

Department of Electrical Engineering
Final Term Assignment
Date: 29/06/2020

Course Details

Course Title: Technical Report Writing
Instructor: Madam Rizwana Iqbal

Module: 4
Total 50
Marks:

Student Details

Name: Saad Bin Tariq

Student ID: 5534

Note: **Plagiarized work is not acceptable.**

Q1	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?	Marks 10
		CLO 1
Q2	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.	Marks 10
		CLO 2
Q3	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.	Marks 10
		CLO 2
Q4	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.	Marks 10
		CLO 2
Q5	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.	Marks 10
		CLO 2



Student Name: Saad Bin Tariq
ID: 5534
Department: BE(E)
Subject: Technical Report Writing (TRW)
Teacher : Madam Rizwana Iqbal

Question No 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?

Answer:

Technical writing is a type of writing where the author writes about a particular subject which requires direction and instruction of explanation. This style of writing has a very different purpose and different characteristics than any other writing style, such as creative writing, academic writing or business writings.

Examples

Technical writing is **used** in a wide variety of fields, such as engineering, computer hardware and software, chemistry, and biotechnology. A person can also find everyday examples of **technical writing** in owner's manuals, employee handbooks, and web articles.

Chronological Process of Technical Writing

Whether you're writing software manuals, online help, brochures, or scripting a video, the core goals of technical writing remain the same, the technical writer must learn to understand the technology, develop a body of information that can help the end user to understand and use the technology, then package and deliver the information to the user.

As a technical writer for a hardware or equipment manufacturer you may be expected to perform basic maintenance on a product, or perhaps be capable of some assembly and disassembly. The more knowledge you have about your product, the better.

1 Technical writers beginning a documentation product will often get much of their information from *subject matter experts*, Here, is **plural** (experts), no 's' is added to the abbreviation in this question. As the S.M.E. are generally members of the design and development teams on the project. They are the technical experts with a thorough understanding of how the product is designed and what it is capable of doing.

2 One of the technical writer's main roles is to interview S.M.E. and translate their technical knowledge of a product into more generally digestible knowledge that will benefit the end user. If you are a member of the design team yourself and are tasked with doing the technical writing as well, this step will obviously not be as important.

Since, as the technical writer, you are in charge of writing the manual, you will find that there is no

manual to help you as you learn how a given product works! The S.M.E. will come in handy here as well, giving you information on how to use the product so that you can get up and running with the task.

3 **LEARNING OF YOURSELF**

Ideally, you will have time to play around with the product yourself, and learn by trial and error how it works. Doing this has advantages over working strictly with S.M.E. because by acting as an end user you will get an idea of what aspects of the product's use are simple and easy to understand and which are more confusing. When you write your user help, you will know which aspects of the product's operation will require more explanation for the end user. Remember that if you do have trouble learning something, it may not be your fault, but the product's.

While you learn, practice *meta-learning*. Be aware of your learning process. What aspects of the product interest you the most? The least? How similar or different from related products is this one? Document your learning as well. Take notes on what parts of the process you find the easiest, and which are the most challenging or confusing. If something seems excessively confusing to you, it might be the same for the end user. Bring any major concerns about usability to the development team leader. Essentially, technical writers are beta testers, or trial end users, for a new product, and quality design teams will take their concerns seriously.

4. **LEARN FROM OTHERS**

Speaking of beta testers, does your company have a small group of dedicated users who regularly get first crack at trying new products in exchange for feedback on them? If so, they can be invaluable partners for the technical writer in evaluating the learning challenges that new users of your product will face. Talk with beta testers if you can. If beta testers are not the norm in your industry, ask your supervisor if you can speak with users of your company's earlier products.

5 **CONSIDER THE AUDIENS**

Once a technical writer has developed a good understanding of the product, the next goal is to consider the audience. How does the company define its market? What is the general profile of the company's customer base? Do its products appeal to a general audience or a sophisticated group of experts in a given field? Is the average user tech-savvy or a technological *newbie*? In some cases, companies will produce a range of products for users in all of these different profiles, and the technical writer's job is to deliver information that has the proper amount of complexity. If the information is too technical for the audience, they will become confused and fail to get the most out of the product (or jam the company's customer support lines with questions). If the information is too simple for a sophisticated audience, they may be insulted, and they may wonder why the manual only explains simple procedures and leaves out the more complicated and the more useful ones.

6 DEFINE DELIVERABLE

The term *deliverables* is used in technical writing to describe the format or formats in which the writer's output will be produced. Traditional deliverables included hard copy owner manuals, product specifications, and other paper based documents. Nowadays, these kinds of documents are often published both on paper and in a *pdf* file available on the Web. Many companies don't publish hard copy help at all anymore, instead, they may include a CD containing the manual in *pdf* form. Other companies strictly offer support and manuals on the Web.

As technology enables the affordable production of audio-visual media, more and more audio and video tutorials are becoming available. Depending on the type of product, these can be far more effective methods of teaching people how to use a product than simple words on a page or on a screen. The modern technical writer may find himself producing instructional videos more often than written help. For software products, specifically, *screen casting* a growing type of technical help, in which an end user is shown a video on their screen of someone actually using the software. The user can then follow the process visually and this can result in a much better understanding of the product.

In most cases, technical writers will be called upon to package several different deliverables for a single product. A computer may have a printed manual, a shorter *quick start* guide, an online version of the manual, and an interactive website offering help as well. As the range of media widens, technical writers are looking for ways to *single source*, to organize their content in a way that allows it to be published in a variety of media without being rewritten.

7. OTHER ORGANIZE THE CONTENT

As with any major writing project, it is wise to organize the material the technical writer has gathered from S.M.E., other users, personal experience, and so on, into an effective record keeping system. A set of folders on the writer's hard drive as well as a filing system for any handwritten notes and other hard copy data for keeping track of all of the information the writer has gathered about a given project. When the time comes to produce a deliverable, the writer can further organize their content into a project outline, video script, website map, or other blueprint for the finished product. In the case of a single-sourcing system, as mentioned in the preceding paragraph, the material may be organized by topic and written in a computer language that will enable it to be published in a variety of sources.

Question: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

DEFINITION

The goal of a research proposal is twofold: to present and justify the need to study a research problem and to present the practical ways in which the proposed study should be conducted. The design elements and procedures for conducting research are governed by standards of the predominant discipline in which the problem resides, therefore, the guidelines for research proposals are more exacting and less formal than a general project proposal. Research proposals contain extensive literature reviews. They must provide persuasive evidence that a need exists for the proposed study. In addition to providing a rationale, a proposal describes detailed methodology for conducting the research consistent with requirements of the professional or academic field and a statement on anticipated outcomes and/or benefits derived from the study's completion.

Our professor may assign the task us of writing a research proposal for the following reasons:

- We will develop our skills in thinking about and designing a comprehensive research study;
- We will learn how to conduct a comprehensive review of the literature to determine that a research problem has not been adequately addressed or has been answered ineffectively and, in so doing, become better at locating pertinent scholarship related to your topic;
- We will Improve our general research and writing skills;
- Practice identifying the logical steps that must be taken to accomplish our research goals;
- We will critically review, examine, and consider the use of different methods for gathering and analyzing data related to the research problem; and,
- Nurture a sense of inquisitiveness within ourself and to help see yourself as an active participant in the process of doing scholarly research.

A proposal should contain all the key elements involved in designing a completed research study, with sufficient information that allows readers to assess the validity and usefulness of your proposed study. The only elements missing from a research proposal are the findings of the study and your analysis of those findings. Finally, an effective proposal is judged on the quality of your writing and, therefore, it is important that your proposal is coherent, clear, and compelling.

Regardless of the research problem we will investigating and the methodology we choose, all research proposals must address the following questions:

1. What do I plan to accomplish? Be clear and succinct in defining the research problem and what it is you are proposing to research.
2. Why do we want to do the research? In addition to detailing your research design, we also must conduct a thorough review of the literature and provide convincing evidence that it is a topic worthy of in-depth investigation .we will sure to answer the "So What?" question.

3. How are we going to conduct the research? Be sure that what you propose is doable. If you're having difficulty formulating a research problem to propose investigating, [go here](#) for strategies in developing a problem to study.
-

Common Mistakes to Avoid

- Failure to be concise. A research proposal must be focused and not be "all over the map" or diverge into on unrelated tangents without a clear sense of purpose.
- Failure to cite landmark works in your literature review. Proposals should be grounded in foundational research that lays a foundation for understanding the development and scope of the issue.
- Failure to delimit the contextual boundaries of your research [e.g., time, place, people, etc.]. As with any research paper, your proposed study must inform the reader how and in what ways the study will examine the problem.
- Failure to develop a coherent and persuasive argument for the proposed research. This is critical. In many workplace settings, the research proposal is intended to argue for why a study should be funded.
- Sloppy or imprecise writing, or poor grammar. Although a research proposal does not represent a completed research study, there is still an expectation that it is well-written and follows the style and rules of good academic writing.
- Too much detail on minor issues, but not enough detail on major issues. Your proposal should focus on only a few key research questions in order to support the argument that the research needs to be conducted. Minor issues, even if valid, can be mentioned but they should not dominate the overall narrative.

BEGINNING THE PROPOSAL PROCESS

As with writing most college-level academic papers, research proposals are generally organized the same way throughout most social science disciplines. The text of proposals generally vary in length between ten and thirty-five pages, followed by the list of references. However, before you begin, read the assignment carefully and, if anything seems unclear, ask your professor whether there are any specific requirements for organizing and writing the proposal.

A good place to begin is to ask our self a series of questions:

- What do I want to study?
- Why is the topic important?
- How is it significant within the subject areas covered in my class?
- What problems will it help solve?
- How does it build upon [and hopefully go beyond] research already conducted on the topic?
- What exactly should I plan to do, and can I get it done in the time available?
- In general, a compelling research proposal should document your knowledge of the topic and demonstrate your enthusiasm for conducting the study. Approach it with the intention of leaving your readers feeling like, "Wow, that's an exciting idea and I can't wait to see how it turns out!"

Question.3.

Ans. Feasibility report:

A feasibility report is a paper that examines a proposed solution and evaluates whether it is possible, given certain constraints. These constraints could be anything: financial, social, practical, environmental, technical, legal, or any number of other things that could make it impossible or impractical for a solution to be implemented.

For example, in moving the company's manufacturing, the CEO hopes to save money for the company. But is it a good idea? The move could cost the company lots of money, cutting into the savings of the new location. In addition, there are environmental concerns: they might be displacing wildlife. There's also the question of tax breaks, which could change based on the location.

Purpose of feasibility report:

The purpose of feasibility studies is to provide companies information and analysis on whether or not you or your company should pursue this course of action. Feasibility reports are usually used to sway decision makers towards one direction or the other.

Importance of feasibility Report:

The importance of writing the report consists in providing legal and technical evidence of the project's vitality, sustainability and cost-effectiveness. The reporting process allows the senior management to get the necessary information required for making key decisions on budgeting and investment planning.

There are many different types of feasibility report here is a list of some of the most common:

- **Technical Feasibility:**

Does the company have the technological resources to undertake the project? Are the processes and procedures conducive to project success?

- **Schedule Feasibility:**

Does the company currently have the time resources to undertake the project? Can the project be completed in the available time?

- **Economic Feasibility:**

Given the financial resources of the company, is the project something that can be completed? The economic feasibility study is more commonly called the cost/benefit analysis.

- **Cultural Feasibility:**

What will be the impact on both local and general cultures? What sort of environmental implications does the feasibility study have?

- **Legal/Ethical Feasibility:**

What are the legal implications of the project? What sort of ethical considerations are there?

You need to make sure that any project undertaken will meet all legal and ethical requirements before the project is on the table.

- **Resource Feasibility:**

Do you have enough resources, what resources will be required, what facilities will be required for the project, etc.

- **Operational Feasibility:**

This measures how well your company will be able to solve problems and take advantage of opportunities that are presented during the course of the project

- **Marketing Feasibility:**

Will anyone want the product once it's done? What is the target demographic? Should there be a test run? Is there enough buzz that can be created for the product?

- **Real Estate Feasibility:**

What kind of land or property will be required to undertake the project? What is the market like? What are the zoning laws? How will the business impact the area?

- **Comprehensive Feasibility:**

This takes a look at the various aspects involved in the project - marketing, real estate, cultural, economic, etc. When undertaking a new business venture, this is the most common type of feasibility study performed.

Question.4:

Ans:

There are many different types of reports

1. Long Report and Short Report
2. Internal and External Reports
3. Vertical and Lateral Reports
4. Periodic Reports
5. Formal and Informal Reports
6. Informational and Analytical Reports
7. Proposal Reports
8. Functional Reports

All Types of Reports and their Explanation

- **Long Report and Short Reports:**

These kinds of reports are quite clear, as the name suggests. A two-page report or sometimes referred to as a memorandum is short, and a thirty-page report is absolutely long. But what makes a clear division of short reports or long reports? Well, usually, notice that longer reports are generally written in a formal manner.

- **Internal and External Reports:**

As the name suggests, an internal report stays within a certain organization or group of people. In the case of office settings, internal reports are for within the organization.

We prepare external reports, such as a news report in the newspaper about an incident or the annual reports of companies for distribution outside the organization. We call these as public reports.

- **Vertical and Lateral Reports:**

This is about the hierarchy of the reports' ultimate target. If the report is for your management or for your mentees, it's a vertical report. Wherever a direction of upwards or downwards comes into motion, we call it a vertical report.

Lateral reports, on the other hand, assist in coordination in the organization. A report traveling between units of the same organization level (for example, a report among the administration and finance departments) is lateral.

- **Periodic Reports:**

Periodic reports are sent out on regularly pre-scheduled dates. In most cases, their direction is upward and serves as management control. Some, like annual reports, is not vertical but is a Government mandate to be periodic in nature.

That is why we have annual or quarterly or half-yearly reports. If they are this frequent, it only makes sense to pre-set the structure of these reports and just fill in the data every period. That's exactly what happens in most cases too.

- **Formal and Informal Reports:**

Formal reports are meticulously structured. They focus on objectivity and organization, contain deeper detail, and the writer must write them in a style that eliminates factors like personal pronouns.

Informal reports are usually short messages with free-flowing, casual use of language. We generally describe the internal report/memorandum as an informal report. For example, a report among your peers, or a report for your small group or team, etc.

- **Informational and Analytical Reports:**

Informational reports (attendance reports, annual budget reports, monthly financial reports, and such) carry objective information from one area of an organization to maybe a larger system.

Analytical reports (scientific research, feasibility reports, and employee appraisals) show attempts to solve actual problems. These analytical reports usually require suggestions at the end.

- **Proposal Reports:**

These kinds of reports are like an extension to the analytical/problem-solving reports. A proposal is a document one prepares to describe how one organization can provide a solution to a problem they are facing.

There's usually always a need to prepare a report in a business set-up. The end goal is usually very solution-oriented. We call such kinds of reports as proposal reports.

- **Functional Reports:**

These kinds of reports include marketing reports, financial reports, accounting reports, and a spectrum of other reports that provide a function specifically. By and large, we can include almost all reports in most of these categories. Furthermore, we can include a single report in several kinds of reports.

Now, as we have progressed from knowing what report writing is and then the kinds of reports. So, let's see step-by-step how one actually writes a report. Stay tuned to Topper Guides.

Requirement for the formal report:

Following are particular requirements for the formal report.

- Introduction
- Background
- Purpose (or problem statement)
- Research (or methods)

- Recommendation (or solution)
- Overview of alternative options
- Evaluation
- Benefits
- Qualification
- Management
- Implementations
- Schedule
- Methods of operation
- Costs
- Conclusion

Introduction:

An introduction sets up the structure of a report. Essentially, the introduction tells the reader what is to come and in what order, and it reminds the reader of the key criteria that instigated the report's creation. This section is key to the reader following and retaining key points of the report.

Background:

The **background** section of a report explains the circumstances that led to the report's creation. In some situations, this section may be labeled as **criteria** or **constraints**, or the topic may be briefly addressed in the **transmittal letter** or introduction. This section can appear in both informational and analytical reports.

Purpose or Problem Statement:

As mentioned, the **purpose** or **problem statement** section may be part of the background, or it can stand separately, depending upon the complexity of the report. The purpose or problem statement should be worded like this example:

The purpose of this report is to address [the problem or question that the requester needs addressed]. This report will accomplish this by investigating [whatever you researched or developed for the report]

While the example shows the proper phrasing for an analytical report, it could be reworded to fit an informational report: for example, "details from three solutions are listed."

Research or Methods:

The **research** section (also sometimes called **methods**) is where authors establish their credibility as they show how their perspective is supported by outside experts. This section provides background on where data used in the report was found: it is not a section where data is listed.

Recommendation or Solution:

This section may stand on its own, or it may have several subsections depending upon the complexity of the report. Additionally, depending upon the receptivity of the audience to your solution, this section may come earlier or later in the report. In some reports the **recommendation** is used in lieu of the **conclusion**. This section is found only in analytical reports.

Overview of Alternative Options:

In this section, you must underline the key features of each possible option. Make sure they are easy to understand and presented in a friendly layout. Keep in mind that the goal is to allow your audience to make the best decision. This section is typically used in informational reports, where no recommendation is made.

Evaluation:

This should be the bulk of your report; you must evaluate the options using the criteria you created. Add graphs, charts, etc. to show that you have studied your options, and have come up with statistics that back up your reasons why your alternative beats the competition. If your audience is likely to be resistant to your recommendation, the evaluation should appear before you make the recommendation. This section is found only in analytical reports.

Benefits:

This section explains the benefits of the solution. There is little reason why your proposal should be accepted if there are not meaningful benefits. Thus, be sure to show that your solution will result in substantial benefits for the organization, company, etc. Some may think to omit this section when the report was requested; however, it is always helpful to have comprehensive listing of why something is being proposed and to document all the items the solution addresses.

Qualifications:

This section may stand alone or be part of the benefits section. A **qualifications** section is a good place to explain the talent and experience of yourself and your team members. Depending on your readers, this section may be small or large. As with all business documents, you need to be honest when you write your qualifications.

Management:

This section may stand alone or be part of the benefits section. In some cases, the resumes of the proposed team for the project are requested or provided. In those situations, this section is found as part of the **back matter**. A project's success depends on its management team, and readers are impressed if you can describe your project management structure in your proposal. By identifying each person on your team and explaining what their tasks and responsibilities are, you can

coordinate your work efficiently. It is very helpful for each person to know what they will be doing beforehand so there won't be many problems concerning leadership and time management further into the project.

Implementation:

This section details when, why, and how the solution will be used for the first time. The **implementation** period is usually a trial period to see if the solution is feasible as planned. Thus, you will pick a time that does not impact the normal operation of existing programs, patterns of operation, etc. In addition, you will describe the location of implementation, who will be involved, costs of implementation, what is expected to happen, the date and time of implementation, the duration of implementation, etc. You should also explain why you chose this time for implementing the solution. State that during this time you will note what works and what needs to be changed.

Schedule:

A **schedule** section may be found separately if the product or project is complex. In other instances, it is combined with the **implementation** section. In some situations, the schedule is part of the back matter and exists more as a list or table of dates and accomplishments.

Schedules help provide readers with three things:

1. Schedules give readers a deadline, so they know when to expect a final result.
2. Schedules can be critiqued by readers to make sure they are feasible.
3. Schedules are a good way to keep track of how a project is proceeding.

In addition to project deadlines, schedules should also include due dates for drafts, resources, and other information that is needed to assist you with your project goal.

Methods of Operation:

This section describes how the solution will fit into and be used as a functional part of the day-to-day operation of the company, business, etc. Detail the date you expect to launch the solution into the operation of the company, the place from where the solution will operate, how it will operate, and who will be involved (identify their responsibilities, duties, and any titles, certifications, degrees, etc.).

Costs:

This section tells how much the solution will **cost** in dollar amounts. This section is generally presented after all the explanation of implementation, benefits, etc. That way the reader is fully appreciative of what the costs cover. It is expected that numbers presented are accurate to the penny, unless otherwise specified by whatever margin of error is appropriate to the situation. In informal reports and some formal reports, this section is part of the body (or evaluation) detail. For some formal reports, there is extensive line by line detail of parts, services, and/or supplies. When this is the case, the costs section may be part of the appendices and will only be referenced from the body.

Conclusion:

The **conclusion**, as the header says, finishes the body of the report: it provides a summary of the major ideas of the report. While not as long as an **executive summary**, it may have a similar feel in order to provide a comprehensive reminder of the key components of either an analytical or informational report. The closing of a report should never introduce a fact or idea not presented earlier in the report.

Question. 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

Answer:

The term piracy is used to reproduce someone's expressions of ideas or information without permission which is a literary crime. In the most of the literary material or beginning of book or reserved for republication until its permission was met granted by the author. This practice is going on illegally. Actually these kind of material is the property of author which steal by someone and mold it and republic for his own purpose. Piracy further refers the unauthorized duplication of copyright contents that is than sold at a substantially lower price in the grey market. For example CD writer are available off the self at very low price making music piracy which is a simple affair Piracy is not a theft is crime, piracy is a copyright violation and only under certain circumstances is the copyright violation. Hence crime and the copyrights deserves its punishment under their remaining law.

Keeping in view of above answer and the contents of question the simple term of the literary crime is "PIRACY"

