audience? An interactive audience?

### **The time allotted for the talk**

The longer the talk, the more freedom you will have to explore the topic. A short talk needs to be very clear and to address the topic directly. Find out well in advance whether question time is included in the time allocation.

### **Expectations for information content**

Is there a specific purpose for having you give a talk? Clarify the expectations beforehand and plan to address them during the presentation.

Will you be presenting new and unfamiliar concepts to this audience, or building on their existing knowledge? Either way, make sure you cover the basics clearly, and early in the talk, to avoid losing the audience.

### **Preparation**

Once you have a general idea of *what* you want to say, you have to decide *how* to say it.

Unlike a conversation or a written document, a talk is a one chance attempt to make a point. By contrast, a conversation consists of repetitions and clarifications based on questions and immediate feedback, while a written paper allows a reader to puzzle through its contents as often as necessary.

It is essential that your talk be well constructed and tidy, and that you present your points to the audience logically. This all takes a fair amount of preparation. *Start early!*

## ***Conducting the presentation***

### **Introduction**

If you can give a good example of the experience, event or trend that you are presenting information on, start with that. A good example that everyone can relate to will get your audience interested on the right wavelength. Give a theoretical context, but don't go into unnecessary details.

State your theory clearly. Make sure the logic behind it is clear, but emphasise the major point in the argument rather than the weight of evidence for each one.

## **4.7 Make conclusions and recommendations**

In order to make effective recommendations, particularly when requiring action on the part of the audience, state it clearly as part of your ending. Plan the precise words you will use in your recommendation and inform your audience exactly what you want them to do.

### Presentation methods

A *transparency* is a thin sheet of transparent flexible material, typically celluloid film, onto which you can write or print. This is then used on an overhead projector.

An *overhead projector* is a piece of electronic equipment that is used to display images to an audience. It typically consists of a large box containing a very bright lamp and a fan to cool it on top of which is a large lens that the light shines through. Above the box, typically on a long arm, is a mirror that redirects the light forward instead of up.

The table below provides a few ideas of methods you can use to present and illustrate your talk and the materials you will need in each case:

Method	Materials
Blackboard	Blackboard, chalk (coloured), eraser
Whiteboard	Whiteboard, erasable colour markers, eraser
Flip chart	Flip chart, colour markers
Hand-drawn poster	Materials: poster boards, paints or markers
Overhead transparencies	Overhead projector, screen, laser printer (colour), colour markers, scanner
Important images, graphs, and data	Big screen monitor(s), computer disk space, paint or drawing program, method of display
Video movies	Video camera, video tape
Computer-assisted presentation	Big screen monitor(s), disk space, computer programs such as PowerPoint.

### Presenting results and recommendations of your findings

Where appropriate, put the overall results in the table or graph. You don't have to give minute detail about your research, just show the overall relationships.

If you are presenting recommendations, communicate these after you have presented the results, and link your recommendations to specific points in your findings. These links will demonstrate that your recommendations are based on sound information and judgement. This will make the audience more receptive to your recommendations.

### Discussion

Briefly explain what is important about your finding, both with regard to theory and applications. What does this study reveal that could be important? Why is it important?

Allow for the opportunities for the audience to give feedback and ask questions. This can happen either during the presentation or at the end. Usually it is better to allow time at the end, to prevent interruptions or breaks in the flow of your presentation. Tell the audience at the beginning of the presentation that you will welcome questions at the end.



#### **Class Activity 4: Conduct research, analyse and present findings**

Please follow the instructions from the facilitator to complete the formative activity in your Learner Workbook.