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Q 1: Technical writers use design processes to creatively solve complex problems;

they use writing processes to create complex documents. In both cases, there are
steps or stages. What is the chronological manner to know the technical writing
process?

Ans: Just as we use design processes to creatively solve complex problems, we use writing processes to create complex documents. In both cases, there are steps or stages, but we don't always proceed directly from one step to next in a chronological manner. These processes are often iterative, meaning we might return to previous stages in the process from time to time. The more complex the task, the more iteration might be needed. Examine the Design Process (**Figure 1.5.1**) and Writing Process (**Figure 1.5.2**) diagrams below.

- ***Design processes to creatively solve complex problems :***
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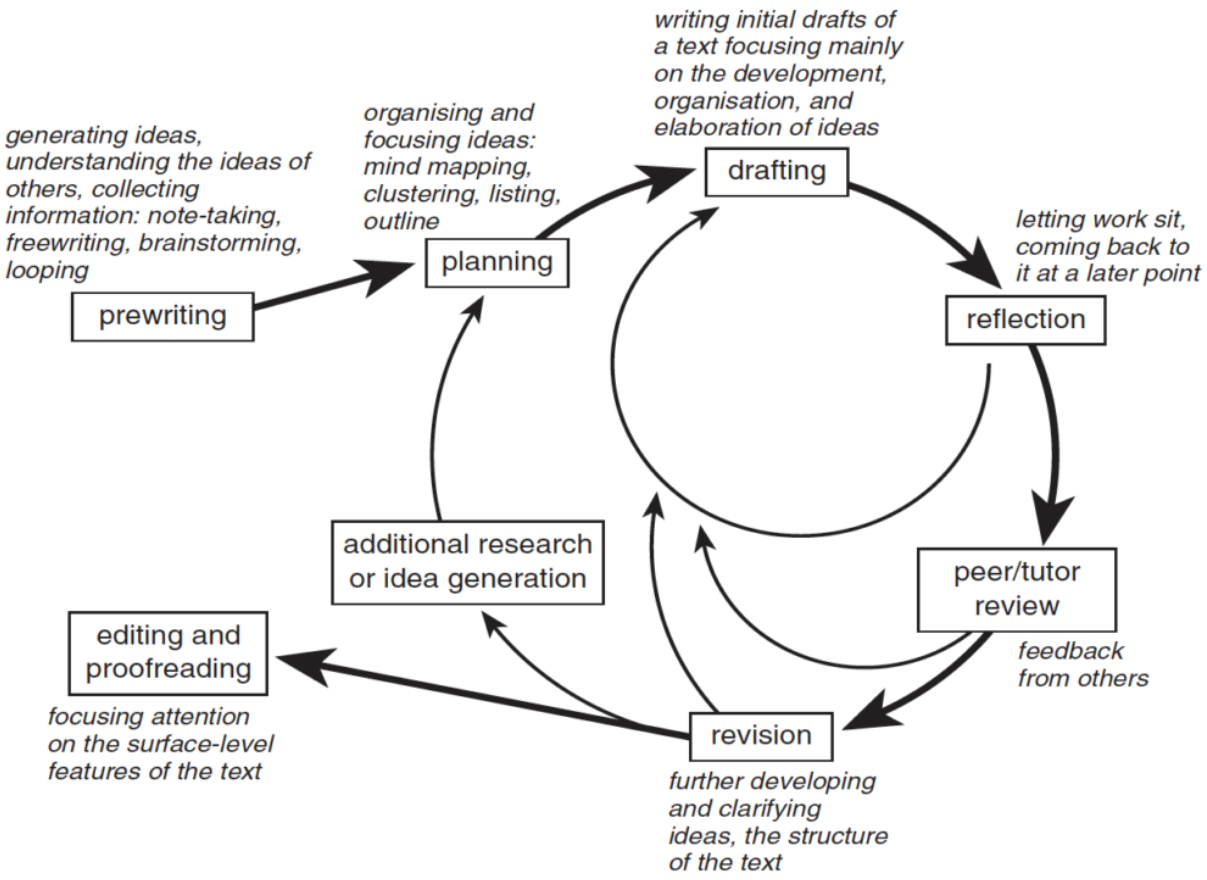
- ***Using writing processes to create complex documents :-***

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## ***The Technical Writing Process*:-**

Technical writing is the practice of documenting processes, such as software manuals or instructional materials.

## Skills Needed for Technical Writing:

To be a successful technical writer, there is a core set of skills that you will want to master. Here are some of the most common skills needed to be successful:

## Research:

Research is one of the first steps in technical writing. After you have an assignment, you will be responsible for collecting the data (numerical and non-numerical) and turning it into valuable information.

Research can come from a variety of places including:

- On-Site Data
- Online and Intranet Publications
- Interviews
- Libraries and Research Databases

After you have researched, you will need to

synthesize and begin planning your document organization.

## Communication Skills:

Communication skills are imperative to be a successful technical writer. You will likely be working with multiple teams and individuals from differing roles.

Your ability to listen, record, and communicate will be crucial.

## Technical Skills:

It is imperative that you understand the technical nature of the content you are writing about. It is difficult to clearly convey a concept that you have not mastered. Many technical writers have academic or workplace experience in the topic they are writing about and many technical writers

have job titles of engineer, geologist, seismologist, financial analyst, or business analyst. They are employed in technical positions and have to summarize information cross-functionally to other areas of the company.

## Writing:

Excellent writing skills ensure your documents are easy to read and are free of errors. Writing encompasses many of the other skills on this list.

It is important that you have the correct tone, style, and format for your document.

## Document Design:

It is important that the graphics aid the reader in comprehending the information.

Graphs, tables, and charts are commonplace in technical reports.

A poorly designed document will make it more difficult for the reader to understand the content. Document design is a key aspect of technical writing.

## User Research and Testing:

Some forms of technical writing may require user research and testing. An example application where detailed research and testing would be appropriate is a written guide instructing engineers how to fix a faulty mechanism on a deep ocean oil rig. This type of research is closely related to testing.

Testing is necessary to ensure your document functions as intended.

After the writer has completed a draft of the document, they may give it to a test group to read. They can then observe the end users following the instructions in real time.

They may follow-up with a focus group or survey to get feedback on the usefulness of the document. They will use these real-world insights as they revise the document.

Even in less complex or critical applications, it is always a good idea to have a third party read over the text. This helps combat the curse of knowledge. The curse of knowledge is a cognitive bias that an individual has when trying to explain something they already understand. As an expert, it is hard to put yourself in the shoes of the learner who is less experienced.

## Industries That Use Technical Writing:

Today technology has expanded into every facet of business. Companies continue to develop ever more technical processes in search of higher efficiency and profit.

Below is a list of industries where strong technical writing is required.

- Biotech & Pharmacy
- Consulting
- Energy and Chemical
- Engineering
- Information Technology
- Financial Services
- Government & Nonprofit
- Insurance
- Manufacturing
- Supply Chain

Q 2: In research the question leads to a problem that needs to be solved by the

researcher. Clearly explain the parameters within which your proposal must stay.

Ans: # How to write a research proposal:

A research proposal describes **what** you will investigate, **why** it's important, and **how** you will
do the research. The format of a research proposal varies between fields, but most proposals
should contain at least these elements:

- Cover page
- Introduction
- Literature review
- Research design
- Reference list

## Purpose of a research proposal:

Academics often have to write research proposals to get funding for their projects. As a student,
you might have to write a research proposal to get your thesis or dissertation plan approved.
All research proposals are designed to persuade someone — such as a funding body, educational

institution, or supervisor — that your project is worthwhile

### Research proposal aims:

**Relevance** Convince the reader that your project is interesting, original and important

**Context** Show that you are familiar with the field, you understand the current state of research on the topic, and your ideas
have a strong academic basis**Approach** Make a case for your methodology, showing that you have carefully thought about the data, tools and procedures you
will need to conduct the research

**Feasibility**Confirm that the project is possible within the practical constraints of the programme, institution or funding.

### How long is a research proposal?

The length of a research proposal varies dramatically. A bachelor's or master's thesis proposal
can be just a few pages, while proposals for PhD dissertations and research funding are often
very long and detailed.
Although you write it before you begin the research, the proposal's structure usually looks like a
shorter version of a thesis or dissertation (but without the results and discussion sections).

### Abstract and table of contents:

If your proposal is very long, you might also have to include an abstract and a table of
contents to help the reader navigate the document.

## Introduction:

The first part of your proposal is the initial pitch for your project, so make sure it succinctly
explains what you want to do and why. It should:

- Introduce the topic
- Give background and context

If your proposal is very long, you might include separate sections with more detailed information
on the background and context, problem statement, aims and objectives, and importance of the
research.

## Research design and methods:

Following the literature review, it's a good idea to restate your main objectives, bringing the
focus back to your own project. The research design or methodology section should describe the
overall approach and practical steps you will take to answer your research questions.

### Methodology in a research proposal :

**Research type** • Will you do qualitative or quantitative research?
• Will you collect original data or work with primary or secondary sources?
• Is your research design descriptive, correlational, or experimental?
**Sources** • Exactly what or who will you study (e.g. high school students in New York; Scottish
newspaper archives 1976-80)?
• How will you select subjects or sources (e.g. random sampling, case studies)?
• When and where will you collect the data?
**Research methods** • What tools and procedures will you use (e.g. surveys, interviews, observations, experiments) to
collect and analyze data?
• Why are these the best methods to answer your research questions?
**Practicalities** • How much time will you need to collect the data?
• How will you gain access to participants or sources?
• Do you foresee any potential obstacles, and how will you address them?
Make sure not to simply write a list of methods. Aim to make an argument for why this is the
most appropriate, valid and reliable approach to answering your questions.

## Reference list or bibliography:

Your research proposal must include proper citations for every source you have used, and full publication details should always be included in the reference list. To create citations quickly and easily, you can use our free APA citation generator.

In some cases, you might be asked to include a bibliography. This is a list of all the sources you consulted in preparing the proposal, even ones you did not cite in the text, and sometimes also other relevant sources that you plan to read. The aim is to show the full range of literature that will support your research project.

## Revisions and Proofreading:

As in any other piece of academic writing, it's essential to redraft, edit and proofread your research proposal before you submit it. If you have the opportunity, ask a supervisor or colleague for feedback.

For the best chance of approval, you might want to consider using a professional proofreading service to get rid of language errors, check your proposal's structure, and improve your academic style.

Q No 3: Assume that your manager wants to create a Web page/ Facebook page/

YouTube channel. Investigate the situation, and write a report explaining the feasibility of creating and maintain a Web page/Facebook page/ YouTube channel.

Ans:

Facebook Page:

***Feasibility Reports:***

A feasibility report studies a situation (for example, a problem or opportunity) and a plan for doing something about it, and then determines whether that plan is "feasible"—whether it is practical in terms of current technology, economics, time frame, social needs and preferences, and so on. The feasibility report answers the question "Should we implement Plan X?" by stating "yes," "no," or sometimes a "maybe" or "under certain conditions." Not only does it indicate whether the idea

is feasible, it also provides the data and the reasoning behind that determination; conversely, it might outline the reasons why the idea cannot or should not be implemented, or what obstacles must be overcome before the idea can become feasible. Typical questions addressed in these reports include.

• ***Is it possible?*** Can this be done within the allotted budget, time frame, legal and regulatory conditions, and technical capabilities?• ***Is it financially viable?*** Even if it falls within our budget, *should* we do it? Will it have long term benefits that outweigh costs? Is there a less expensive or financially risky way to achieving the same result? How does it compare to the cost of doing

nothing about this situation?
• ***Will it be accepted by the community?*** Will people be in favor of this idea? Will
anyone be opposed to it? How much public support is necessary to make this
successful? (What kind of stakeholder consultation might be necessary to
determine this?)

## Recommendation Reports:

A recommendation reports starts from a stated need; it offers a selection of solution options, presents a detailed comparative analysis of the options, and then recommends one, some, or none. For example, a company might be looking at grammar-checking software and want a recommendation on which product is the best fit for them. As the report writer on this project, you could study the market for this type of application and recommend one particular product, 2-3 possible products (differing perhaps in their strengths and their weaknesses), or none (maybe none of them are appropriate for the client's specific needs). The recommendation report answers the question "Which option should we choose?" (or in some cases "Which are the best options?) by recommending Product B, or maybe both Products B and C, or none of the products. These recommendations might arise from questions such as

- What should we do about Problem X?
- What is the best way to provide Function or Service A?
- Should we use Technology X or Technology Y to perform Function Z?

## Typical Contents of Recommendation and Feasibility Reports:

Whatever variety of feasibility or recommendation report you write, whatever name people call it—most of the sections and the organization of those sections are roughly the same.

The structural principle fundamental to this type of report is this: you provide not only your recommendation, choice, or judgment, but also the data, analysis, discussion, and the conclusions leading to it. That way, readers can check your findings, your logic, and your conclusions to make sure your methodology was

sound and that they can agree with your recommendation.

The general problem-solving approach for a Recommendation Report entails the steps shown in the example below.

## *Typical Recommendation Report Elements :*

1. Identify the **need**
What is the "unsatisfactory situation" that needs to be improved?
2. Identify the **criteria** for responding to the need
What is the overall goal?
What are the specific, measurable objectives any solution should achieve?
What constraints must any solution adhere to?
3. Determine the solution **options** you will examine
Define the scope of your approach to the problem.
Identify the possible courses of action that you will examine in your report. You might include the consequences of simply doing nothing.
4. Study how well each **option** meets the **criteria**
Systematically study each option, and compare how well they meet each of the objectives you have set.Provide a systematic and quantifiable way to compare how well to solution options meet the objectives (weighted objectives chart).
Based on the research presented in your discussion section, sum up your findings and
5. Draw **conclusions** based on your give a comparative evaluation of how well

analysis
each of the options meets the criteria and
addresses the need.
Indicate which course of action the reader
6.
should take to address the problem, based on
Formulate **recommendations** based
your analysis of the data presented in the
on your conclusion
report.

## Q No4: The report is generally written for the purpose of solving a problem. There are

many different types of reports. Define different types of reports and explain the
particular requirements for the Formal report.

## Ans:

## Informal Report:

Informal reports are typically internal reports, and can go to other members of the department
and department heads. They are also used for reports that will circulate throughout the
company. They use personal pronouns and contractions. Though the report may be several
sections long, it is typically much shorter than a formal report. No contents page is included.
Informal reports can even be formatted like a memo.

## Formal Report:

If you are writing a report for upper management or for another organization, you will need a

formal report. Formal reports are also used for research papers in higher education. Formal
reports are longer and well researched. Formal reports are impersonal, rarely using personal
pronouns and contractions. Summaries are located on separate pages and usually have more than one heading. Formal reports may also be preceded by a proposal. Include a contents page
if your report is more than five pages long. A cover letter or memo may be required.

## How to start the Formal report :

There are many different types of reports, including business, scientific and research reports, but the basic steps for writing them are the same. These are outlined below.

- Step 1: Decide on the 'Terms of reference'
- Step 2: Decide on the procedure
- Step 3: Find the information
- Step 4: Decide on the structure
- Step 5: Draft the first part of your report
- Step 6: Analyse your findings and draw conclusions
- Step 7: Make recommendations
- Step 8: Draft the executive summary and table of contents
- Step 9: Compile a reference list
- Step 10: Revise your draft report

You can also check our information on assignment writing for tips on planning, finding information, writing and reviewing your work

## Step 1: Decide on the 'Terms of reference'

To decide on the terms of reference for your report, read your instructions and any other information you've been given about the report, and think about the purpose of the report:

- What is it about?

- What exactly is needed?
- Why is it needed?
- When do I need to do it?
- Who is it for, or who is it aimed at?

This will help you draft your Terms of reference.

## Step 2: Decide on the procedure

This means planning your investigation or research, and how you'll write the report. Ask yourself:

- What information do I need?
- Do I need to do any background reading?
- What articles or documents do I need?
- Do I need to contact the library for assistance?
- Do I need to interview or observe people?
- Do I have to record data?
- How will I go about this?

Answering these questions will help you draft the procedure section of your report, which outlines the steps you've taken to carry out the investigation.

## Step 3: Find the information

The next step is to find the information you need for your report. To do this you may need to read written material, observe people or activities, and/or talk to people.

Make sure the information you find is relevant and appropriate. Check the assessment requirements and guidelines and the marking schedule to make sure you're on the right track. If you're not sure how the marks will be assigned contact your lecturer.

What you find out will form the basis, or main body, of your report – the findings.

For more on finding information:

Research and reading

Steps for writing an assignment

## Step 4: Decide on the structure

Reports generally have a similar structure, but some details may differ. How they differ usually depends on:

- The type of report – if it is a research report, laboratory report, business report, investigative report, etc.
- How formal the report has to be.
- The length of the report.

Depending on the type of report, the structure can include:

- A title page.
- Executive summary.
- Contents.
- An introduction.
- Terms of reference.
- Procedure.
- Findings.
- Conclusions.
- Recommendations.
- References/Bibliography.
- Appendices.
- The sections, of a report usually have headings and subheadings, which are usually numbered

The basic structure of a report (PDF 262 KB; opens in a new window)

## Step 5: Draft the first part of your report

Once you have your structure, write down the headings and start to fill these in with the information you have gathered so far. By now you should be able to draft the terms of reference, procedure and findings, and start to work out what will go in the report's appendix.

### Findings

The findings are result of your reading, observations, interviews and investigation. They form the basis of your report. Depending on the type of report you are writing, you may also wish to include photos, tables or graphs to make your report more readable and/or easier to follow.

Graphs - BBC Skillwise website (opens in a new window)

### Appendices

As you are writing your draft decide what information will go in the appendix. These are used for information that:

- is too long to include in the body of the report, or
- supplements or complements the information in the report. For example, brochures, spreadsheets or large tables.

Formatting and presenting your assignment

## Step 6: Analyse your findings and draw conclusions

The conclusion is where you analyse your findings and interpret what you have found. To do this, read through your findings and ask yourself:

- What have I found?
- What's significant or important about my findings?
- What do my findings suggest?

For example, your conclusion may describe how the information you collected explains why the situation occurred, what this means for the organisation, and what will happen if the situation continues (or doesn't continue).

Don’t include any new information in the conclusion.

## Step 7: Make recommendations

Recommendations are what you think the solution to the problem is and/or what you think should happen next. To help you decide what to recommend:

- Reread your findings and conclusions.
- Think about what you want the person who asked for the report should to do or not do; what actions should they carry out?
- Check that your recommendations are practical and are based logically on your conclusions.
- Ensure you include enough detail for the reader to know what needs to be done and who should do it.

Your recommendations should be written as a numbered list, and ordered from most to least important.

## Step 8: Draft the executive summary and table of contents

Some reports require an executive summary and/or list of contents. Even though these two sections come near the beginning of the report you won't be able to do them until you have finished it, and have your structure and recommendations finalised.

An executive summary is usually about 100 words long. It tells the readers what the report is about, and summarise the recommendations.

## Step 9: Compile a reference list

This is a list of all the sources you've referred to in the report and uses APA referencing.

APA referencing

## Step 10: Revise your draft report

It is always important to revise your work. Things you need to check include:

- If you have done what you were asked to do. Check the assignment question, the instructions/guidelines and the marking schedule to make sure.
- That the required sections are included, and are in the correct order.
- That your information is accurate, with no gaps.
- If your argument is logical. Does the information you present support your conclusions and recommendations?
- That all terms, symbols and abbreviations used have been explained.
- That any diagrams, tables, graphs and illustrations are numbered and labelled.
- That the formatting is correct, including your numbering, headings, are consistent throughout the report.
- That the report reads well, and your writing is as clear and effective as possible.

### Types of Formal Reports:

There are many different kinds of formal reports that you may encounter throughout your career. Here are a few of the more common kinds:

- **Research reports** gather and explain data; these reports are informational. Module 4: Research discusses research methods to obtain the data you'll use in these reports.
- **Proposals** may be internal to a company in addressing a business situation, or they may come from a solicited or unsolicited sales situation. Formal proposals will include details of the proposed solutions and costs.
- **Feasibility reports** are a specific type of analytical report. When an entrepreneur or business manager has a new idea, it is prudent to fully explore the idea before making major investments. Some think of this report as a precursor to developing a full business plan. While a business plan may take many months to develop, a feasibility report can be developed in much less time, and it still provides excellent direction for decision makers.

- **Business plans** are typically informational reports about what a new or existing company plans to do over the next period of time. A business plan may take on a bit more of an analytical tone rather than a strictly informational tone when it is shared with potential investors. In some cases, the business plan may be presented with a request for funds; in those cases, the writing is gently more persuasive.
- **Other complex recommendations** may also come in the form of a formal report. These recommendations result from a business problem that an individual or team has been asked to solve.

**Q No 5:** It is considered illegal to reproduce someone else's expression of ideas or

information without permission. Define the term which is used for this literary
crime and explain how to protect any “Fact” that have been considered the
intellectual property of the author.

Ans:

# Plagiarism:

Plagiarism is presenting someone else’s work or ideas as your own, with or without their consent, by incorporating it into your work without full acknowledgement. All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition. Plagiarism may be intentional or reckless, or unintentional. Under the regulations for examinations, intentional or reckless plagiarism is a disciplinary offence.

Students will benefit from taking an online course which has been developed to provide a useful overview of the issues surrounding plagiarism and practical ways to avoid it.
The necessity to acknowledge others' work or ideas applies not only to text, but also to other media, such as computer code, illustrations, graphs etc. It applies equally to published text and data drawn from books and journals, and to unpublished text and data, whether from lectures, theses or other students' essays. You must also attribute text, data, or other resources downloaded from websites.

The best way of avoiding plagiarism is to learn and employ the principles of good academic practice from the beginning of your university career. Avoiding plagiarism is not simply a matter of making sure your references are all correct, or changing enough words so the examiner will not notice your paraphrase; it is about deploying your academic skills to make your work as good as it can be.

## Why does plagiarism matter:

Plagiarism is a breach of academic integrity. It is a principle of intellectual honesty that all members of the academic community should acknowledge their debt to the originators of the ideas, words, and data which form the basis for their own work. Passing off another's work as your own is not only poor scholarship, but also means that you have failed to complete the learning process. Plagiarism is unethical and can have serious consequences

for your future career; it also undermines the standards of your institution and of the degrees it issues.

## Does this mean that I shouldn't use the work of other authors:

On the contrary, it is vital that you situate your writing within the intellectual debates of your discipline. Academic essays almost always involve the use and discussion of material written by others, and, with due acknowledgement and proper referencing, this is clearly distinguishable from plagiarism. The knowledge in your discipline has developed cumulatively as a result of years of research, innovation and debate. You need to give credit to the authors of the ideas and observations you cite. Not only does this accord recognition to their work, it also helps you to strengthen your argument by making clear the basis on which you make it. Moreover, good citation practice gives your reader the opportunity to follow up your references, or check the validity of your interpretation.