## Technical Report Writing

Communication can be defined as a way of exchanging ideas or thoughts between individuals or institutions through different channels. Thus, technical communication, therefore, means the transmission of facts, figures, ideas, and all sorts of scientific and technical information from one individual to another.

## The Process of Communication

The entire process of communication requires at least six steps, namely, thought, encoding of message, transmission of message, de-coding of message, and feedback.

**Thought**: the sender begins communication with content and the basis of the message.

**Encoding**: this refers to thought converted in to a form that can be understood by a receiver via encoding.

**Transmission of message**:  this means the message encoded passes through a channel. But ,sometimes there could be a problem in transmission of message because of different barriers.

**Reception:** refers to when the receiver received the transmitted message.

**Decoding**: this means the receiver converted the message into a readable or understandable text decoding.

**Feedback**: Here, the receiver gives feedback to the sender of the message, he or she has received.

## Effective Writing Process

There are four steps which a writer should follow while writing a document:

**Planning**: in this step the writer should decide to whom the message to be written and also determine what the document intends to accomplish.

**Writing**: in this stage the writer states ideas in the form of sentences and paragraphs.

**Revising**: in this writing step, the writer revises the message and contents to be conveyed until he or she is satisfied with it.
**Editing**: at this stage the writer attacks grammatical mistakes and typographical errors in the document



## What is technical writing?

Technical writing is the practical writing that people make or do at their work places as part of their jobs. This practical document is made in different government, non-government organizations, and public service offices in order to run their operations for the purpose of informing, instructing, and persuading professionals.

## Features of language use for technical writing

i. **Use of familiar and easy words**: use familiar and concert words and expressions since technical writing
does not require using too many and roundabout words and expressions.
ii. **Use of clear sentences**: place the main idea in a topic sentence at the beginning, and later develops
the idea with clear developing sentences.
**iii .sentences should be of moderate length**: since an active voice emphasizes the action performed
than what happened to an object ,use this voice to help readers understand ideas more easily**.**
Iv.logical **ordering of ideas and paragraphs**: in order to give coherence to many ideas, use a paragraph
for one single idea and use cohesive devices to relate idea to anther in each paragraph .

V.**avoid old –fashioned phrases**: use newer, more precise, concise words /phrases than expressions which have become old- fashioned.

**Principles of technical writing**

i. **Accuracy**: this principle includes accuracy of the facts and the expression which means proof –reading that includes sentence level skills-spelling, grammar, and punctuation marks.

ii. **Brevity**: use shorter sentences than long ones and use minimum number of words to provide maximum amount of information to the reader.

iii**. Clarity**: add the right amount of information or specific details to your writing and use clear and easy words and expressions to pass clear message to the readers.

iv. **Objectivity:** since technical writing should be fact oriented, your analysis, discussions and interpretations should be free from subjectivity emotions.

v. **Organization**: use idea organization techniques such as chronological, spatial, and emphatic to make your writing clear and understandable to the readers.



## Business Reports and Business Proposals

### What Is a Report?

The word report is derived from the Latin word reportare which means to carry back an event to someone who was not present on the occasion. A report can be written on a number of occasions, and can be classified under different divisions. Among these:

**A. The Informative Report**- if a report merely presents facts important to an issue or a Situation, it is then informative. Types of informative reports:

**Progressive reports**: this type of report describes what has been done during a specified time on only one project unlike periodic reports which cover all of an organizations work.

**Periodic reports**: this explains accomplishments for all projects of a work group or
of entire organization over a specified time period.

**Instructions:** instructions are steps of procedures and appropriate explanations along with additional details to people who need them to perform a task or understand how someone else performs that task.

**B. The Investigative Report**- if a report, on the other hand, presents analysis of facts, draws
conclusions ,and makes recommendations, it is said analytical, interpretive ,or investigative report.

**Science lab report**: the type of report that adds knowledge from concepts and procedures tested by scientific lab.

**Field- Trip report**: in this type of report a technical writer reports only the essential details to supervisors and coworkers about what was gained from a business trip.

**Reasons for writing reports**

**i.To enhance communication at all levels**: whether the organization is big or small, technical writers should exchange accurate and consistent information from subordinate to superior officials with in the same organization or with other agencies and companies outside the organization through channels to improve their activities.

**ii. To provide data to make decisions to shoot problems**: companies often require data from different sources like expert advice, market survey reports, feedback, etc to decide to retain ,upgrade ,expand policies ,decisions ,products ,and infrastructure and to find solutions to problems.



**iii. Reports can store information**: unlike oral reports, the written report can be stored .this allows the owners or another people to reread it again at different time and place to deal with many institutional activities

**iv .Reports develop communication skills in the writer**: for the reports are concise ,accurate ,formal, and instrumental in decision making, the writer of a report develops data collection, data organization, analysis, interpretation, presentation and other necessary skills.

**V .Reports the only source of showing professional activity**: employees can show their work and performance among themselves, and to their superiors through reports and files.

VI .Thought writing a report personnel with in institutions or outside institutions in the same status or indifferent status deal activities in collaboration and co-operation with others in their team.

## Main characteristics of a business report

**Precision**: since the people who read the report have limited time include a lot of information in a limited space and indicate your purpose clearly by stating your investigation, analysis, and recommendations precisely.

**Factual**: any information included in a report should be based on facts and facts only. Otherwise, personal emotions or inaccurate facts will lead to error in decision-making.

**Relevance**: add all related and relevant information to your report, and make it brief and precise.

**Objectivity of recommendations**: any recommendation made in the report should be free from partiality, personal- interest or attitude.

**Simple and clear**: your report should be written with familiar words and expressions. That means, don't use vague, complex, outdated language, and your ideas should be arranged systematically to be understandable to the readers.

**Homogeneity**: the report should be presented or written on one topic.

**Grammatical accuracy:** avoid grammatical errors resulted from language structures-word choice, word order, sentence skills, etc.

**Brevity:** add only necessary and the right amount of information in your report. The aim is to include

everything significant and yet be brief.

**Special format, illustrations, and documentation**: a report should include all its structures or parts, and accompany the written document with graphic representations of the document.

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## Sections of Science Lab Report

**Introduction**

Tells the purpose or the objective of the lab (what the lab is expected to prove) and can provide background of the situation under investigation, tells under whose authority the lab was conducted, and provides relevant dates. The introduction does not always have a separate heading in shorter reports.

**Materials and method/experimental section/methodology, or procedure section**

List materials/equipments, items, evidence and/or instruments used. This section describes the procedure and includes relevant calculations. Materials can be presented in a separate heading from methodology if report is long.

**Results and Discussion/Results**

Presents test results with relevant calculations, including any accompanying graphics such as tables or graphs. This section presents the results and explains why things happened. Results can be presented in a separate heading from discussion if the report is long.

**Conclusions**

Includes a brief summary that tells how the test results, findings, analyses meet the objectives of the lab. This section tells what was learned or gained from the experiment.

## What is a proposal?

A proposal is a properly conceived plan or idea made on a future project which might produce some practical or theoretical benefits. Proposals can be made within organization, between companies, in between different departments, or from subordinates to the superiors to bring about change in an old policy, system, launch a new product, or start some new facilities. Thus, a proposal can be written for various

reasons: to solve an existing problem, change a system or procedure, find answers to questions, offer advice or training, or conduct research on a topic of interest.

A proposal differs from report as the former is a suggestive plan for future action or task where the writer aims at getting the acceptance or approval of the documents. In contrast, a report deals with what has already been done.



**Kinds of proposals**

(a)**Business proposals**: refers to proposals prepared on business activities like trade or commerce to

enhance growth and development of business activities, and to test facilities in marker.

(b) **Research proposals**: are those proposals concerned with projects engaged in scientific investigation

(c) **Internal proposal**: This type of proposal is written by an employee of a company, organization

or institution for internal matters to these institutions and submitted to higher authorities.

(d**) External proposal**: This is a proposal comes from persons to parties not belonging to the organization.

**Sections of internal Proposal**

| **Section** | **possible headings** |
|---|---|
| **Introduction** | Introduction |
| | Problem addressed and solution (could be two headings) |
| | Objectives of proposed plan |

| | |
|---|---|
| | Background |
| | Data sources |
| | Scope and delimitation |
| **Body** | Methods |
| | Scheduling |
| | Capabilities and qualifications of personnel |
| | Materials and equipment |
| | Expected results |
| | Plan for evaluating results |
| | Feasibility |
| | Budget (usually in tabular form) |
| | Justification of budget items |
| **Conclusion** | Conclusion |
| | Summary of key points |
| | Request for action |



**Course Contents**

1. Introduction
   1.1. Overview of writing process
   1.2. Writing for technology
2. Technical Writing
   2.1. Definitions and Purpose Technical Writing
      2.1.1. Definitions of technical writing
      2.1.2. Purpose of technical writing
   2.2. Characteristics of Technical writing
   2.3. Features of language use for Technical writing
   2.4. Document design and graphics in Technical writing
3. Types of Technical writing
   3.1. Informative reports
      3.1.1. Progressive reports
      3.1.2. Periodic reports

3.1.3. Instructions ( mechanism description)
3.2. Investigative Report
3.2.1. Science Lab Report
3.2.2. Field Trip Report
3.3. Business letters
3.3.1. Steps to write Business letters
3.3.2. Types of Business letters
4. Technical reports and proposals
4.1. Technical reports
4.1.1. Contents of technical reports
4.1.2. Formats of Technical reports
4.2. Project Proposals
4.2.1. Purpose of writing proposals
4.2.2. Basic features of proposals
4.2.3. Contents of proposals
4.2.4. Formats of proposals



**Teaching Methods**

Lecture followed by group discussion activities

**Evaluation Techniques**

1. Continuous Assessment ( 70% )
   - Quiz 1 &2 (10%)
   - Individual assignment on Letter Writing (10%)
   - Group assignment on writing and presenting Project proposals (15%)
   - Classroom activity and attendance 5% each (10%)
   - Writing Instructions (10%)
   - Lab. Reports (10%)
2. Written Final Exam (35%)

**References**

Abidi, A. and R. Chaudhry (2010), English for Engineers. Delhi: Cengage Learning

Jefferson, S. and D, Smith Worthington ( 2011) Technical Writing for Success,3rd ed. Mason: Southwestern, Cengage ;Learning
Level, B (2004). Writing and Grammar. New Jersey: Pearson Education, Inc.
Soles, D. ( 2010). Essentials of Academic writing 2nd ed. Boston, Cengage Learning
Thomson, A,J. and A,V. Martinet (2004). A practical English Grammar, Oxford. OUP