

TECHNICAL WRITING

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INTRODUCTION

- **TECHNICAL WRITING IS THE PRESENTATION OF INFORMATION THAT HELPS THE READER TO SOLVE A PARTICULAR PROBLEM**
- **TECHNICAL WRITING REQUIRES A STRONG FOUNDATION IN GENERAL WRITING, INCLUDING KNOWLEDGE OF COMMON GRAMMAR AND PUNCTUATION CONVENTIONS.**
- **TECHNICAL WRITING IS DIRECT, INFORMATIVE, CLEAR, AND CONCISE LANGUAGE WRITTEN SPECIFICALLY FOR AN IDENTIFIED AUDIENCE. THE CONTENT MUST BE ACCURATE AND COMPLETE WITH NO EXAGGERATIONS. TO DELIVER THE INTENDED MESSAGE, THE TEXT MUST BE OBJECTIVE AND PERSUASIVE WITHOUT BEING ARGUMENTATIVE.**
- **DEVELOPING TECHNICAL DOCUMENTS THAT MEET THESE REQUIREMENTS AND STANDARD GUIDELINES IS TIME CONSUMING.**

USES OF TECHNICAL WRITING

- **USED IN PROPOSALS, MANUALS, WEB PAGES, LAB REPORTS, NEWSLETTERS, AND MANY OTHER KINDS OF PROFESSIONAL DOCUMENTS**
- **USED TO COMMUNICATE INFORMATION TO MANAGEMENT, EMPLOYEES, AND OTHER BUSINESSES**
- **CONSIDERED THE CONDUIT BETWEEN PEOPLE WHO KNOW TECHNOLOGY AND THOSE WHO USE IT**

(KIMBERLY GILLES TECHNICAL COMMUNICATIONS BS310 DR. JANICE SPANGENBURG)

EXAMPLES OF TECHNICAL WRITINGS

- **USER MANUALS; SOFTWARE INSTALLATION GUIDES; STANDARD OPERATING PROCEDURES (SOP); SERVICE LEVEL AGREEMENTS (SLA); REQUEST FOR PROPOSAL (RFP); LEGAL DISCLAIMERS; COMPANY DOCUMENTS; ANNUAL REPORTS; HELP FILES; RESEARCH RESULTS; WHITE PAPERS; BUSINESS PLANS AND PROCEDURES; FEASEABILITY STUDIES & CORPORATE REPORTS; PRESS RELEASES; CATALOGUES ETC.**

THINGS TO DO BEFORE COMPOSING THE TEXT

- **BEFORE COMPOSING THE TEXT, IDENTIFY THE AUDIENCE, DETERMINE THE MESSAGE, COLLECT ADEQUATE INFORMATION, BRAINSTORM, AND THEN DEVELOP A DETAILED OUTLINE. DETAILS OF EACH PROCESS ARE PROVIDED BELOW.**

DETAILS OF THE PROCESS (AUDIENCE IDENTIFICATION)

- **IDENTIFY THE AUDIENCE BY ANSWERING THE FOLLOWING QUESTIONS:**

WHO IS THE INTENDED AUDIENCE (ONE OR MULTIPLE)?

WHAT SUBJECT KNOWLEDGE, VOCABULARY, AND BIASES WILL THE INTENDED AUDIENCE HAVE?

HOW WILL THE REPORT BE USED?

WHAT INFORMATION MUST BE CONVEYED AND HOW MUCH DETAIL WILL BE EXPECTED?

PROCESS CONTD. (PURPOSE, INFORMATION, LISTING IDEAS, OUTLINE)

- **DETERMINE THE PURPOSE OF THE REPORT BY EVALUATING THE INTENDED MESSAGE. A CLEAR MESSAGE WILL HELP FOCUS ON WHAT TO INCLUDE AND WHAT TO DISCARD.**
- **COLLECT ADEQUATE RELEVANT INFORMATION WITH SUFFICIENT DEPTH FOR THE INTENDED AUDIENCE BEFORE STARTING TO WRITE.**
- **BRAINSTORM BY LISTING RELEVANT IDEAS. THEN GROUP RELATED THOUGHTS TOGETHER. ORGANIZE THE KEY POINTS AND SUPPORTING DETAILS IN A LOGICAL ORDER. ENSURE THAT EACH SECTION RELATES TO AND SUPPORTS THE MESSAGE, ELIMINATING IRRELEVANT IDEAS.**
- **DEVELOP AN OUTLINE OF HEADING AND SUBHEADINGS THAT CONVEY KEY POINTS; FOR EXAMPLE, USE *ANALYTIC RESULTS OF ENERGY PRODUCTION* IN PLACE OF *RESULTS*. THEN ASSIGN A LENGTH TO EACH TOPIC.**
- **NEXT, DEVELOP FIGURES AND TABLES.**

USE APPROPRIATE LANGUAGE

- **LANGUAGE SHOULD BE SPECIFIC TO THE GOAL OR SITUATION OF THE DOCUMENT TECHNICAL REPORTS USE FORMAL ENGLISH/HINDI, DIRECT LANGUAGE, AND SIMPLE TERMS.**
- **MAKE SURE TO SELECT THE CORRECT TERM; REVIEW THE LIST OF COMMONLY MISUSED WORDS FROM VARIOUS SOURCES.**
- **EMPLOY CORRECT SCIENTIFIC TERMS AND CONVENTIONS.**

DIRECT LANGUAGE

- **IN TECHNICAL WRITING, EVERY WORD MUST HAVE A PLACE IN THE SENTENCE AND A MEANING.**
- **USE DIRECT STATEMENTS AND AN ACTIVE VOICE, AVOIDING PAST TENSE AS MUCH AS POSSIBLE, EXCEPT IN THE EXECUTIVE SUMMARY, WHERE PAST TENSE IS ALWAYS USED.**
- **USE FUTURE TENSE TO PROJECT INTO THE FUTURE**
- **AVOID SAYING THE SAME THING TWICE AND REPEATING THE SAME WORD IN A SENTENCE.**
- **PROVIDE CERTAINTY BY ELIMINATING AUXILIARIES SUCH AS WOULD, SHOULD, COULD, MAY, AND MIGHT. AVOID AMBIGUOUS WORDS AND PHRASES BY SELECTING A CLEARER ALTERNATIVE**
- **EXAMPLE, REPLACE WORDY TEXT (DESPITE THE FACT THAT) WITH A CONCISE ALTERNATIVE (BECAUSE).**

SIMPLE TERMS

- **IMPRESS THE AUDIENCE WITH ANALYSIS, NOT VOCABULARY.**
- **REPLACE COMPLEX WORDS WITH SIMPLE LANGUAGE IF IT CONVEYS THE SAME MEANING. THIS PREVENTS THE AUDIENCE FROM INTERPRETING THE TEXT, ALLOWING THE AUTHOR TO MAINTAIN CONTROL BY FORCING THE READER TO UNDERSTAND THE INTENDED MEANING.**
- **EXAMPLE, REPLACING THE WORD “UTILIZE” WITH “USE” OR “ALTERCATION” WITH “DISPUTE” SIMPLIFIES THE TEXT.**

ACTION VERBS

- **DEVELOP PRECISE AND INTERESTING TEXT. REPLACE VERB-PREPOSITION COMBINATIONS WITH HIGH QUALITY ACTION VERBS (GO WITH → ACCOMPANY, FIND OUT → DISCOVER, START OUT → BEGIN).**

CREATE TEXT FLOW

- **SELECT AN APPROPRIATE STYLE AND TONE, AND THEN SIMPLY WRITE DOWN IDEAS AND FACTS WITHOUT CONCERN FOR QUALITY OR FORMAT UNDER EACH HEADING AND SUBHEADING.**
- **THEN EDIT, WAIT, AND EDIT AGAIN, ELIMINATING IRRELEVANT INFORMATION, EMOTION, UNSUPPORTED OPINIONS, AND JUDGMENTS.**
- **ORGANIZE THE IDEAS INTO SMOOTH FLOWING TEXT BY DEVELOPING COHERENT PARAGRAPHS, USING TRANSITIONAL WORDS, AND INCORPORATING SENTENCE VARIETY. BE SELECTIVE IN THE USE OF ACRONYMS AND INITIALISMS. USE NUMBERS OR BULLETS TO CONVEY LISTS OF INFORMATION.**

COHERENT PARAGRAPHS

- **CREATE PARAGRAPHS WITH A SINGLE TOPIC OR FOCUS, AND INCLUDE SUPPORTING DETAILS.**
- **EACH PARAGRAPH USUALLY CONTAINS AROUND FIVE SENTENCES (ALTHOUGH THIS IS NOT A RULE). TO IMPROVE COMPREHENSION, PLACE THE KEY TOPIC AT THE BEGINNING OF A SENTENCE AND NEW INFORMATION AT THE END.**
- **ALL OF THE IDEAS CONTAINED WITHIN A PARAGRAPH MUST RELATE TO ONE CENTRAL THOUGHT. ARRANGE FACTUAL SENTENCES IN A LOGICAL ORDER FROM GENERAL TO SPECIFIC. IF THERE ARE IDEAS THAT RELATE TO OTHER FOCI, CONSTRUCT ADDITIONAL PARAGRAPHS.**
- **IN ORDER TO BUILD THE INDIVIDUAL PARAGRAPHS INTO A COMPLETE PAPER, TAKE IDEAS FROM THE BEGINNING PARAGRAPH AND EXPAND EACH INTO SUBSEQUENT PARAGRAPHS. LINK PARAGRAPHS TOGETHER BY STATING WHAT WILL APPEAR IN THE NEXT PARAGRAPH.**

IMPROVE THE TEXT

- **MAKE THE REVISION PROCESS MORE EFFICIENT BY REVIEWING THE DOCUMENT ASKING FOLLOWING QUESTIONS, THEN EDIT AS NEEDED TO ELIMINATE UNNECESSARY OR CONFLICTING INFORMATION.**
- **ARE THE KEY POINTS AND SUPPORTING DETAILS EASILY IDENTIFIED AND COMPLETE?**
- **ARE THERE CONCEPTS OR BACKGROUND INFORMATION MISSING THAT THE READER NEEDS?**
- **IF INFORMATION IS DELETED, WILL THE READER'S UNDERSTANDING BE JEOPARDIZED?**
- **IS THE CONTENT ACCURATE AND COMPLETE WITH NO EXAGGERATIONS?**
- **DOES THE DATA SUPPORT THE CONCLUSIONS?**
- **ARE THE CONCLUSIONS AND RECOMMENDATIONS CLEAR AND LOGICAL?**
- **ARE THERE CONTRADICTING STATEMENTS?**

REFERENCES

- **DOCUMENTATION OF IMPORTANT REFERENCE MATERIAL IS ESSENTIAL; HOWEVER, TO PREVENT PLAGIARISM, USE DIRECT QUOTES RATHER THAN PARAPHRASING THE AUTHOR'S WORDS WHEN DOCUMENTING THE RESULTS OR INTERPRETATIONS OF A RESEARCH ARTICLE.**
- **USE ANY APPROPRIATE FORM OF REFERENCING**

APPENDICES

- **INCLUDE MATERIAL THAT IS IN SUPPORT OF THE WORK BUT NOT PERTINENT TO THE UNDERSTANDING OF THE REPORT IN THE APPENDIX. THIS INCLUDES FIGURES OR TABLES REFERRED TO IN THE RESULTS SECTION; MATERIAL SUCH AS RAW DATA, SAMPLE, INTERMEDIATE, OR LENGTHY CALCULATIONS; LONG DERIVATIVES; AND DETAILED INFORMATION THAT MIGHT INTEREST ONLY CERTAIN READERS.**
- **IDENTIFY ALL APPENDIX MATERIAL WITHIN THE BODY OF THE REPORT.**

ABSTRACT/EXECUTIVE SUMMARY

- **AN ABSTRACT IS PUBLISHED ALONE AND THEREFORE MUST BE SELF-CONTAINED AND CONCISE YET COMPREHENSIVE. ALTHOUGH SIMILAR TO A TECHNICAL REPORT EXECUTIVE SUMMARY.**
- **AN ABSTRACT IS WRITTEN TO INTEREST AN AUDIENCE IN THE HOPES OF PUBLISHING THE PAPER AND POSSIBLY PRESENTING THE WORK AT A CONFERENCE.**
- **TO ENABLE THE TEXT TO STAND ALONE, ACRONYMS OR ABBREVIATIONS OR BIBLIOGRAPHIC, FIGURE, OR TABLE REFERENCES ARE NOT USED.**
- **THE ABSTRACT IS WRITTEN IN PAST TENSE SINCE THE WORK HAS ALREADY BEEN COMPLETED.**
- **GENERALLY IT IS SINGLE-SPACED AND ONE OR TWO PARAGRAPHS (250 WORDS MAXIMUM).**

SUGGESTED READINGS

- **WALTER E. OLIU, 1976, HANDBOOK OF TECHNICAL WRITING**
- **KIERAN MORGAN, 2015, PROCESS OF TECHNICAL WRITING**
- **BASU, B.N., 2007, TECHNICAL WRITING. PHI**