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HIGHLIGHTED HANDOUT

ENG201

Business and Technical English Writing

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Handouts 201

Business and Technical English

ENG201

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LESSON 1

INTRODUCTION TO BUSINESS & TECHNICAL COMMUNICATION

Outline

- Introduction to Business & Technical Communication
- Books & Materials
- Modules
- Importance of Business & Technical Communication
- Types of Communication

Introduction to Business & Technical Communication

The main objective of this course is to equip the students with skills that will enable them to communicate clearly and concisely in diverse business situations. The students will learn the importance of planning and organizing effective written messages. The course is divided into two sections:

1. Written Communication
2. Oral Communication

Written communication will cover planning, structures, and stylistic issues. The students will learn to write memos and letters, proposals, short and long reports, and procedure & policy documents. Moreover, the students will learn to simplify complex information through editing and revising for enhancing their ability to create powerful documents to sell their ideas. The **oral communication** section will cover planning and execution of effective presentations; group behavior, planning and conducting effective meetings.

Books & Materials

- The Mayfield Handbook for Technical Writing
<http://www.mhhe.com/mayfieldpub/tsw/home.htm>
- Business Communication Today by Bovee, C.L. & Thill, J.V.

Modules

Module 1: Basics of Effective Technical and Business Communication

Module 2: Forms of Written Communication: Reports, Proposals, Letters, Memos, Applications, Resumes, Instructions, and Specification documents.

Module 3: Research & Writing

Module 4: Oral Communication

Importance of Business & Technical Communication

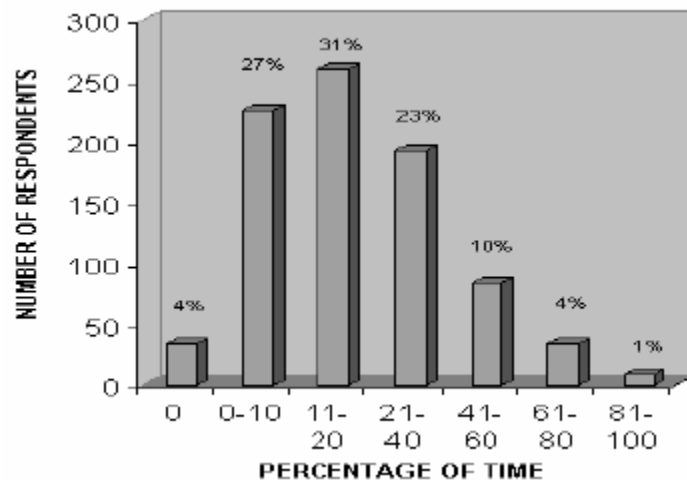
Learning 'Business & Technical Communication' helps a person to identify different roles at workplace. For instance, you will need to identify your two roles at work. As a specialist, you

need to generate ideas which will be potentially useful. Secondly, you need to share the results of your ideas with co-workers, customers, etc. as a communicator.

Example

Naila, a newly hired dietitian, must communicate to make the work valuable to her employer, at a large hospital. She has devised a way to reorganize the hospital kitchen that saves money, etc. Her insights will benefit the hospital only if they are communicated to someone who has the power to implement them, such as the kitchen director.

Writing is critical to your success. As a college graduate, you will need to spend an average of 20 percent of your time at work writing. That comes out to one out of every five-day work week.



A graph plotted for percentage of hours spent versus the number of people who responded for the survey. The study was conducted for a total number of 896 students in the US Universities.

Besides enabling you to do your job, writing well can bring you many personal benefits as well:

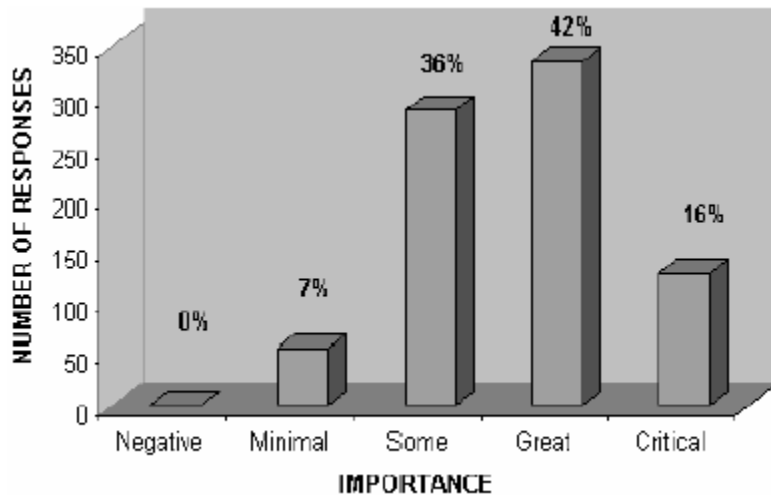
- Recognition in the form of praise
- Raises
- Promotions

In many organizations, the communication with the upper management is not feasible. In such a company, your memos, reports, and other writings may be the only evidence. They only have specimens of your good written work as either a specialist or a communicator.

Writing is an important responsibility of managers who have to communicate a wide variety of messages to those working above and below them. Consequently, employers look for writings when considering people for advancement.

In a study, 94 percent of the graduates from seven departments that send students to technical writing classes reported that the ability to "write well" is of "some" importance to them. Furthermore, 58 percent said that it is of great or critical importance to them.

In a survey of people listed in the "Engineers of distinction", 89 percent said that the writing ability is considered when a person is considered for advancement.



Survey of people listed in the "Engineers of distinction" plotting the importance of writing skills to people versus the number of people who responded.

In addition to bringing you recognition, writing well at work can bring you personal satisfaction too. It will enable you to make an important impact. To succeed in any endeavors during your professional career, you will need to influence people's opinions, actions and decisions mostly through your writing skills.

Writing at work differs from writing at school

To write successfully at work, you will need to develop new writing skills and even new ways of thinking about writing. That's because writing at work place differs in some very fundamental ways from writing done at school.

Purposes of Writing

As a student, you communicate for *educational* purposes, for example, writing term papers or taking a written exam, etc. In contrast, as an employee, you will communicate for instrumental purposes. Most of your communications will be designed to help your employer achieve practical business objectives.

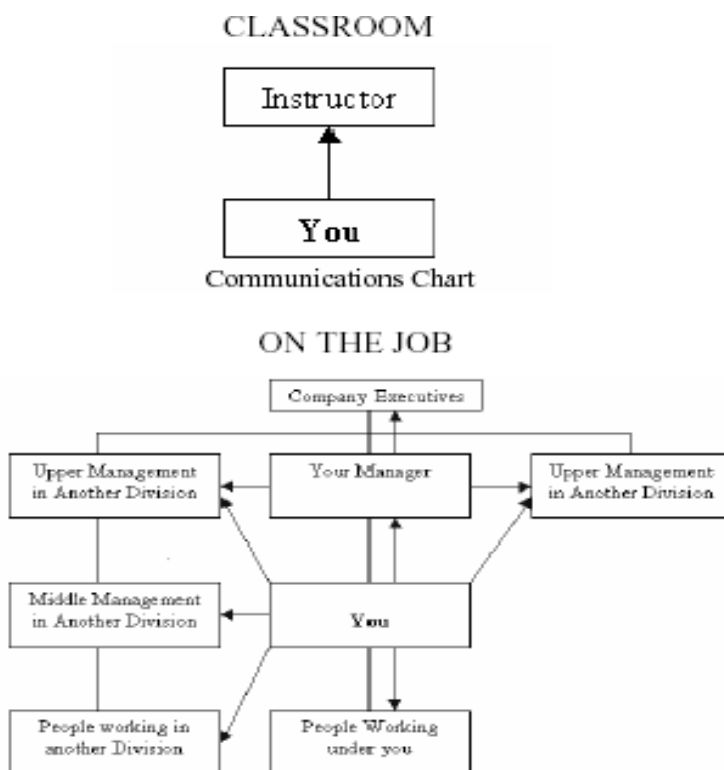
At school, where your aim is to show how much you know, one of your major writing strategies is to write as much as you can about your subject. At work, your communications should only include the information your readers *need*. Extra information would only clog your readers' path resulting in:

- o decreased efficiency

- o increased frustration

Audience

- At school your interaction is only with one person, the instructor. In contrast at work, you will often create communications that will address a wide variety of people with different backgrounds.
- The use they will make of your information.
- The kinds of professional and personal concerns they will bring to your presentation.



Example

Consider the report in which Naila will present her recommendations for improving the hospital kitchen. Her recommendations might be read by her supervisor Mr. Nadeem who will want to know what measures he will have to take in order to follow her recommendations. The vice president of finance, Mr. Altaf, will want to verify the cost estimates that Naila includes. The director of purchasing, Mr. Chauhan, will need to know about the new equipment he will need to order. The head of personnel, Miss Sara, will want to learn whether she needs to write any new job descriptions. And lastly, to assure the kitchen staff that their new work assignment will treat them fairly. So, writing for such a large and diverse audience requires skills that are not needed when writing only to your instructor.

Types of Communication

People at work write different types of writing for communication than those written at schools. Instead of term papers and exams, they write such things as:

- Memos
- Business letters
- Instructions
- Project proposals
- Progress reports

Each on-the-job communication has its own conventions. To write successfully at work, you will need to learn how to construct these kinds of communication.

Ownership

Ownership of a writer's work is very important. While at school your communication only belongs to you, at work however, your communication will belong only *partly* to you. It will belong to your employer. What you write at work represents not only you but also your department or your employer.

Example

If you write a letter or report to a customer, the customer views it as an official communication from your employer. If you write a proposal, your employer will get the contract or lose it.

Two other situations are fairly common at work. Employees often work on committees that write reports, proposals, and other documents collaboratively. The final version cannot be accredited to only one individual.

People often write communication that is sent under someone else's name. It is common for departmental reports to be signed by the Head of Department, even though they are written by the staff members.

To succeed in a job, you will need to learn to write under the circumstances in which your employer claims ownership of your communication. It is absolutely essential to think constantly about your readers.

- Think about what they want from you and why?
- Think about the ways you want to affect them.
- Think about the ways they will react to what you have to say.
- Think about them as if they were right there in front of you while you talked together. The communication must affect the individual people you are addressing in specific ways.

Example

If Naila's proposal of modifying the hospital kitchen explains the problems created by the present organization in a way that her readers find *compelling*, if it addresses the kinds of objections that her *readers* can relate to, if it reduces the reader's sense of being threatened by suggesting improvements to a system that they set up, then it may succeed.

On the other hand, if Naila's proposal leaves the readers confused, and fails to persuade them, it will make Naila seem like a pushy person who has overstepped her appropriate role. As you write in a professional environment, you need to remember three things:

1. Readers create meaning.
2. Readers' responses are sharpened by the situation.
3. Readers react on a moment-by-moment basis.

Readers create Meaning

Instead of *receiving* the message, people interact with the message to *create* meaning. While reading, we build larger structures of knowledge from small fragments of sentences. These structures are not the words we have just read but our own creation.

Readers' responses are shaped by the situation

Responses to a communication are shaped by a total situation surrounding the message such as the readers' purpose of reading, their perceptions of the writer's aims, their personal interests and stake in the subject discussed, and their past relations, if any, with the writer.

Readers react on a moment-to-moment basis

On job, people react to each part of the memo, report or other business communication as soon as they come to it.

Exercises

1. Find a communication written by someone who has the kind of job you want. Explain its purpose from various points of view of both the writer and the readers. Describe some of the writing strategies the writer has used to achieve those purposes.
2. Find a piece of writing that you believe to be ineffective. (You might look for an unclear set of instructions or an unpersuasive advertisement of some business or a technical product.) Write a brief analysis of three or four "reading moments" in which your interaction with the text is in a way that inhibits the author's desired results.
3. Now analyze an effective piece of writing. This time, write about three or four "reading moments" in which you interact with the text in a way that helps the author bring about the desired result.

LESSON 2

ORAL COMMUNICATION

Outline

- Types of Oral communication
- Modes of Delivery
 - Extempore
 - Impromptu
 - Memorization
 - Reading
- Preparation and Delivery of a Presentation
- Delivery Guidelines
- Using Visual Aids

Types of Communication

Oral Presentations

Oral presentations can be formal or informal depending upon their explicit and implicit purposes and the delivery situation. An oral presentation can be almost any report type such as a design review, a proposal, or a conference talk.

Whatever the specific type, however, an effective oral presentation is carefully planned with your objectives in mind and pays close attention to the demands of your audience.

<i>Written Documents</i>	<i>Oral Presentations</i>
Publication permits potentially unlimited audience over time and place.	Audience generally limited to time and place of delivery.
No direct audience interaction.	High level of audience interaction is possible.
Refined argumentative structure.	Simple presentation of main points.
Large volume of detailed information can be communicated.	Limited information transfer.
Precise syntax and diction.	Conversational syntax and diction.
Emphasis on text.	Emphasis on visuals.
Reader controls pace of presentation.	Speaker controls pace of presentation.

Effective oral communication is a combination of many skills:

- outlining and planning
- preparing overheads or other display media

- rehearsing
- delivery

Formal and Informal Oral Reports

An oral report may be delivered around a small table with just a few listeners or in a large auditorium to hundreds of people.

Formal oral reports are usually prepared well in advance of presentation and are, therefore, well-rehearsed. Your manner of delivery is extremely important in a formal oral report situation. Formal oral reports may follow an outline similar to the parts of any formal written report and may be presented to an audience of one's peers or to an interested general or mixed audience in a setting such as a large auditorium or hall.

Informal oral reports are generally characterized by small-group settings with a high degree of audience interaction and a relaxed manner of delivery and dress. Informal oral presentations can foster the free exchange of ideas and can be important for producing action items.

Oral presentations in a professional environment generally fall into two categories:

- Informative speaking
- Persuasive speaking

a. Informative Speaking

Informative Speaking has audience learning as its primary goal. An informative speech may explain a concept, instruct an audience, demonstrate a process, or describe an event. In a professional setting, the informative speech may take many different forms:

- Individual or Group Report
- Oral Briefing
- Panel Discussion
- Oral Critique

b. Persuasive Speaking

Persuasive Speaking is used to influence what an audience thinks or does. Some of the goals of persuasive speaking include:

- To reinforce the attitudes, beliefs, and values an audience already holds
- To inoculate an audience against counter persuasion
- To change attitudes
- To motivate an audience to act

Delivery Methods

There are at least four methods for making an oral presentation:

1. Extempore
2. Impromptu

3. Memorization
4. Reading

Extempore

In this method of delivery, the thought is planned before starting to speak, either in a few hurried minutes or in the course of long, elaborate and exacting preparation, but the exact wording is left to the moment of speaking. The **extemporaneous** method involves significant effort but results in a degree of quality that tells your audience that you care about them.

- It requires the detailed laying out of the presentation from beginning to end.
- Doing your homework to fill in your knowledge gaps.
- The use of 3 x 5 cue cards or similar method to jog your memory on specifics and keep your presentation on track.

Impromptu

The impromptu speech is given without any advance preparation, any notes or other additional materials; it is a spontaneous reaction to the topic at hand which may introduce an interesting turn to the discussion.

Memorization

A memorized speech is a speech that is recited from memory rather than read from cue cards or using the assistance of notes. This method of speech delivery does not come as highly recommended as other methods.

The memorization method is risky; you can lose your place or leave something out and, in a panic, you might revert to the impromptu method, resulting in disaster.

Reading

The drawback of reading is that when you read your speech, you are communicating with the text instead of the audience.

Novice speakers often believe that if they memorize their speeches by reading them over and over word for word, they will be able to stand up and deliver the speech verbatim without reading. It is a great idea but it just does not work. If you practice by reading from a written manuscript, you will become so devoted to the paper that it will be virtually impossible to break away from it. You also lose most of the expressiveness and engaging body language that make speeches work in the first place.

Preparation of the presentation

Irrespective of the method of delivery, the presenter must consider the following parameters in preparing for the presentation:

- knowledge of the audience
- knowledge of subject
- use of time
- rehearsal

- personal appearance and grooming

Additionally, the preparation and use of visual aids is an important element of any effective presentation.

a. Knowledge of the Audience

You should know about your audience's pre-existing knowledge. Know the age level of the audience as well as its members' level of educational sophistication and special interests. Then tailor your presentation accordingly.

b. Knowledge of the Subject

Whether you use notes, manuscript, or strictly memory, you must know your subject well. If gaps exist, you should fill them up.

c. Use of Time and Rehearsal

Time limits are to be observed. Even if no time limit is given, you should strive to do justice to your subject in as little time as possible but not at the price of an incomplete presentation.

d. Personal Appearance

Your personal appearance affects your credibility. Informal clothing is rarely appropriate for a professional presentation. Pay significant attention to personal grooming.

Delivering an Oral Presentation

A well planned and well-structured presentation can almost be ineffective because of bad presentation delivery. Keep in mind the following factors:

- Poise and Enthusiasm
- Eye Contact
- Use of Voice
- Use of Time

a. Poise and Enthusiasm

Be well prepared and strive for muscular control, alert attention, vibrant interest in the subject, and an eagerness to communicate. Avoid distracting mannerisms, but don't stand in a "frozen" position. Moving about, if not excessive, can accentuate your enthusiasm.

b. Eye Contact

During your presentation, try to make eye contact with most of the people and, if possible, every person in the room. Avoid fastening your gaze on your notes, on your chart or screen, or on some point in space above the heads of your listeners.

c. Use of Voice

Don't speak too soft, too fast, or mumble. Your audience must be able to:

- hear what you say
- understand what you say

d. Use of Pace

Without adequate preparation, it is easy to become nervous and start rushing through a presentation. Instead, use the pacing established during your many rehearsals.

Making a Formal Presentation

The material of your presentation should be concise, to the point, and tell an interesting story. In addition to the obvious things like content and visual aids, the following are just as important as the audience will be subconsciously taking them in:

- **Voice** - *how* you say it is as important as *what* you say.
- **Body language** - a subject in its own right and something about which much has been written and said. In essence, your body movements express what your attitudes and thoughts *really* are.
- **Appearance** - first impressions influence the audience's attitudes to you. Dress appropriately for the occasion.

As is the case with most personal skills, oral communication cannot be taught. Instructors can only point the way. So as always, practice is essential both to improve your skills generally and also to make the best of each individual presentation you make.

Preparation

Prepare the structure of the talk carefully and logically just as you would for a written report. Keep in mind:

- the objectives of the talk
- the main points of the talk

Make a list of these two things as your starting point. Write out the presentation in rough, just like a first draft of a written report. Review the draft. You will find things that are irrelevant or superfluous - delete them. Check that the story is consistent and flows smoothly. If there are things you cannot easily express, possibly because of some doubt, it is better to leave them unsaid.

Never read from a script. It is also unwise to have the talk written out in detail as a prompt sheet; chances are you will not locate the thing you want to say amongst all the other text. You should know most of what you want to say - if you do not, then you should not be giving the talk. So, prepare cue cards which have key words and phrases (and possibly sketches) on them.

Postcards are ideal for this. Do not forget to number the cards in case you drop them. Remember to mark on your cards the visual aids that go with them so that the right OHP or slide is shown at the right time. Rehearse your presentation, to yourself at first and then in front of some colleagues. The initial rehearsal should consider how the words and the sequence of visual aids go together.

Making the Presentation

Greet the audience (for example, 'Good morning, ladies and gentlemen') and tell them who you are. Good presentations then follow this formula: tell the audience what you are going to tell them, at the end tell them what you have told them. Keep to the time allowed. If you can, keep it short. It is better to under-run than over-run. As a rule of thumb, allow two minutes for each *general* overhead transparency or Power Point slide you use but longer for any that you want to use for developing specific points. 35mm slides are generally used more sparingly and stay on the screen longer.

However, the audience will get bored with something on the screen for more than 5 minutes, especially, if you are not actively talking about it. So switch the display off or replace the slide with some form of 'wallpaper' such as a company logo. Stick to the plan for the presentation, don't be tempted to digress - you will eat up time and could end up in a dead-end with no escape.

Unless explicitly told not to, leave time for discussion. Five minutes are sufficient for clarification of points. The session chairman may extend this if the questioning becomes interesting. At the end of your presentation, ask if there are any questions. Avoid being terse- when you do this, the audience may find it intimidating (i.e. it may come across as *any questions? If there are, it shows you were not paying attention*). If questions are slow in coming, you can start things off by asking a question from the audience, so have one prepared.

Delivery Guidelines

Following are some very useful and practical guidelines for delivering a smooth presentation:

Speak clearly. Do not shout or whisper. Judge the acoustics of the room. Do not rush or talk deliberately slow. Be natural - although not conversational. Deliberately pause at key points - this has the effect of emphasizing the importance of a particular point you are making. Avoid jokes - always disastrous unless you are a natural expert.

Use your hands to emphasize points but do not indulge in too much hand waving. Ask colleagues occasionally what they think of your style. Look at the audience as much as possible, but do not fix on an individual - it can be intimidating. Pitch your presentation towards the back of the audience, especially in larger rooms. Do not face the display screen behind you and talk to it. Also, do not stand in a position where you obscure the screen. In fact, positively check for anyone in the audience who may be disadvantaged and try to accommodate them.

Avoid moving about too much. Pacing up and down can unnerve the audience; although, some animation is desirable. Keep an eye on the audience's body language. Know when to stop and also when to cut out a piece of the presentation.

Using Visual Aids for Oral Presentations

Visual aids significantly improve the interest of a presentation. However, they must be relevant to what you want to say. A careless design or use of a slide can simply get in the way of the presentation. What visual aids you use depend on the type of talk you are delivering.

Here are some possible visual aids you can benefit from:

- Overhead projection transparencies (OHPs)
- 35mm Slides
- Computer projection (PowerPoint, applications such as Excel, etc.)
- Video and film
- Real objects - either handled from the speaker's bench or passed around
- Flipchart or blackboard - possibly used as a 'scratch-pad' to expand on a point
- Keep it simple though - a complex set of hardware can result in confusion for both the speaker and audience.

Make sure you know in advance how to operate equipment and also when you want particular displays to appear and when and what signals you will use. Edit your slides as carefully as your talk - if a slide is superfluous then leave it out. If you need to use a slide twice, duplicate it. Slides and OHPs should contain the minimum information necessary. To do otherwise risks making the slide unreadable or will divert your audience's attention so that they spend time reading the slide rather than listening to you.

- Try to limit words per slide to a maximum of 10. Use a reasonable font size and a typeface which will enlarge well.
- Typically use a minimum 18 pt. Times New Roman on OHPs and preferably larger. A guideline is: if you can read the OHP from a distance of 2 meters (without projection) then it's probably 'OK'.
- Avoid using a diagram prepared for a technical report in your talk. It will be too detailed and difficult to read.
- Use color on your slides but avoid orange and yellow which do not show up very well when projected. For text only, white or yellow on blue is pleasant to look at and easy to read. Books on presentation techniques often have quite detailed advice on the design of slides.
- If possible, consult an expert such as the Audio Visual Centre. Avoid adding to OHPs with a pen during the talk - it's messy and the audience will be fascinated by your shaking hand!
- On this point, this is another good reason for pointing to the screen when explaining a slide rather than pointing to the OHP transparency. Room lighting should be considered. Too much light near the screen will make it difficult to see the detail.

- On the other hand, a completely darkened room can send the audience to sleep. Try to avoid having to keep switching lights on and off, but if you do have to do this, know where the light switches are and how to use them.

LESSON 3

READER-CENTERED WRITING

Outline

In this lesson, you will learn the following steps for writing a resume & letter of application:

- Defining your objectives
- Planning
- Drafting
- Evaluating
- Revising

Writing your Resume

a. Defining your objectives

The first activity of writing- defining objectives- is especially important while you are writing a simple letter or job application letter. When defining your objectives, you tell what you want your communication to do. Thus, your objectives form the basis of all your other work of writing.

To take the reader centered approach, you need to look at three things:

- a. The final result you desire.
- b. The people who will read your communication.
- c. The specific way you want your communication to affect the people as they read your communication.

In the first stage, employers try to attract applications from as many qualified people as possible. At this stage of recruiting, resumes are usually read by people who work in a personal office.

To understand the first stage, you may find it helpful to draw an imaginary portrait of the person going through your resume. Imagine a man who sat down to read a stack of 25-50 new applications that arrived in today's mail. He does not have time to read through all the applications, so, he quickly sorts those applications which merit additional consideration.

He quickly finds reasons to disqualify most applicants. Only, occasionally, does he read a full resume. As you write your resume you must keep in mind that it must quickly attract and hold that man's attention.

In the second stage of recruiting, employers carefully scrutinize the qualifications of the most promising applicants. Often this involves the visit of the candidates to the employer's work place. The second stage reader of your resume includes managers of the department you have to work for.

To imagine your reader, you can imagine the head of the department at this stage. This person is shorthanded and wants rapidly to fill one or more openings. When s/he gets the resumes, s/he knows precisely what qualifications she seeks.

Of course, **some job searches vary from the two-stage recruiting procedure** as described above. If you interview at a campus placement center, you will probably hand in your resume to the company recruiters at the same time you meet them.

Deciding how you want your resumes to affect your readers is important. After you have identified the readers, you should determine how your resume will affect them in the job that you are seeking. More precisely, you should define how your resume is to affect your readers while they read it.

To determine how your resume will affect your reader, you can think about two things:

- The way you want your communication to alter your reader's attitude
- The task you want to help your readers perform while they read

Altering your Audience's Attitudes

First determine how your audience feels before reading what you are writing, and then decide how you want them to feel after they have read it. However, your reader's attitude before they read anything is neutral towards you.

Once you have described your reader's present and desired attitudes, try to find out things about your reader that will help you plan a strategy for persuading them to change their attitudes the way you specified. To begin, find out what will appeal to your audience.

Altering your employer's attitudes

As common sense will tell you, your employers will want to hire people who are capable – applicants must be able to perform the tasks assigned to them. Responsible – applicants must be trustworthy enough to benefit the organization. Pleasant – applicants must be able to interact compatibly with other employees.

The reader of your resume will look for specific terms. Instead of asking, "Is this applicant capable?", he will ask "Can this person program in Java?", etc.

Helping your readers perform their tasks

Different kinds of communication involve different tasks. When you know what those tasks are, you can write your communication in a way that will help your readers perform them easily.

While reading your resume, your reader's primary task is to get the answers to the following questions:

- What exactly does the person want to do?
- What kind of education does the person have for the job?
- What experience does the person have in this or a similar job?

- What other activities has the person engaged in which have helped him prepare for the job?
- How can I get more information about the person's qualifications?

Knowing that your readers will be looking for the answers to these questions tells you a great deal about what to include in your resume.

b. Planning

When you plan, you decide what to say and how to organize your material. In addition, you should find relevant expectations your readers have about your communication. Those expectations may limit the choices you make concerning content and organization. Deciding what to say provides you with direct help in determining what to say. In addition, your resume is a persuasive argument whose purpose is to convince your readers to hire you.

The persuasive argument has two elements: a claim and an evidence to support your claim. Your definition of your objectives tells you what the implicit claim of your resume should be. That is: you are the kind of capable, responsible, and pleasant person that employers want to hire. You identify the specific facts you can mention as evidence to support the claim about yourself. Your objectives do that by alerting you to the kind of questions your readers will be asking about your resume.

Conventional	Usual Questions By Readers	Persuasive Claims to Make
<i>Objective</i>	What, Exactly, do you want to do?	I have a sense of direction and I want a job that you have.
<i>Education Honors</i>	Do you have the required knowledge?	I have the required knowledge, perhaps more than you expected.
<i>Work Experience Activities</i>	Do you have experience in this or a similar job? What responsibilities have you had?	I have related experience in which I learned things directly relevant to the job I want. I was trusted by my employers.
<i>Interests</i>	Do your interests show that you would be a pleasant and compatible employee?	I am an interesting, well-rounded person who can work well with others.
<i>References</i>	How can I get more information about your qualifications?	Important people with knowledge of my business qualifications will attest that I would make a good employee.

Organizing your material

When planning a communication, you need to decide not only what you will say but also how you will organize your material. For example, your definition of resume objectives requires you to emphasize the points as major evidence that you are qualified for the job you seek. More than one organizational pattern can be used to achieve those objectives. Most resumes are organized around an applicant's experience. Thus, you can categorize them under educational experiences, work experiences, and so on.

However, some individuals choose to organize a substantial part of their resume around their accomplishments and abilities. Such a resume is called a **functional resume** because it emphasizes the functions and tasks the applicant can perform. Whichever organizational pattern you choose, you must still decide the order you will use to present your resume. If you imagine your readers reading your resume, you will see that you have to make your name and professional achievements prominent. If you are writing **conventional resume**, you can provide the desired prominence by placing the name and professional objectives at the top. If you are designing a **non-conventional resume**, you may place your name along the bottom or side. After stating your professional objective, you should organize your remaining material by following one of the most basic strategies for writing at work: put the most important information first. This will ensure that your hurried readers come to the most important information quickly.

For example, people in conservative fields take a similar conservative approach to resumes. To them, resume should be typed in a white, buff or gray paper with the applicant's name and address at the top. Keep in mind, the conventions in your fields may be different and you may have to do some investigation to learn whether or not that is the case.

c. Drafting

When you draft, you transform your plans, notes, outlines, and ideas into a communication. For your resumes that you create at work, you must not only draft a prose but also draft the design and the visual appearance of your message.

Drafting the Prose

While you draft the prose of your resume, keep in mind the imaginary portraits of your readers. Remember that your purpose is to enable those people to locate the answers to their questions relating to you. Your professional objectives are statements which are one or two sentences long and are usually general enough that the writer could send them, without alteration to many prospect employers.

Example

If you follow the convention, for example, you would not say "I want to work in the process control department of Adam Jee cloth manufacturing unit."

Instead, you would make a more general statement like "I want to work in the process control of a mid-sized cloth manufacturing unit."

This does not mean, however, that you need to develop a single professional objective that you can send to all employers you might contact.

Professional Objectives

When you state your professional objective, you answer your reader's question, 'What exactly do you want to do?' Your answer is extremely important to the resume. In contrast, people in other fields such as advertising are accustomed to seeing highly unconventional resumes, perhaps printed on a pink paper.

You could write multiple resumes each with professional objective suited to respective fields. Consequently, the challenge you face when writing your professional objective is to be neither too general nor too specific. You have struck the proper balance if you could send the same resume to several companies and if your readers can see that you want to work in a particular kind of organization.

Education

When describing your education, you provide evidence that you are capable of performing the job you applied for. The basic evidence is your college degree, so you should name the college and your degree and the date of graduation.

Remember

If your grades are good, mention them. If you have earned any academic honors, mention them. If you have any specialized academic experience, such as a co-assignment or internship, describe it.

Example

By looking at Ramon and Sharon's resumes you can see how three very different people have elaborated on the way their education qualify them for the jobs they want. Ramon, for example, describes his honors in a separate section, thereby, making them more prominent than they would have been under the simple heading of 'Education'.

Ramon Perez

16 Henry Street
Brooklyn, New York 11231
Days (212) 374-7631
Home: (718) 563-2291

Professional Objective	A position as a systems analyst where I can use my knowledge of computer science and business to develop customized systems for financial institutions.
Education	New York University, B.S. in Computer Science December 19 GPA 3.4 overall; 3.7 in major Computer classes include artificial intelligence and expert systems, computer security, data communication, deterministic systems, stochastic, systems design Business classes include accounting, banking, finance, economics, business law Worked full-time while completing last half of course work
Honors	Dean's List three times Golden Key National Honor Society
Related Work Experience	Miller Health Spas, New York City, 1988-Present. • Helped convert to a new computerized accounting system • Served on a four-person team that wrote user documentation for the new system • Trained new employees • Earned employee of the Month Award twice
References	Professor Mildred Do brick Finance Department New York University New York, NY 12234 (212) 254-9642 Professor R. Theodore Berger Communication Department New York Department New York, NY 12234 (212) 254-7539 Wilson Meyer Hoff Senior Accountant Miller Health Spas New York, NY 12232 (212) 671-9007

Sharon Pollock

Objective	A position as corporate Manager of Drilling Operations for an international oil company
Summary	Fourteen years of experience in a variety of drilling operations in both the United States and overseas. Steady progression in management and budgetary responsibilities. Extensive record of success in introducing technical innovations that improved drilling performance.

Experience and Achievements

Pilot Petroleum Company

Regional Drilling Engineer 1986-Present

Responsible for Pilot's drilling operations throughout the entire Gulf of Mexico Region. Coordinate comprehensive drilling programs for both exploration and new oil field development. Prepare one-year and three-year drilling plans for corporate head-quarters. Prepare and administer a \$60,000,000 annual budget. Select drilling contractors and negotiate all contractual agreements with them.

Successfully integrated the drilling operations of three small companies acquired by Pilot.

Introduced measurement-while-drilling technology to the company, reducing drilling time for directional holes by an estimated 12%.

Sharon Pollock

Previous Employment

Neptune Oil – Corpus Christi, Texas <i>Engineering Summer Intern</i>	1975-1976
Lawson Enterprises – Galveston, Texas Roustabout during summer vacations from college	1974

Education

University of Texas at Austin, B.S. in petroleum Engineering 1977

Certification

Registered Professional Engineer in Alaska, Colorado, Louisiana, and Texas

Professional Honors and Service

Member, Industrial Advisor Council, University of Texas	1989-Present
Society of Petroleum Engineers Distinguished Lecturer	1988

Professional Memberships

Member, Society of Petroleum Engineers of AIME
Member, Society of Professional Well Log Analysts
Member, Pi Epsilon Tau (Petroleum Engineering Honorary)

Personal

Born: 8/24/54	Excellent Health	Married, three children
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Ordering your job experience

When deciding on the order in which to present your jobs, remember that you want to enable your busy readers to see your most impressive qualification. Most people can achieve that objective by stating their jobs in the reverse chronological order because their most recent job is also their most impressive.

d. Evaluating & Revising

Revision literally means to "see again", to look at something from a fresh, critical perspective. Writing is a process of discovery, and you do not always produce your best stuff when you first get started.

Revising is an ongoing process of rethinking: reviewing your evidence, refining your purpose, reorganizing your presentation, reviving stale prose and correcting grammar and punctuation. So, revision is a chance for you to look critically at what you have written to see:

- if it's really worth saying
- if it says what you wanted to say
- if a reader will understand what you are saying

LESSON 4

AUDIENCE ANALYSIS

Outline

In this lecture, you will learn ‘Audience Analysis:

- Target Audience
- Writing for Experts
 - Types of Experts
 - o General experts
 - o Specific experts
- Audience’s use of Document

Target Audience

‘Target audience’ is a specified audience or demographic group for whom a message is designed. Your target audience is the individuals, groups, communities and bodies of decision makers who can influence your target. Your target is the individual or individuals who have direct decision-making power over the issue your organization is working to address. Often a document will be read by readers with different levels of expertise.

A mixed group of audience may be based on experts, technicians, managers, and laypersons.

Target your audience by identifying audience type, characteristics and level of expertise. Determine your audience's needs by assessing their expertise and their purpose in reading the document. Determine document density.

People read technical documents for different reasons, and readers have varying levels of technical expertise. To be effective, technical writing must target its audience or audiences.

Target your audience by identifying your audience type and level of expertise, your audience purpose in using the document, and your audience attitude towards both you and the content of your document.

Writing for Experts

Distinguish between two types of experts:

- General experts
- Specific experts

Both kinds are readers with extensive *technical knowledge* of the document's subject matter.

General experts possess extensive knowledge about a field in general, but they might be unfamiliar with particular technical terms, specific equipment, or recent advances in your document's subject matter. **Specific experts**, on the other hand, share or surpass your knowledge about a document's subject matter.

Audience's Use of a Document

Experts read technical and scientific documents for a variety of purposes:

- To maintain and expand their own general expertise
- To obtain specific answers to their own research and writing
- To evaluate a document's technical or scientific content

Strategies for Writing to Technicians

Following are the strategies for writing to technicians:

- Keep introductions and background information brief.
- Make information accessible.
- Provide short definitions or explanations of any unfamiliar terms, tools, devices, or procedures.

Managers read technical and scientific documents for a variety of purposes:

- To aid in making decisions
- To assess current situations
- To maintain their general level of expertise
- To evaluate projects and employees

In general, **managers read for the *bottom line***, a concise summary of the present situation and specific recommendations for action.

Audience's General Use of Document

Readers of technical and scientific writings, whatever their level of expertise, read a document for three general purposes:

- To acquire information
- To help make decisions
- To learn how to do something

On the other hand, if the audience does not know you or does not consider you an expert, or if the reader has had past negative experience with you or your organization, the document should include extensive explanations of your conclusions and recommendations to create *trust* and establish *credibility*.

LESSON 5

EFFECTIVE COMMUNICATION

DEFINING OBJECTIVES-I

Outline

In this lecture, you will learn:

- Defining Objectives
- Document Purpose
 - a. Explicit Purposes
 - to provide information
 - to give instructions
 - to persuade the reader
 - to enact (or prohibit) something
 - b. Implicit Purposes
 - to establish a relationship
 - to create trust and establish credibility
 - to document actions

Defining your Communication Objectives

Defining Objectives – determining what your document needs to accomplish to be successful.

Defining the objectives of your communication is extremely important. Defining objectives has a strong link with the audience analysis covered in the last lesson.

Purpose for writing documents

Document Purpose

Documents should be created for explicit purposes or goals that both the writer and the reader would readily agree on. Although there are many explicit purposes for creating a scientific or technical document, there are four general categories:

- To provide information
- To give instructions
- To persuade the reader
- To enact (or prohibit) something

Points to keep in mind while writing a document

Make the explicit purpose clear at the beginning of your document in an abstract, an executive summary, an introduction, or all of these. Sometimes, a formal statement of objective is called for.

You may also need to identify the person, the agency, or the contract requiring or authorizing the document or research. In addition to explicit goals, however, writers almost always write with unstated but still extremely important implicit goals in mind. Among the most common of these goals are to establish a relationship, to create trust and credibility, and to document actions.

a. Explicit Purposes of a Document

Explicit purpose means the purpose which is clearly stated. As discussed earlier, most scientific documents have, as their principal (explicit) purpose, one or more of the following actions:

- To provide information
- To give instructions
- To persuade the reader
- To enact (or prohibit something)

Whatever is the general purpose of an overall document, certain sections of a document always have a specific purpose.

Documents that provide information

Document Types

- Literature reviews
- Specifications

Sections in Document

- Background
- Theory
- Materials
- Results
- Tables

Example

“This document will discuss the reasons behind constructing a new Trade Center in Islamabad.”

Documents that give instructions

Document Type

- Proposals

Sections in Document

- Procedures
- Work plan

Example

“This document outlines a procedure for constructing a new Trade Center in Islamabad.”

Documents meant to ‘persuade’ the reader

Document Types

- Proposals
- Recommendation Reports
- Job application Letters
- Résumés

Sections in Document

- Discussion
- Conclusion
- Recommendation

Example

“This document proposes a feasibility study for constructing a new Trade Center in Islamabad.”

Documents meant to ‘enact’ something

Document Type

- Acceptance Letters
- Regulations
- Patents
- Authorization Memoranda

Example

“NOTICE: Construction site for Trade Center ahead; no unauthorized persons allowed.”

b. Implicit Purposes of a Document

Implicit purpose means the purpose which is not clearly stated in the document. Keep your implicit goals in mind when writing a document. In addition to explicit goals, writers almost always write with other unstated but still extremely important implicit goals. Common goals are:

- To establish a relationship
- To create trust and establish credibility
- To document actions

To Establish a Relationship

Communication not only conveys information but also establishes a relationship between a speaker and listener, or a writer and reader. A well-written letter of inquiry, for example, can begin a professional connection that may last for years. Readers of research reports often initiate long and fruitful correspondences with the authors.

Even seemingly impersonal documentation and instructions can, if written carefully to address a user's need, establish a positive relationship between the user and producer of the product.

To Create Trust and Establish Credibility

An underlying goal of all technical and scientific writing is to get the reader to trust the writer's credibility.

Scientific and technical writing is based on precision. Accordingly, any technical or scientific document should justify the reader's confidence in the accuracy of its content, style, and organization. Carefully qualify statements that need to be qualified. Do not make claims that are merely suppositions. If your reader begins to doubt your ability or intent to analyze and shape data with a minimum of distortion, the document will no longer be effective.

To Document Actions

Scientists, engineers, and managers often use writing to create permanent records of their thoughts and actions. One of the primary differences between most forms of written and spoken communication is that writing can be fairly permanent; whereas, speech vanishes as soon as it is produced. Consequently, technical communication is often more effective when it is written down.

Make important observations, suggestions, or objections in writing. Similarly, communicate important tasks and deadlines in documents such as project plans. Keeping precise records of experiments and procedures in notebooks is crucial to a project's overall accuracy and to establishing intellectual-property rights.

Statement of Objective

If appropriate, state your document's objective at the beginning. Readers of technical writers are often busy people; such a statement will alert them that it is important to read further. The sentence given below is from a memorandum by an engineer at a Hydro-electric Power Plant where he warns his superiors of the problem that later caused the explosion in one of the plant's sections and it provides an example of a good statement of objective.

“This letter is written to ensure that management is fully aware of the seriousness of the current erosion problem in the section III from an engineering standpoint.”

How do you actually go about defining your objectives?

Example

Consider the example of Ali, a fresh graduate from FAST who has been appointed as the junior Software Engineer in Adam Soft. Today Ali's boss dropped by and asked him that the two vice presidents of Adam Soft have asked Ali for a report on his progress. Ali must now decide what he has to write in the report. If he writes his objectives clearly and precisely, they can guide him through all his work at writing.

Guideline-I (Identifying the final result you want from your communication.)

When defining your objectives, start by identifying the final result you want from your communication. Doing so will help you remember that when you write, you are performing an action for your desired result/outcome.

Examples

You want your boss to approve the project you are describing in your proposal. You want two new people to assist you in the new project you have been assigned by your employer. You want a new printer as sharing the old one with the whole department reduces your efficiency.

People's response on reading something

When people read they respond in two ways simultaneously. They think and they feel at the same time. Focus your attention on accurately understanding the communication to be delivered and present it in such a way that it is viewed favorably.

LESSON 6

DEFINING OBJECTIVES-II

Outline

In this lesson, you will learn to identify the tasks you will help your readers perform while they read. You should:

- Tell how you want to change the readers' attitudes.
- Learn your readers' important characteristics.
- Learn the types of your possible readers.
- Fill in a sample worksheet that should be kept in mind when defining objectives.
- Learn the importance of 'Appropriateness' in business and technical communication.

Identify the tasks you will help your readers perform while they read. When you identify the tasks, you are describing the enabling element of purpose. At a general level, all tasks are the same for all readers. Readers perform tasks of locating, understanding, and using information in many ways, depending on the situation.

As discussed earlier, not only do readers vary but different readers' tasks are helped by different writing strategies. It should be part of your aim while writing to enable your readers to perform their reading tasks quickly and efficiently.

Example

Consider the example of Ayesha, an engineer, employed by a Steel Mill. Her task is to study two types of furnaces and present a proposal to help the upper management decide which one to buy. She has two options to present the immense amount of information she has gathered.

Divided Pattern

Furnace A *Cost*

Efficiency Furnace B

Time Furnace A

Furnace A *Construction Time*

Efficiency Furnace B

Time Furnace A

Alternating Pattern

Cost Furnace A

Construction *Efficiency*

Air pollution Furnace B

Cost Furnace A

Construction *Air Pollution*

Air pollution Furnace B

As the information in both the patterns is exactly the same, she cannot decide for herself which furnace to choose. But she has produced the results of her study in a manner that it is easy for her

superiors to judge the best path. Should she choose a writing pattern which is easier to write? But then ease of writing is a writer-centered consideration, not a reader-centered one.

She should choose an *alternating pattern* keeping in view the reader-centered approach. She knows that her readers will surely want to compare the two furnaces in detail in terms of various criteria they consider important. To make your writing reader centered, you should:

- Identify the questions your readers will ask.
- Identify the strategy to answer all these questions.
- Identify the ways in which your readers will use your answers.

Guideline-II (Tell how you want to alter the readers' attitudes.)

Consider how you want your communication to alter the readers' attitudes. Begin by identifying the attitudes you want to alter. Sometimes, you will want to *reinforce* an existing attitude. For example, you might aim your presentation in a way that the readers feel more favorably impressed by your qualifications. At other times, you might try to *reverse* an attitude you want your readers to abandon.

For example, you might want to persuade them to like something they don't like. You might need to persuade them that a problem exists where they feel that everything is fine. Finally at times, you might need to shape your readers' attitude about a subject they have not thought about seriously.

The way things are now	You act (You write)	The way you want things to be
Your reader is a manager who wants to decide whether or not to purchase a certain piece of equipment	You write a memo evaluating the equipment in terms of the benefits it will bring the company	The manager decides to buy the equipment and feels confident that he has made the right decision.

The way things are now	'You act (You write)	The way you want things to be
Your reader is the director of a plant that is using an outdated process. The director feels that the process is fine.	You write a report on problems with the current process and all ways, they can be overcome by various new processes.	After reading your report, the plant director feels that the process being used now is faulty and a new one is necessary.

The way things are now	You act (You write)	The way you want things to be
Your readers are bank clerks who will be using the computer system. They are afraid if the new system and are therefore reluctant to use them	You write a procedure manual that shows how easy it is to use the new system.	The bank clerks feel relaxed and self-confident after learning how to use the new system from your procedure manual.

Guideline –III (Identify and learn about your readers' important characteristics.)

You might want to think of your readers in terms of the following three roles:

- Decision Makers
- Advisors
- Implementers

Learn your readers' important characteristics.

Decision makers

The decision maker's role is to say how the organization, or some part, will act when confronted with a particular situation.

Advisors

Advisors provide information and advice for the decision makers.

Implementers

Implementers carry out the decisions that have been made.

Familiarity with your topic

Your readers' familiarity with your topic will determine the amount of background information you will need to make your communication understandable to your audience. Keep in mind that people unfamiliar to your topic will also want you to explain how the information relates to them.

Preferred Communication Style

Most people have preferences concerning the style of communication they read. To a certain extent, the peoples' communication preferences are shaped by the customary practices in the organization that employs them. Information style may vary from a simple prose writing to illustration with tables, graphs, and charts, etc.

Special Factors

Each reader is unique, so you should be on the outlook for special reader characteristics you would not normally need to consider. For example, you might be facing an individual who detests certain words, insists on phrasing certain statement, etc.

Sometimes, you will also need to consider the settings in which your reader will be reading. How to consolidate information about readers? You must consolidate all information in the same way that will let you keep the key points about your audience in mind as you write. Remember, you should view the key points not merely as list of facts but as a dynamic resource which you can use to guide yourself as you perform the rest of the writing tasks.

Guideline-IV (Learn the types of your possible readers.)

Learn the types of your possible readers:

- Phantom Readers
- Future Readers
- Complex Readers

a. Phantom Readers

In some situations, most important readers may be hidden from you. Written communications addressed to one person are used by *others*. These real but *unnamed* readers are called phantom readers.

Phantom readers are real but unnamed readers who use communication addressed to others. For example, you might have written your document for the decision makers in your company but they pass your material on to advisors. You did not know while writing that your material was going to be read by these advisors. In this case, the advisors would be called phantom readers.

b. Future Readers

While identifying your readers, you should keep in mind the possibility that your communication may be used weeks, months or even years from now. The readers who will be reading your document/s in future are your future readers.

c. Complex Readers

Complex readers are the readers consisting of diverse groups with widely varying backgrounds and responsibilities, each with a different agenda, each with a different way of functioning and communicating.

Guideline-V (Fill in a sample worksheet that should be kept in mind when defining objectives.)

Defining Objectives

a. Overall Purpose

These are the questions to consider while trying to find out the overall purpose of your document:

- What are you writing?
- What prompts you to write?
- What outcome do you desire?

b. Reader's Profile

Following questions are important to consider for knowing a reader:

- Who is the primary reader?
- What is the reader's relationship to you?
- What are your reader's job title and responsibilities?
- Who else might read your communication?
- How familiar is the reader with your communication?
- How familiar is the reader with your specialty?
- Does your reader have certain communication preferences?

c. Reader's Information Needs

Consider the following questions for evaluating the readers information needs:

- What are the key questions your reader will ask while reading?
- How will your reader search for answers?

d. Reader's use of the information provided

Following questions are important to consider the readers' use of the information we provide them with:

- How will the reader use the information you provide?
- What will be their points of comparison?

Also, try to determine how the information you provide will affect the reader/s and the organization.

e. Reader's Attitude

The following questions should be considered to judge the reader/s attitude:

- What is the reader's attitude towards your subject?

- What is the reader's attitude towards you?

Sample Worksheet to Define Objectives

a. Overall Purpose

What are you writing?

A proposal that our Software Company, Adam Soft, should assign the international projects to most reliable engineers.

What prompts you to write?

I think this way we would complete foreign projects promptly and build the company's credibility.

What outcome do you desire?

I would like the new method to be put to effect as soon as possible.

b. Reader's Profile

Who is the primary reader?

Ms. Zahra Saeed

What is the reader's relationship to you?

We see each other daily but still have a formal relationship.

What are your reader's job title and responsibilities?

She is the Head of the project assignment committee for Adam Soft.

Who else might read your communication?

Mr. Omair Hafeez, Mr. Khawaja Usman and Miss Zahra's chief assistants may read it.

How familiar is the reader with your communication?

She is the head of the present system of assigning. She has used the current system for 3 years. She doesn't know that I am proposing an alternative.

How familiar is the reader with your specialty?

Very familiar

Does your reader have communication preferences?

She likes all the communication to be "business like".

c. Reader's Information Needs

Following are the questions related to the readers information needs:

- What are the key questions Ms. Zahra will ask while reading?
- What would I have to do differently?
- How will Ms.Zahra search for answers?
- How exactly would the new system work?
- What makes you think that something is wrong with the present system?

- What will be the criteria for selecting an appropriate engineer for this particular project?

d. Reader's use of the information provided

You have to think how ms. Zahra will use the information you provide. Attempt to determine how the information you provide will affect her and the organization.

e. Reader's Attitude

- What is the reader's attitude towards your subject? She is not in favor of the new system; she thinks that it will create competition among the new employers.
- What is the reader's attitude towards you? She thinks of me as a novice.

***Revision of Guideline-V**

Identifying the Readers by Role

- Decision Makers
- Advisors
- Implementers

Identifying the Readers by Type

- Phantom Readers
- Future Readers
- Appropriateness

Because a reader's knowledge or experience determines the level of comprehension of a technical material, appropriateness is largely determined by your audience. For example, a fact expressed in a mathematical equation may not be effective in a report addressed to a managerial audience.

All technical writing should also be appropriate to the specific institutional context that motivated its creation. It should not only serve the writer's and the reader's purposes but also conform to the goals and conventions of the institution in which it exists. Institutional goals and conventions are sometimes clear and explicit. For example, in large companies, the specific goals of various documents, as well as the preferred form and style, are often described in the company correspondence and style manuals.

Although the context is not always clearly delineated, it always can be worked out. Research reports should conform to the general goals and specific conventions of the scientific or technical community in which they are created.

Style Guidelines

Style guides are widely used in the professions and in organizations to achieve a uniform document look by identifying the formal requirements for a document's appearance. They are task-oriented documents in the sense that they provide definite instructions for preparing a document.

In the style guides, instructions are generally provided for numerous document elements including most of the following:

- Page formats (title page and sample page with headers or footers)
- Numbering systems (page, graphics, sections)
- Headings and subheadings
- Graphics elements
- Usage
- Punctuation and mechanics
- Document packaging

For many documents, it is a good idea to identify a standard of style, so that you may achieve a consistency of style. Consistency is important, not only because it genuinely improves the reader's ability to understand your material, but also because it gives the reader confidence in your ability to assert control over any detail.

LESSON 7

ACCURACY, CLARITY, CONCISENESS AND COHERENCE

Outline

In this lesson, you will learn the importance of the following in effective communication:

- Accuracy
 - Document Accuracy
 - Stylistic Accuracy
 - Technical Accuracy
- Clarity
 - Structural Clarity
 - Stylistic Clarity
 - Contextual Clarity
- Conciseness
- Coherence
 - Paragraph Development: Strategies to Develop Coherent Paragraph
 - exemplification
 - analysis
 - comparison and contrast
 - definition
 - enumeration
 - description

Characteristics of Effective Technical Communication

A good technical communication is:

- accurate
- clear
- concise
- coherent
- appropriate

In the prose of science and technology, these qualities are sometimes difficult to achieve. Not only do science and technology depend heavily on specialized concepts and terminologies, but they also make extensive use of numbers and graphics. Consider the example given below:

Example

The flow of electrical current can induce the migration of impurities or other defects through the bulk of a solid. This process is called electro migration. In simple electro migration, the force on the defect is thought to have two components. The first component is the force created by direct interaction between the effective charge of the defect and the electric field that drives the current. The second component, called the "wind force," is the force caused by the scattering of electrons at the defect.

(--J.A. Stroscio and D.M. Eigler, "Atomic and Molecular Manipulation with the Scanning Tunneling Microscope," *Science*)

The preceding example is accurate in two ways. It is stylistically accurate in its precise use of language. It is technically accurate in its use of specialized terms- technical terms-such as *electro migration*, *charge*, *electric field*, and *scattering* whose meanings are based in the context of a technical discipline.

Both kinds of accuracy, i.e., accuracy of phrasing and accuracy of technical concept are of foremost importance in technical and professional writing. The example is also *clear* because it is written in simple and direct sentences. Although the technical context is the highly specialized realm of theoretical and applied nanotechnology, the sentence syntax, that is, word *order*--is restrained and structurally very simple.

Part of this clarity is achieved by the rhetorical device of defining a term, electro migration. The example is *concise* in its use of minimum words to express the basic idea of electro migration. It is not wordy, and it does not digress from the point being made. The example is *coherent* because it develops its subject matter in an easy-to-follow line of thinking. The sentences are further linked by referents such as "this process", "the first component and the second component."

Finally, the example is *appropriate* to its purpose of presenting a general description of the process of electro migration, and to its audience, educated readers of *Science*, who are not necessarily experts in the field of nanotechnology.

What is accuracy and why is it important?

1. Accuracy

Cultivate accuracy in your writing. **Accuracy**, which is the careful conforming to truth or fact, has three main aspects:

- Document Accuracy
- Stylistic Accuracy
- Technical Accuracy

What is document Accuracy and why is it important?

Document Accuracy

Document accuracy refers to the proper coverage of your topics in appropriate detail. Often an accurate document needs to focus clearly on a problem.

Document accuracy is generally cultivated by a clear problem statement and by a preliminary outline. These writing tools help you focus your writing effort by reducing your data in a way that solves a theoretical or practical problem.

What is Stylistic Accuracy and why is it important?

Stylistic Accuracy

Stylistic accuracy concerns the careful use of language to express meaning. Accurate language requires the careful use of paragraph and sentence structure and word choice to describe and analyze your topics effectively. As a writer, you gain command of accuracy by studying the elements of style and by learning to apply those elements to your drafting, revising, editing, and proofreading. Stylistic accuracy is also a matter of using words precisely.

What is technical accuracy and why is it important?

Technical Accuracy

Technical accuracy requires stylistic accuracy but is not based solely on it. The effective document in science and technology must be grounded in a technically accurate understanding and representation of the subject.

Technical accuracy depends on the writer's conceptual mastery of the subject and its vocabulary, as well as on his or her ability to analyze and shape data with a minimum of distortion. In science and technology, enormous creative energy is given to mastering this technical aspect of subject development.

What is Clarity and why is it important?

2. Clarity

Strive for clarity in your writing. Clarity, which refers to ease of understanding, is a special problem in technical and professional writing.

Specialized languages, mathematically detailed analyses, and complex conceptual schemes can make technical subjects hard to grasp even when prepared by skilled writers and read by expert readers.

You can increase the clarity of your material by securing the following:

- Structural Clarity
- Stylistic Clarity
- Contextual Clarity

What is Structural Clarity and why is it important?

Structural Clarity

At the level of the whole document, you can promote structural clarity thus making it easy for the reader to get the large picture. Use abstracts and other forecasting strategies such as introductions that state the purpose and scope of the document.

How can you promote structural clarity?

Table of contents, problem statements, and even strategic repetition also promote structural clarity. Graphs and tables, effectively designed and placed, help focus and clarify information. Descriptive titles and frequent subject headings guide readers and help keep the large picture in focus.

What is meant by Stylistic Clarity and why is it important?

Stylistic Clarity

Stylistic clarity is promoted by simple and direct language. Simplicity in language is obtained with directly worded sentences. Using simple sentences and avoiding overloaded sentences & excessive normalization also contribute to clarity.

Word choice is a factor in stylistic clarity: use simple language wherever possible to counteract the abstract, highly specialized terms of science and technology.

What is meant by Contextual Clarity?

Contextual Clarity

Contextual clarity, in which the importance, authorization, and implications of your work are made available, also contributes to ease of understanding. All work has a context and your readers want to understand what the context of your document is:

- What prompts you to write?
- What is your purpose?
- Whose preceded work has influenced yours?
- What is the organizational and intellectual context of your problem?

You answer those questions in introductions and problem statements and in your citations and other references.

What is ‘Conciseness’ and why is it important?

3. Conciseness

Learn the strategies of conciseness. Conciseness has a special value in technical fields. Writers are often tempted to include everything that could be relevant to their subject, rather than merely everything that is relevant to the communication task at hand.

The concise document is a piece of writing that conveys only the needed material. At the level of the whole document, conciseness is helped mostly by focus and the narrowing of document scope to a manageable problem and response.

Preparing a clear introduction and developing a detailed outline are two strategies that give you control over document length and scope. Identify and eliminate material that is not necessary to support your claims. Look for sections including appendixes that are not essential to your work. Graphics are powerful aids to conciseness because they cut down on the amount of prose necessary to describe objects and processes, summarize data, and demonstrate relationships.

How do you make your document more concise?

Conciseness requires careful revising. Become familiar with the strategies for reducing wordiness. Look for ways of cutting useless words, sentences, and sections from the document.

What is coherence and why is it important?

4. Coherence

Look for ways to improve the coherence of your writing. **Coherence** is the quality of hanging together, of providing the reader an easily followed path.

Writers promote coherence by making their material logically and stylistically consistent and by organizing and expressing their ideas in specific patterns. Efforts to emphasize the relationships among the elements of a document strengthen its impact. Coherence can dramatically improve the reader's ability to understand your material by promoting its flow or readability. Coherence is especially valued in technical communication and writing because of the inherent complexity of the subjects.

At the level of the whole document, coherence helps to provide the larger picture in which the connections among the parts of the document are made clear by the writer. Give readers a roadmap to help them anticipate the content of your work. Abstracts, clear titles, introductions, and problem statements all promote *coherence* by linking various parts of a piece of writing.

Paragraph Development: Strategies to Develop Coherent Paragraph

The paragraph is one of the most powerful instruments of coherence. By organizing material into a topic sentence and supporting sentences, paragraphs pull together material and emphasize various forms of conceptual development. Paragraph development is achieved partly through the specific strategies of:

- enumeration
- exemplification
- comparison and contrast
- analysis
- definition
- description

All of the above furnish distinct approaches to developing ideas. Transitional devices also operate at the paragraph level to provide links among sentences and paragraphs.

a. Enumeration

Use enumeration in paragraphs when you want to itemize or list a set of topics or a series of some kind. Enumeration is a powerful way to establish a series of observations and to emphasize each element.

In the following paragraph, the items are enumerated in a series of itemized recommendations.

Have your blood cholesterol measured if you have never had it done. Finger-prick tests at health fairs and other public places are generally fairly accurate, especially if they are offered by a hospital or other reputable health group. When you know your “number,” follow these guidelines: If your cholesterol is under 200 mg/dl, maintain a healthy lifestyle-- including eating a low-fat diet, getting regular exercise, maintaining a healthy body weight, and not smoking--and get another test within five years.

If your cholesterol is between 200 and 239 mg/dl, have a second test performed and average the results. If that number falls in the same range, and if you do have any form of cardiovascular disease, change your diet to improve your cholesterol. In addition, eliminate any other risk factors you have and get tested again in about one year. If your cholesterol is 240 mg/dl or more,

your physician should order a more detailed cholesterol analysis and recommend therapy based on the results. You should begin a cholesterol-improving diet immediately.

b. Exemplification

Exemplification refers to the use of anecdotes or examples to bolster your argument or whatever you are writing about. Use exemplification paragraphs to provide instances that clarify your topic statement.

In the following paragraph, the topic sentence is supported in examples that illustrate, support, and clarify the main point.

Vitamins and minerals can be added to enrich (replace nutrients lost in processing) or fortify (add nutrients not normally present) foods to improve their nutritional quality. Bread and cereals are usually enriched with some B vitamins and iron. Common examples of fortification include the addition of vitamin D to milk, vitamin A to margarine, vitamin C to fruit drinks, calcium to orange juice, and iodine to table salt.

(--P. Insel and W. Roth, Core Concepts in Health)

c. Comparison and Contrast

Use comparison and contrast to develop a topic by examining its similarities or dissimilarities to another thing, process, or state. Comparison emphasizes the similarities, contrast, the differences. A paragraph may use both comparison and contrast.

In the following example, two kinds of electrical cable are compared. The aim here is to convey the superiority of A over B for two categories of performance.

Coaxial vs. Fiber-Optic Cable: Comparative Cable-Length Performances

For a number of critical performance characteristics, fiber-optic cable offers considerable advantages over standard coaxial cables. The most obvious distinction between the two is the great bandwidth-distance capacity of fibers. The high-frequency capacity of coaxial cables decreases rapidly with increased length, but the bandwidth of a commercial fiber-optic system will remain constant with length. A commercial fiber-optic system like that of Artel remains constant for a bandwidth over a distance of 4,000 ft, while three different sizes of coaxial cable rapidly drop in less than half the distance.

(--Artel Communications Corporation, "Fiber Optics in RGB Color Computer Graphics Communications," Application Note CG-1)

Use Transitional Words and Phrases

Use transitional words and phrases to clarify and smooth the movement from idea to idea. Compare the following paragraphs:

Weak

Reducing drag in an aerospace vehicle is an important design consideration with financial and operational consequences. Poorly designed rocket fuselage can triple fuel and launch costs. Drag increases stress on the key joints. This proposed project will develop a model to reduce aerodynamic drag on the RX100.

Improved

Reducing drag in an aerospace vehicle is an important design consideration. For example, poorly designed rocket fuselages can triple fuel and launch costs. Moreover, drag increases stress on the key joints. Therefore, this proposed project will develop a model to reduce aerodynamic drag on the RX100.

LESSON 8

THE SEVEN C'S OF EFFECTIVE COMMUNICATION-I

Outline

In this lecture, you will learn the following seven C's of effective communication:

- Completeness
Guidelines to secure Completeness in your writing:
 - Provide all necessary information.
 - Answer all questions asked.
 - Give something extra, only when desired.
- Credibility
- Conciseness
Guidelines to secure Conciseness in your writing:
 - Eliminate wordy expressions
 - Include only relevant material
 - Avoid unnecessary repetition

To compose a written or oral message, you must apply certain communication principles. These are called the seven **C's of effective communication**. Following are the seven C's of effective communication:

1. Completeness
2. Conciseness
3. Consideration
4. Concreteness
5. Clarity
6. Courtesy
7. Correctness

The seven C's apply to both written and oral communication. Although, this lesson discusses these principles on a sentence level, yet they are applicable to all forms of communication. To some extent, the principles overlap because they are based on a common concern for the audience, whether the audience consists of listeners or readers.

1. Completeness

Your message is complete when it contains all the facts readers or listeners need for the reaction you desire. Communication senders need to assess their message from the eyes of the receivers to be sure they have included all the relevant information.

Benefits of Completeness

Complete messages are more likely to bring the desired results. They do a better job at building goodwill. Communication that seems inconsequential can become very important if information it contains is complete and effective.

Guidelines to secure Completeness in your writing

- Provide all necessary information.
- Answer all questions asked.
- Give something extra, only when desired.

a. Provide all the necessary information

Answer the five Ws that make the message clear.

- Who
- What
- When
- Where
- Why

Example

When requesting merchandise, make sure:

- What do you want?
- When do you need it?
- To whom and where is it to be sent?
- And how would the payment be made?

b. Answer all the questions asked

Look for questions. Some may appear buried within a paragraph. Locate them and answer them precisely.

A colleague or a prospective customer's reactions to an incomplete answer are likely to be unfavorable. The customer may think that the respondent is careless or purposely trying to conceal a weak spot. In general "omissions cast suspicions" whether you are answering an inquiry about your product or recommending a former employee to a new job.

If you have no information on a particular question, say so clearly. If you have unfavorable information in answer to certain questions, handle your reply with both tact and honesty.

Example

In one instance, a software distributor when replying to a customer's letter answered only four of the seven questions. The original questions had somewhat hidden and buried five long paragraphs so the respondent apparently overlooked them. The reply was incomplete and unfriendly and caused the distributor to lose business.

Sometimes before you can answer a question, you need certain specific information from the inquirer. If so, it is a good idea to list the needed details on a reply form that the inquirer can fill out and return to you. In this way, both your answer and that of your respondent will be complete.

c. Give something extra when desired

Use your good judgment in offering additional material if sender's message was incomplete. But the words 'when desirable' are essential. You must take great care not to waste the reader's time with superfluous information.

2. Credibility

Credibility of the communicator has been systematically analyzed over the years, often as relating to the speaker. Several classic but still relevant studies suggest that five decisions are made regarding a communication source.

- **Competence**
- **Character**
- **Composure**
- **Sociability**
- **Extroversion**

Competence: Does the audience perceive the message sender as communicating honestly?

Character: Does the sender of the message know his or her message?

Composure: Does the sender give the impression of being cool, calm, and collected?

Sociability: Does the sender come across as a likable individual?

Extroversion: Does the source exhibit outgoing tendencies rather than timidity?

Example

You are the president of a community welfare center, and receive the following message.

I'm new to the city and would like to consider joining your welfare center. As I will be visiting the center within the next month, would you please tell me where the next meeting will be held?

If you answered only this question, your letter would be incomplete. You should have added information about a welcome message, information about parking space, date, day, and time of meeting. Your message will then have something extra that the reader really needs and appreciates.

Examples

Fax 1: Incomplete Question

Please fax me the in return departures from Lahore to Karachi on 8th May.

In reply to the above fax you would have to "give something extra", as to times of day, airline flying that route, costs, and departure & arrival times.

Fax 2: Incomplete Question

How come my request for an interview letter didn't receive a response?

- When was the letter sent?
- Who sent it?
- To whom was it sent?

In other words, responding to Fax 2 would require a return letter or a fax seeking answers to the above questions.

Conciseness

Conciseness is saying what you want to say in the fewest possible words without sacrificing the other C qualities. A concise message saves time and expense for both the sender and the receiver. It increases emphasis in the message. It shows respect for the recipient by not cluttering them with unnecessary information.

To achieve conciseness, observe the following suggestions:

- Eliminate wordy expressions.
- Include only relevant material.
- Avoid unnecessary repetition.

a. Eliminate wordy expressions

Use single-word substitutes instead of phrases whenever possible without changing meaning.

Wordy: At this time

Concise: Now

Wordy: Due to the fact that

Concise: because

Wordy: have need for

Concise: Need

Wordy: In due course

Concise: Soon

Omit trite and unnecessary expressions

Wordy: Please be advised that your admission statement has been received.

Concise: Your admission statement has been received.

Replace wordy conventional statements with concise ones

Wordy: Please find attached the list you requested.

Concise: The list you requested is attached.

Wordy: Such refreshing comments are few and far between.

Concise: Such refreshing comments are scarce.

Avoid overusing empty phrases

Wordy: There are four rules that should be observed.

Concise: Four rules must be observed.

Wordy: It was known by Mr... Usman that we must reduce the size of our inventory.

Concise: Mr... Usman knew that we must reduce our inventory.

Omit “which” and “that” clause wherever possible

Wordy: She bought desks that are of the executive type.

Concise: She bought executive type desks.

Wordy: The receipt that is enclosed documents your purchase.

Concise: The enclosed receipt documents your purchase.

Eliminate unnecessary prepositional phrase

Wordy: The issue of most relevance is teamwork.

Concise: The most relevant issue is teamwork.

Wordy: In most cases, the date of the inquiry is indicated in the upper right corner.

Concise: The policy date is in the upper right corner.

Limit your passive voice

Wordy: The total balance due will be found on Page 2 of this report.

Concise: The balance due is on page 2 of this report.

Wordy: The reports are to be submitted by employees prior to 5:00 p.m., at which time they will be received by Ali.

Concise: Please submit your reports to Ali by 5:00 p.m.

b. Include only relevant material

- Stick to the purpose of the message.
- Delete irrelevant words and rambling sentences.
- Omit information obvious to the reader.
- Avoid long introductions, unnecessary explanations, pompous words, and gushy politeness.
- Get to the important point, tactfully and concisely.

Example

Wordy: We hereby wish to let you know that our company is pleased with the confidence you have reposed in us.

Concise: We appreciate your confidence.

c. Avoid unnecessary repetition

Unnecessary repetition leads to dullness.

- Use short names when you have mentioned the long one once.

For Shaukat Khanum Memorial Cancer Hospital, use ‘Shaukat Khanum’ or simply the Hospital.

- Use initials instead of repeating long names.

Instead of using Pakistan International Airlines, use PIA.

- Cut out needless repetition of phrases or sentences.
- Sometimes it is good to combine two or even three sentences using subordinate clauses or phrases.

Example

Following is the body of a letter from a business executive in a Company for 5 years.

“Will you ship us some time, anytime during the month of October would be fine, or even November if you are rushed (November would suit us just as well, in fact a little bit better) 300 of the regular Dell Computers.

Thank you in advance for sending these along in parcel post, and not in express, as express is too expensive.”

Concise Version of the Letter

Please ship parcel post, 300 Dell Computers before the end of November.

LESSON 9

THE SEVEN C'S OF EFFECTIVE COMMUNICATION II

Outline

In this lesson, you will learn the following seven C's of effective communication:

- Consideration

Ways to secure consideration are:

- Focus on 'you' Instead of 'I' or 'we'.
- Show audience benefit or interest in the receiver.
- Emphasize positive, pleasant facts.

- Concreteness

Guidelines to compose concrete & convincing messages:

- Use specific facts and figures.
- Put action in your verbs.
- Choose vivid, image-building words.

Consideration

Consideration means preparing every message with the message receiver in mind. Consideration is very important in effective communication. It shows that you understand your audience, which goes a long way to get your desired result. Consideration simply means you show empathy in your communication style. Along with understanding your audience, you should also:

- Not lose your temper
- Not accuse
- Not charge them without facts

In business communication, there are three specific ways to indicate consideration:

- Focus on 'you' Instead of 'I' or 'we'.
- Show audience benefit or interest in the receiver.
- Emphasize positive & pleasant facts.

1. Focus on 'you' Instead of 'I' or 'we'

To create considerate, audience-oriented messages, focus on how message receivers will benefit, what they will receive, and what they want or need to know. In some cases this can be accomplished by emphasis; you may downplay your own feelings to make a point.

Example

We-attitude: I am delighted to announce that we have extended our office hours to make shopping more convenient.

You-attitude: You will be able to shop evenings with the extended office hours.

The use of 'you' in negative situations can be avoided by employing passive voice, making the receiver part of the group.

2. Show audience benefit or interest in the receiver

Readers may react positively when benefits are shown to them. Whenever possible and true, show your receivers will benefit from whatever the message asks or announces. Benefits must meet the recipient's needs, address their concerns, or offer them rewards.

3. Emphasize positive and pleasant facts

Another way to show consideration is to emphasize pleasant and positive facts. This means stressing what can be done instead of what cannot be done. Also, you must focus on words your recipient considers favorable.

Example

In the following opening of a letter, the negative words you would rather not have at all are underlined.

We regret that, since you closed your account, your name is missing from our long list of satisfied customers. We sincerely hope that due to the best efforts of our fine staff, there were no occasions on which you felt we failed to serve you properly.

Concreteness

Communicating concretely means being specific, definite, and vivid rather than vague and general. Often it means using denotative (direct, explicit, often dictionary-based) rather than connotative words.

The benefits to business professionals of using concrete facts and figures are:
Your receivers know exactly what is desired. When you supply specifics for the reader, you increase the likelihood that your message will be interpreted the way you intended. The following guidelines will help you compose concrete and convincing messages.

- Use specific facts and figures.
- Put action in your verbs.
- Choose vivid, image-building words.

1. Use Specific Facts and Figures

Whenever possible, use an exact, precise statement or a figure in place of a general word to make your message more concrete. Consider the following example:

Vague, General & Indefinite: Student GMAT scores are higher.

Concrete & Precise: In 1996, the GMAT scores averaged 600; by 1117 they had risen to 610.

2. Put Action in Your Verbs

Verbs can activate other words and help make your sentences alive or vigorous. To have dynamic sentences:

- Use active rather than passive verbs.
- Put action in your verbs.

a. Use Active Rather than Passive Verbs

Active verbs help make your sentences more specific, personal, concise, and emphatic.

Specific: "The dean decided" is more explicit than "A decision has been made."

Personal: "You will note" is both personal and specific; "It will be noted" is impersonal."

Concise: The passive voice requires more words and thus slows both writing and reading. Compare "Figures show" with "It is shown by figures."

Emphatic: Passive verbs dull action. Compare "The students held a contest" with "A contest was held by the students."

Sometimes, however, you may **prefer the passive voice instead of the active**, as in the following situations:

- **When you want to avoid personal, blunt accusations or comments**

Use Passive voice instead of active voice when you want to avoid personal blunt accusations:

‘The October check was not included’ is more tactful than ‘you failed to include....’

‘Attendance at the meeting is required.’ is less hard than ‘You must attend...’

- **When you want to stress the object of the action**

"You are invited." is better than "**We invite you.**"

- **When the doer is not important in the sentence**

In "Three announcements were made before the meeting started," the emphasis is on the announcements, not on **who** gave them.

b. Put Action in Verbs, Not in Nouns

Seven verbs—be, give, have, hold, make, put, and take—(in any tense) might be designated as "deadly" when the action they introduce is hidden in a "quiet noun". The examples given below show how each deadly verb with the noun and preposition (all underlined) can be changed to an action verb that shortens the sentence.

Weak: Action hiding in a "Quiet" Noun

- The function of this office is the collection of payments and the compilation of statements.
- Professor H. will give consideration to the report.

Improved: Action in the Verb

- This office collects payments and compiles statements.
- Professor H. will consider the report.

3. Choose vivid and image-building words

You can make your message forceful, vivid, and specific by using comparisons, sensory appeals, figurative language, concrete nouns, and well-chosen adjectives.

Comparisons

Bland Image: This is a long letter.

More Vivid Image: This letter is three times as long as you said it would be.

Figurative Language

Literal: Her work in groups was exemplary.

More vivid & Figurative: She could be called the spark plug of the group.

LESSON 10

THE SEVEN C'S OF EFFECTIVE COMMUNICATION III

Outline

- Clarity
- Do's and Don'ts of Clarity
- Examples
- Checklist
- Courtesy
- Do's and Don'ts of Courtesy
- Examples
- Checklist

Clarity

Getting the meaning from your head *accurately* to the reader is the purpose of clarity.

Remember

Choose precise, concrete and familiar words. Construct effective sentences and paragraphs. Clarity is achieved through a balance between precise language and familiar language. When you have the choice between a long word and a short word, choose the short and familiar word.

Golden Rule

When in doubt, use the more familiar words; audience will understand them better.

For example

You must use *pay* instead of remuneration and *invoice* instead of *statement of payment*.

Examples

Unfamiliar

After our perusal of pertinent data, the conclusion is that a lucrative market exists for subject property.

Familiar

The data we studied show that your property is profitable and in high demand.

Although it is appropriate to use technical terms and business jargon in some professional situations, avoid their use when the reader is not acquainted with the terminology.

Unfamiliar

Assessed Valuation

Familiar

Property value for tax purpose

A. Choose precise, concrete, and familiar words:

With the increased use of e-mail, there is the tendency to be concise. The danger is that you must know the meaning of e-mail acronyms which aid conciseness. For instance, IMO means in my opinion, FAQ means frequently asked questions etc.

B. Construct Effective Sentences and Paragraphs:

At the core of clarity is the sentence. Important characteristics to consider are:

- A. Length
- B. Unity
- C. Coherence
- D. Emphasis

A. Length

Try for an average sentence length of 17 to 20 words. When the sentence length increases, try to chop it down into two sentences. Also if the sentences are too short then the resulting language becomes overly simple and choppy.

B. Unity

In a sentence, unity means that you must have one main idea. In case of other ideas they must be closely related. For example, 'I like Sohail and Eiffel Tower is in Paris' is obviously not a unified sentence.

C. Coherence

In a coherent sentence the words are arranged so that the ideas clearly express the intended meaning. Place the correct modifier as close as possible to the word it is supposed to modify.

In the examples which follow, notice that 'unclear' sentence conveys the wrong meaning.

Examples

Unclear

Being an excellent lawyer, I am sure that you can help us.

Clear

Being an excellent lawyer, you can surely help us.

Unclear

His report was about managers, broken down by age and gender.

Clear

His report focused on age and gender of managers.

Unclear

After planning 10,000 berry plants, the deer came into out botanist's farm and crushed them.

Clear

After our botanists had planted 10,000 berry plants, the deer came into the farm and crushed them.

Emphasis

The quality that gives force to important parts of sentences and paragraphs is emphasis.

Most often put main ideas up front within a sentence. Writers must decide what needs emphasis, and then decide the correct sentence structure.

Examples

Little emphasis

The airplane finally approached the speed of sound, and it became very difficult to control.

Better emphasis

As it approached the speed of sound, the airplane became very difficult to control.

Little emphasis

Candidates should be motivated and should have interest in dynamic and static testing of material, and have those prerequisites and others.

Better emphasis

Prerequisites in candidates should include expertise in dynamic and static testing of material.

In addition to using the above methods of emphasis, the PCs of today allow different ways to visually add emphasis to words.

Some of them include headings, tabulations, itemization, line charts, pie charts, italics, indentation, colored capitals, or even wide or short margins.

Checklist

- Choose as precise or as concrete a word as possible.
- Select words that have high sense of appropriateness for the reader.
- Opt for familiar words, the ones that are not pretenses.
- Limit the average sentence from 17 to 20 words.
- Insert no more than one main idea into a sentence.
- Arrange words in a way that the main idea occurs early in a sentence.

Courtesy

Courtesy stems from a sincere you-attitude. It is not merely politeness with mechanical insertion of 'please' and 'thank you'; although, applying socially accepted manners is a form of courtesy. Rather it is politeness that grows out of respect and concern for others. True courtesy involves being aware not only of the perspectives of others but also their feelings. Knowing your audience allows you to use statements of courtesy. Be aware of your message receiver.

Suggestions

Be sincerely tactful, thoughtful, and appreciative. Use expressions that show respect. Choose nondiscriminatory expressions.

a) Be sincerely tactful, thoughtful, and appreciative

Though very few people are intentionally abrupt or blunt, these negative traits are a common cause of discourtesy. Sometimes, they stem from a mistaken idea of conciseness, sometimes from negative personal attitudes etc.

Examples

Tactless, blunt

Stupid letter; I did not understand any of it.

More tactful

It's my understanding.....

Tactless, Blunt

Clearly, you did not read my latest fax.

More Tactful

Sometimes my wording is not precise, let me try again.

Tactless, Blunt

I rewrote that letter three times; the point was clear.

More Tactful

I am sorry the point was not clear; here is another version.

b) Thoughtfulness and Appreciation

- The traits help build good will.
- Be generous in appreciating others' good performances.

c) Use expressions that show respect:

No reader wants to receive a message that offends. Such expressions are expressed in two groups:

- Irritating expressions
- Questionable humor

- **Omit irritating expressions**

Following is a consensus list that includes a list of expressions that many people find irritating:

- Contrary to your inference
- I do not agree with you.
- If you care
- I am sure you must realize

- **Omit questionable humor**

- When in doubt as to the relevance of humor, leave it out.
- Laughter to one person is disgust for another; each of us has a different sense of humor.
- Notice the difference between the 2 notes in the next example.

Example

Note 1, Offensive

Hey man, what's this I hear about the good news? You sure pulled a fast one this past weekend and then didn't tell any of us about it.

Give my regards to the little lady. And wish her the best; she'll need it.

More courteous

Warm congratulations on your wedding.

Well, you certainly took us by surprise. In fact, just a few of us suspected that you were taking off to get married. But even though we didn't hear about it until later, we wish you the best.

Give our warm regards to the new partner.

d) Choose Non-discriminatory Expressions

o Sexists Terms:

Be careful about using the word 'man'; this is a matter of concern especially in the Western cultures compared to other cultures..

Use alternative expressions that are neutral in nature.

Example

Questionable

Freshman

More Desirable

Entering students, first year students

o Singular pronouns

English lacks a neuter pronoun signifying 'he' or 'she'.

The trend to follow should be to avoid using 'he', 'his' or 'him' etc. One way to avoid using a masculine pronoun for both genders is the use of 'singular they'. Singular *they* is the use of *they*, or its inflected or derivative forms, such as *them*, *their*, or *themselves*, to refer to a single person or an antecedent that is grammatically singular. It typically occurs with an antecedent of indeterminate gender, as in sentences such as:

- "Everyone returned to *their* seats."
- "Somebody left *their* umbrella in the office. Would *they* please collect it?"
- "The patient should be told at the outset how much *they* will be required to pay."
- "But a *journalist* should not be forced to reveal *their* sources."

Examples

Questionable

Anyone who comes to class late will get his grade reduced.

More desirable

Students who come to class late will get their grade reduced.

Questionable

Each customer will have the new changes noted on his bill.

More desirable

Customers will have the new changes noted on their bills.

Questionable

Our criteria are firm: he is to be a scholar; he is to be a good teacher.

More Desirable

Our criteria suggest that he or she should be a good scholar and a good teacher.

Questionable

You guys should all be concerned about the issue.

More Desirable

All men and women should be concerned about the issue.

Questionable

The executives may benefit from the stock options. He will

More Desirable

The executives may benefit from the stock options. Each executive will/ They will...

Questionable

Each manager has assigned parking space. He should park his car...

More Desirable

Each manager has assigned parking space. They should park their car/ He/she should park his/her car...

o Names

While using names, treat each gender with respect. Use names in parallel form.

Example

Undesirable

Mudassir Ali and Sonia

Mrs. Ali and Mudassir

More desirable

Mudassir and Sonia Ali

Ms. Ali [*she deserves this*] and Mr. Ali

Checklist

- Ask yourself: Does the communication has a sincere you-attitude? Has someone else had a look at your statement if you have doubts about whether it's tactful? Another opinion may cause you to reconsider making a statement.
- Be cautious in using humor in communication. Be careful in using discriminatory language, thus being aware of gender, race, age, color, creed or ethnic origins.

LESSON 11

THE SEVEN C'S OF EFFECTIVE COMMUNICATION

Outline

- Correctness
- Do's and Don'ts of Correctness
- Review of Seven C's

Correctness

The following things are at the core of concreteness:

- Grammar
- Punctuation
- Spelling

The term correctness applied to business messages also means the following characteristics:

- o Use the right level of language.
- o Check accuracy of figures, facts and words.
- o Maintain acceptable writing mechanics.

Formal Writing

Formal writing is often associated with scholarly writing.

Examples

It includes Doctoral dissertations, scholarly articles, top-level government agreements, etc. The style is unconventional, usually impersonal, and contains long and involved sentences.

Informal Writing

This style of writing is more common in business writing. An example is the communication via e-mail, memos, etc.

More Formal	Less Formal
Participate	Join
Procure	Get
Utilize	Use
Interrogate	Question
Endeavor	Try

For further studies, please visit the following links

<http://ezinearticles.com/?The-Difference-Between-Formal-and-Informal-Writing&id=594208>

<http://classclit.about.com/library/bl-hw/bl-informal.htm>

Reminder

• Avoid substandard language

Using incorrect words, incorrect grammar, and faulty pronunciation, all suggest the inability

to use good English.

Substandar	More Appropriate
Ain't	Isn't
Can't hardly	Can hardly
Aim at proving	Aim to prove
Stoled	Stolen

- **Check accuracy of figures, facts, and words**

It is impossible to convey the meaning of the words precisely, through words, from the head of the sender to the receiver, so it is highly significant to provide accurate facts and figures and appropriate words.

- **Our goal is to be as precise as possible**

A good check of data is to have another person read and comment on the validity of the material.

- **Facts and Figures**

- Verify your statistical data.
- Double check your totals.
- Avoid guessing at Laws that have an impact on you.
- Have someone else read your message if the topic involves data.
- Determine whether a fact has changed overtime.

- **Words that confuse**

English language is constantly changing. Though dictionaries cannot always keep up with rapid change, still they are the most useful resource for finding correct words.

Examples

a, an

Use *a* before consonant and consonant sounds or a long *a* sound. Use *an* before vowels or silent *h* sounds.

Accept, Except

Accept is a verb that means receive.

Except is a verb that relates to omitting out or leaving out.

Between, Among

Between involves two people, among three or more.

Farther, Further

Farther is used to express more distance in space, further for distance in time, quality, or degree.

Biannually, Biennially

Biannually mean two times a year; biennially means every two years.

- **Maintain Acceptable Writing Mechanics**

Be watchful that:

- All material relating to mechanics, word processing, and appearance is relevant.
- Pay careful attention to the mechanical part of every well-written document.

Revision of the Seven C's of Effective Communication

- Completeness
- Conciseness
- Consideration
- Concreteness
- Clarity
- Courtesy
- Correctness

Completeness

Your message is complete when it contains all the facts readers or listeners need for the reaction you desire. Communication senders need to assess their message from eyes of the receivers to be sure that they have included all the relevant information.

Benefits of Completeness

- Complete messages are more likely to bring the desired results.
- They do a better job at building goodwill.
- Communication that seems inconsequential can become very important if information they contain is complete and effective.

Keep the following guidelines in mind:

- Provide all necessary information.
- Answer all questions asked.
- Give something extra, when desired.

Provide all the necessary information

Answer the five Ws that make the message clear.

Who

What

When

Where

Why

Example

When requesting merchandise, make sure of the following:

- What do you want?
- When do you need it?
- To whom and where it is to be sent?
- How would the payment be made?

Credibility

Credibility means, try to keep the trust of the audience intact.

Competence

Does the audience perceive the message sender as communicating with required competencies?

Character

Does the sender of the message know the worth of his or her message?

Composure

Does the sender give the impression of being calm and collected?

Sociability

Does the sender come across as a likable individual?

Extroversion

Does the source exhibit outgoing tendencies rather than timidity?

Example

You are the president of a Community welfare center, and receive the following message:

I'm new to the city and would like to consider joining your welfare center. As I will be visiting the center within the next month, will you please tell me where the next meeting will be held?

If you answered only this question, your letter would be incomplete.

You should add information about a welcome message, information about parking space, date, day, and time of meeting.

Your message will then have something extra that the reader really needs and appreciates.

Example

Fax 1, Incomplete Question: Please fax me the departures from Lahore to Karachi on 8th May.

In reply to the fax you would have to “give something extra”, as to times of the day, airline flying route, costs, and departure & arrival times.

Consideration

Consideration means preparing every message with the message receiver in mind.

- Don't lose your temper.
- Don't accuse.
- Don't charge them without facts.
- You should be foremost aware of their desires, problems, circumstances, emotions, and probable reaction/s to your thoughts. Handle the matter from their point of view. This thoughtful consideration is also called the 'you-attitude', the human touch or understanding human nature.

Three specific ways to indicate consideration

- Focus on 'you' instead of 'I' or 'we'.
 - Using 'you' does help project you-attitude.
 - Overuse can lead to negative reaction.
- Show the benefit or interest of the receiver.
- Emphasize positive, pleasant facts.

- **Focus on ‘you’ Instead of ‘I’ or ‘we’**

To create considerate, audience-oriented messages, focus on how message receivers will benefit, what they will receive, and what they want or need to know. In some cases, this can be accomplished by emphasis; you may downplay your own feelings to make a point.

Concreteness

To communicate concretely means being specific, definite and vivid rather than vague and general. Misunderstanding of words has produced tragedies both in war and in peace, in business and non-business situations. Often it means using denotative (direct, explicit, often dictionary-based) rather than connotative words.

Benefits of using concrete facts and figures

Your receivers know exactly what is desired. When you supply specifics for the reader/s, you increase the likelihood that your message will be interpreted the way you intended.

The following guidelines should be followed to compose concrete, convincing messages:

- Use specific and definite figures.
- Use vivid image building words.

Use specific facts and figures

It is desirable to be precise and concrete both in written and oral technical communications.

Example

Vague: Students’ GMAT scores are higher.

Concrete: In 1996 the GMAT scores averaged 600, by 1997 they had risen to 610.

Clarity

Getting the meaning from your head *accurately* to the reader is the purpose of clarity.

Remember

Choose precise, concrete, and familiar words.

Construct effective sentences and paragraphs.

Choose Precise, Concrete, and Familiar words

Clarity is achieved through a balance between precise language and familiar language. When you have the choice between a long word and a short word, choose the short and familiar word.

Golden Rule

When in doubt, use the more familiar words; audience will understand them better.

For example

You must use *pay* instead of remuneration and *invoice* instead of *statement of payment*.

Example

Unfamiliar

After our perusal of pertinent data, the conclusion is that a lucrative market exists for subject property.

Familiar

The data we studied show that your property is profitable and in high demand.

Courtesy

True courtesy involves being aware not only of the perspectives of others, but also their feelings. Knowing your audience allows you to use statements of courtesy. Be aware of your message receiver. Courtesy stems from a sincere you-attitude.

It is not merely politeness with mechanical insertion of ‘please’ and ‘thank you’; although, applying socially accepted manners is a form of courtesy. Rather it is politeness that grows out of respect and concern for others.

Be sincerely tactful, thoughtful, and appreciative

Though very few people are intentionally abrupt or blunt, these negative traits are a common cause of discourtesy. Sometimes they stem from a mistaken idea of conciseness, sometimes from negative personal attitudes, etc.

Example

Tactless, blunt

Stupid letter; I did not understand any of it.

More tactful

It's my understanding.....

LESSON 12

PLANNING BUSINESS MESSAGES

Outline

- Basic Tasks in the Message Composing Process
- Guidelines for Planning Business Message
- General and Specific Purposes of Business Message
- Testing the Purpose of Message
- Developing an Audience Profile
- Analyzing the Needs of Audience
- Selecting the Appropriate Medium or Channel

Composing of Business Message

The composition process helps you gain control over your message, and it is flexible, not a fixed prescription of sequenced steps. The composition process can be viewed as ten separate stages that fall into three simple categories:

- A. Planning
- B. Composing
- C. Revising

A. Planning

- o Define purpose
- o Analyze audience
- o Establish main idea
- o Select channel and medium

B. Composing

- o Organize the message
- o Formulate the message

C. Revising

- o Edit the message
- o Rewrite the message
- o Produce the message
- o Proofread the message

Guidelines for Planning Business Message

- **Sharpening Your Skill**
 - o Sharpening Your Skill (Overcoming the fear of Blank page)
 - o Use positive self-talk
 - o Know your purpose
 - o Visualize your audience
 - o Create a productive environment.
 - o Make an outline

- Just start
- Write the middle first
- Push obstacles aside

- **Technology**

Technology affects the composing process. For example, Microsoft Word increases productivity and effectiveness by streamlining the process.

- **Collaboration**

In many organizations the final piece of writing is a team effort, with more than one writer working on a document.

- **Scheduling**

Allotting time properly is very important; especially, when time is short, carefully schedule yourself and stick to it.

Defining your Purpose

The purpose of the document helps you decide how to precede, how to respond to the audience, which information to focus on, and which channel or medium to use.

- **Why do you need to have clear purpose?**

Example

Suppose your boss asks you to write a memo describing the company's policy on vacation time. This is a fairly broad topic. What should you say? Knowing the purpose of your message will help you make important decision about it.

- **Decide whether to proceed**

Many business messages have little practical purpose and should not be composed at all. They should be put on hold until you have a more practical purpose.

- **Respond to the audience**

If you are not certain that your purpose in composing a message is compatible with the audience's purpose, you are likely to deliver irrelevant material.

- **Focus on the content**

If you include extra information in your message, you are likely to overload the audience.

- **Establish a channel and Medium**

The choice of channel and medium has a direct influence on the purpose.

For example, writing a message for the whole department would most likely make you e-mail it for ease of distribution.

Common Purpose of Business Message

Business messages have the following general purposes:

- Inform
- Persuade

- o Collaborate

Specific Purpose

Beyond having a general purpose, your message might have a specific purpose. To determine the specific purpose, think of how the audience's ideas or behavior should be affected by the message.

Examples

General Purpose

- o To inform

Specific Purpose

- o To present last month's sales figures to the Vice President of marketing

General Purpose

- o To persuade

Specific Purpose

- o To convince the marketing director of the need to hire more Software Engineers

General Purpose

- o To collaborate

Specific Purpose

- o To help the personnel department develop a training program for new members of a Software Team

How should you test your purpose?

Test your Purpose

- o Is the purpose realistic?
- o If your purpose involves a major/radical change, you better go slowly, as most people resist change.
- o Is it the right time?
- o Timing matters a lot.
- o An idea is more likely to win approval when the profits are up.
- o Is the right person delivering the message?
- o Some people have more leverage in an organization, and hence have a better shot at getting the purpose achieved.
- o Is the purpose acceptable to the organization?
- o As a representative of your company, you are obligated to work for its goals.

Audience Analysis

Ask yourself some key questions about your audience:

- o Who are they?
- o What is their probable reaction to your message?
- o How much do they already know about the subject?
- o What is their relationship to you?
- o Determine the Audience Size and Composition.
- o Focus on the common interest of the Audience, but be alert to their individual concerns.
- o Identify primary Audience.

- Try to identify the people who are most important to your purpose.
- Estimate the Audience's probable reaction.
- A gradual approach and plenty of evidence is required to win over a skeptical audience.
- Gauge the audience's level of understanding.
- If you and your audience share the same general background, you can assume that they will understand the subject without any difficulty.
- Define your relationship with the Audience— are you communicating with people inside or outside your organization?
- How much credibility do you have?
- **Satisfy your Audience's information needs**
 - What does the audience want to know?
 - What does the audience need to know?
 - Have I provided all the desired and necessary information?
 - Is the information accurate?
 - Have I emphasized the information of greatest interest?
 - What does the audience want to know?

By restating a vague request in more specific terms, you can get the requester to define his or her needs more precisely. Anticipate unstated questions. Include any additional information that might be helpful, even though the reader didn't specifically ask for it.

Test the completeness of your message by making sure it answers all the important questions:

- Who?
- What?
- When?
- Where?
- Why?
- How?
- Is the information accurate?

Be sure that the information you provide is accurate and that the commitments you make can be kept. Ask yourself: Have I emphasized the information of greatest interest?

Try to figure out what points will specifically interest your audience; then give these points the most attention.

- **Make your Message easier to comprehend**

Devices that make your message easier to comprehend include summaries, overviews, headings, lists, enclosures, appendixes, handouts, charts, and graphs.

- **Establishing the Main Idea**

The main idea is the 'hook' that sums up why a particular audience should do or think as you suggest.

- **Use Brainstorming Techniques**

- Storyteller's tour
- Random List
- FCR worksheet
- Journalistic Approach
- Question and Answer Chain

- **Limit the Scope**

The main idea should be geared to the length of the message.

Select Appropriate Channel and Medium

Selecting the Appropriate Channel and Medium is very important.

The mediums could be:

- Oral
- Written
- Electronic

- **Oral medium**

Oral medium is best when you want immediate feedback. You use this medium when your message is relatively simple; you don't need a permanent record; you can assemble audience easily, and you want to encourage interaction.

- **Written medium**

Written medium is best when you don't need immediate feedback. Your message is detailed and complex. You need a permanent record and are trying to reach an audience over a large distance. It is best to use a written medium when you want to minimize the distortion while passing a message from one person to another.

- **Electronic Message**

Electronic Message is best when you don't need immediate feedback, but you do need speed. You don't need a permanent record, but want to overcome time zone barriers. Use electronic message when you want to minimize oral distortion.

LESSON 13

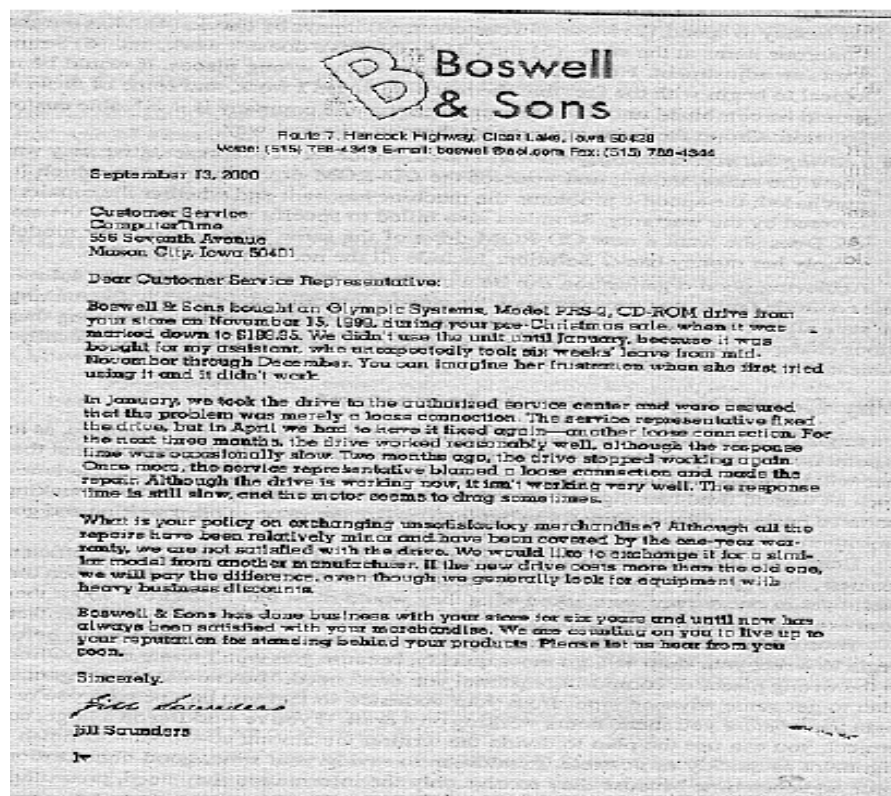
COMPOSING BUSINESS MESSAGES

Outline

- Organizing your Message
- Problems in the Process of Composing
- Benefits of Well-Organized Message
 - o Ways to Achieve Good Organization
 - o Stating the Main idea
 - o Illustration with examples
- Sequence with Organizational Patterns
 - o Direct Approach
 - o Indirect Approach
- Formulating the Message

Organizing your Message

People simply don't remember disassociated facts and figures; successful communicators rely on organization to make their message meaningful. The question arises as to what does good organization mean? Most disorganized communication suffers from problems with content. Grouping Sequence Letter.



- **Problems**

- Taking too long to get to the point: The writer of the letter took too long to get to the point. She waited until the final paragraph to state her purpose.
- Including Irrelevant Material: No information should be introduced which has no purpose.
- Getting ideas mixed up: The ideas should not be in the wrong place. A sequence should be followed in which ideas are built upon previous ones.
- Leaving out necessary information: The prime focus should be including the information required by the reader. Leaving out reader's desired information would be highly undesirable.

- **What does Good organization mean?**

The subject and purpose are clear. All information is related to the subject and purpose. The ideas are grouped and presented in a logical way. All necessary information is included.

Benefits of Well-Organized Message

Why does it matter to put information in any way and leave it to the reader to grasp the information? By arranging the ideas in a logical and diplomatic way, you will increase the chances of satisfying the audience's needs.

- **Helping your audience understand the message**

The main reason for being organized is to improve your chances that people will understand exactly what you mean.

Good organization also helps you get your ideas across without upsetting the audience. Good organization helps motivate the audience to accept your message.

- **Saving your Audience's Time**

Well organized messages are efficient. They only contain relevant information, so the audience does not waste time with superfluous information.

- **Simplifying your Communication Tasks**

Finally being well organized helps you compose your message more quickly and efficiently. Before you start to write, organize your message in a way that it is easy for readers to comprehend.

Letter

Computer Time
556 Seventh Avenue, N.W.
Mason City, Iowa 50401
(515) 979-8870
September 17, 1995

Ms. Jill Sunders
Boswell & Sons
Route 7, Hancock Highway

Clear Lake, IA 50401

Dear Ms. Saunders:

Thank you for letting us know about your experience with the Olympic disk drive that you bought last November. It's important that we learn of unusual problems with the equipment we stock.

As you know, regularly priced equipment returned to Computer time within 30 days is covered by the unconditional refund that has been our tradition for 22 years. Your machine, however, is still covered by the manufacturer's warranty. Your needs will receive immediate attention if you write to

Mr. George Bander

Olympic Systems

P.O. Box 7761, Terminal Annex

Los Angeles, CA 90010

From experience, I know that the people at Olympic truly care about having satisfied customers. We, too, value your business, Ms. Saunders. Please don't miss our Tax Days sale in April, which will feature more of the low prices and high-quality equipment that you've come to rely on.

Sincerely,

Linda Davis

Customer Service

Ways to Achieve Good Organization

To organize a message, first group the ideas and then put them in sequence. In business, deciding what to say is more important than deciding how to say it. Define and group ideas, an outline or a schematic diagram will help you visualize the relationship among the parts of a message. Start with the main idea. State the major points. Illustrate with evidence.

- **Start with the Main Idea**

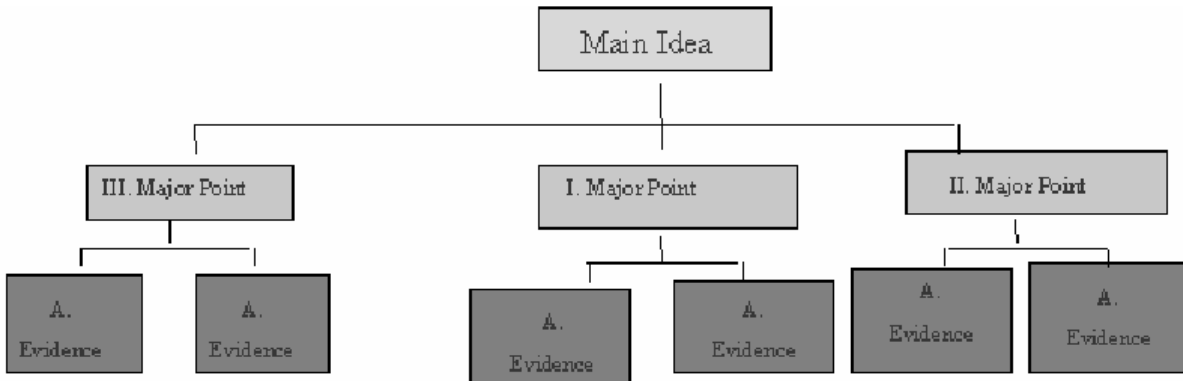
The main idea is the starting point for constructing an outline. It is all about:

- What you want your audience to do or think?
- Why they should do so?

- **State the Major points**

The main idea should be supported by three to five major points. The breakdown of the Main idea into major points and major points into evidences is best represented with an organization chart.

Organization Chart



- **Illustrate with Evidence**

Each major point should be supported with enough specific evidence to be convincing, but not so much that it becomes boring.

Establish Sequence with Organizational Patterns

You have two options after you have defined and grouped your ideas:

- Direct Approach
- Indirect Approach

Direct Approach (deductive)

It means putting the main idea first followed by evidence. Direct requests get straight to the point because the audience usually wants to respond. For routine Good-News and Goodwill messages, direct approach is effective that will please the reader or will cause no particular reaction.

- **Direct Request Format**

The letter begins with the main idea. The mid-section makes a request and provides essential details. In closing, the letter refers to the main point and states the desired action.

- **Routine, Good-News and Goodwill message format**

The letter begins with the good news. All necessary details are provided in the middle part. This paragraph gives additional specifics. In closing, the letter refers to the main point and states the desired action.

- **Persuasive Messages**

Using the indirect approach gives you an opportunity to get your message across to a skeptical or hostile audience.

- **Persuasive Message Format**

The letter begins with questions to catch the reader's attention. The letter leads up to the main point by arousing the reader's interest. This section gives the reader a motive for complying with the request. The letter closes with an appeal.

Indirect Approach (inductive)

To put the main idea later and evidences first, use direct order if the audience's reaction is likely to be positive and indirect order if it is likely to be negative. Short messages follow one of four organizational plans, depending on the audience's probable reaction.

o Bad-News Messages

If you have bad news, try to put it somewhere in the middle, cushioned by other more positive ideas.

o Bad-News Message Format

The letter begins with a neutral statement that provides a transmission to the refusal. The midsection explains the reason for refusal and then states the bad news. The writer takes care to introduce a positive thought. The letter closes on a cordial note.

• Longer Message

The organization of a longer message should reflect both the purpose of the message and the audience's probable reaction. When your purpose is to inform, the major points are based on a natural order implied by the subject's characteristics.

Organizational plan should depend on the reaction you anticipate

Your audience may respond in two ways to your material. If you expect your audience to agree with you, use a structure that focuses attention on the conclusion. If you expect your audience to be skeptical about your conclusions, use a structure that focuses on rationale that supports your point of view.

Formulating your Message

• Your first draft

Composition is the process of drafting your message; polishing it is a later step.

• Your style and Tone

When composing the message, vary the style to create a tone that suits the occasion. Think about the relationship you want to establish. Don't be too familiar. Use humor only with great care. Don't flatter the other person. Don't preach. Don't brag. Be yourself.

• Use the 'you' attitude

The 'you' attitude is best implemented by expressing your message in terms of the audience's interests and needs.

Avoid using 'you' and 'yours' to excess when assigning the blame.

Example

Instead of this

To help us process in this order, we must ask for another copy of the requisition.

Use this

So that your order can be filled promptly, please send another copy of the requisition.

Instead of this

We prefer typewriter ribbons in three colors: black, blue, and green.

Use this

Take your pick of type writer ribbons in three colors: black, blue, and green.

Remember

The word 'you' does not always indicate a 'you' attitude, and the 'you' attitude can be displayed without using the word 'you'.

Examples

Instead of this

You should never use that kind of paper in the machine.

Use this

That kind of paper doesn't work very well in the machine.

Instead of this

You need to make sure the staff follows instructions.

Use this

The staff may need guidance in the following instructions.

Emphasize the positive

Explain what you have done, what you can do, and what you will do – not what you haven't done, can't do or won't do.

When you are offering criticism or advice, focus on what the person can do to improve.

Instead of this

The problem with this department is a failure to control costs.

Use this

The performance of this department can be improved by tightening up cost controls.

Establish Credibility

Don't make false promises. People are more likely to react positively to your message when they have confidence in you.

Example

Instead of this

We hope this recommendation will be helpful.

Use this

We're glad to make this recommendation.

Be Polite

Try to express facts in a kind and thoughtful manner. Use extra tact when writing and communicating with higher-ups. Promptness is a form of courtesy.

Project the Company Image

Subordinate your own style to that of the company.

Revision

Identify the characteristics of a well-organized message. Explain why organization is important to both the audience and the communicator. Break a main idea into subdivisions grouped under logical categories. Arrange ideas in direct or indirect order depending on the audience's possible reaction. Compose a message using a style and tone that are appropriate to your subject, purpose, audience, and format. Use the 'you' attitude to interest the audience toward your message.

LESSON 14

REVISING BUSINESS MESSAGES

Outline

- Editing your Message
- Style and Readability
 - Word Choice
- Bias-free Language
 - Types of Biases
- Rewriting the Message
- Effective Sentence
 - Sentence Types
 - Sentence Style
- Design Element
- Proof-reading the Message for Mechanics and Format

Editing your Message

- Content and Organization
- Stick to the point. Put the main idea in the first paragraph. In the middle, highlight the key features of your stance.
- Eliminate redundancies.

Style and Readability

- Re-word to stress the 'you' view point.
- Clarify the relationships among ideas through placement and combination of phrases.
- Moderate the excessive enthusiasm.
- Eliminate words that seem unfamiliar.
- Mechanics and format.
- To avoid confusion, spell out the abbreviated phrases.

- **Evaluate your Content and Organization**

After a day or two, review the message for content and organization. Is there a good balance between the generals and the specifics? Have you provided enough support? Have you double checked the facts and figures?

- **Review your Style and Readability**

Once satisfied with the structure, review style and readability. Readability depends on word choice, sentence length, sentence structure, and physical appearance.

- **Access your word choice**

The two key aspects of word choice are:

- Correctness
- Effectiveness

If in doubt, check it out!

Example

Instead of: “The data on our market share is consistent from region to region”

Use

The data on our market share *are* consistent from region to region.

- **Plain English**

Plain English is close to spoken English and can be more easily understood.

- **Functional words and Content words**

Functional words include:

- Conjunctions
- Prepositions
- Articles
- Pronouns

Functional words express relationships among content words.

Example

Some objective observers of the biscuit market give Rio the edge in quality, but Gala is lauded for superior distribution.

(The content words are in italics)

- **Connotation and Denotations**

Content words have both a denotative (dictionary) meaning and a connotative (associative) meaning.

Example

1. I have uncovered some interesting *dirt* on that Police officer.
2. My land has fertile and dark *dirt*.

Both sentences use dirt but in different connotations.

- **Abstraction and Concreteness**

The more abstract a word, the more it is removed from the tangible, objective world of things that can be perceived with sense.

- **Words that Communicate**

- **Strong Words**

Verbs and Nouns are more concrete than adverbs and adjectives.

Examples

Avoid Weak Words	Use Strong Phrases
Wealthy businessman	Tycoon
Business prosperity	Boom
Hard times	Slump

o Familiar Words

You will communicate best with the words that are familiar to your reader. At the same time keep in mind: words familiar to one reader might be unfamiliar to another.

Examples

Avoid Unfamiliar Words	Use Familiar words
Ascertain	Find out, learn
Consummate	Close, bring about
Peruse	Read, study

o Short words

Short words are usually more vivid than long ones and improve the readability of a document.

Avoid Long Words	Use Short words
During the precedent year, the company accelerated productive operations.	Last year the company sped up operations.

o Camouflaged Verbs

Turning verbs into nouns and adjectives weakens your writing.

Watch for endings like *-ion*, *-tion*, *-ing*, *-ment*, *-ant*, *-ent*, *-ance* and *-ency*.

Examples

Avoid Camouflaged Words	Use Verbs
The manager undertook implementation of the rules.	The manager implemented the rules.
Verification of shipments occurs weekly.	Shipments are verified weekly.

Bias-Free Language

Avoid biased language that might offend the audience. Some of common biases are:

- o Cultural Bias
- o Gender Bias
- o Racial and Ethnic Bias
- o Disability Bias

Examples of Gender Bias

Unacceptable	Preferable
Mankind	Humanity, human-kind
Man-made	Artificial, synthetic
Manpower	Work force, human energy

Examples of Racial and Ethnic Bias

Unacceptable	Preferable
Disadvantaged Sindhi children	Children from lower income families
Ali is a unusually tall Punjabi.	Ali is tall.

Example of Disability Bias

Unacceptable	Preferable
Crippled workers face many barriers on the job.	Workers who have physical disabilities face many problems on the job.

Rewriting your Message

As you edit your message, you will find yourself rewriting:

- o Passages
- o Sentences
- o Or
- o Even whole section

- **Create Effective Sentence**

Every sentence contains a subject (noun or noun equivalent) and a predicate (verb and related word).

- **Types of Sentence**

To give your sentence variety, use the three types of sentences:

- o Simple
- o Compound
- o Complex

- **A Simple Sentence**

A simple sentence has a single subject and a single predicate.

Profits have increased in the past year.

Subject is in bold and predicate is underlined.

- **A Compound Sentence**

A compound sentence expresses two or more independent but related thoughts.

Wage rates have declined by five percent, and **employee** turnover has been high.

Subject is in bold and predicate is underlined.

- **A Complex Sentence**

A complex sentence expresses one independent clause and one or more dependent clauses.

Although **you** may question Ali's abilities, **you** must admit that his morals are strong.

Subject is in bold and predicate is underlined.

- o Avoid Passive Sentences like sales were increased by 32% last month.
- o Use Active Sentences like sales improved by 32% last month.

Less Emphatic

We are cutting the price to stimulate demand.

More Emphatic

To stimulate the demand, we are cutting the price.

Sentence Style

Break long sentences into shorter ones to improve readability. Active sentences are stronger than passive ones. Use passive sentences to soften bad news, and to put yourself in the background or to create an impersonal tone.

- **Eliminate Unnecessary Words and Phrases**

Be on the lookout for:

- o Inefficient phrases
- o Redundancies
- o Unnecessary relative pronouns and articles

Example

Confusing

The project manager told the engineer last week the specifications were changed.

Clear

The project manager told the engineer last week that the specifications were changed.

- **Emphasize Key Thoughts**

Emphasize parts of a sentence by:

- o Examples
- o Giving them more space
- o Putting them at the beginning or the end of the sentence
- o Making them the subject of the sentence

- **Develop Coherent Paragraphs**

Paragraphs are functional units that revolve around a single thought. Elements of a paragraph are:

- o Topic sentence
- o Related sentences
- o Transitional elements

- **Five Ways to Develop a Paragraph**

- o Illustrations
- o Comparisons and contrasts
- o Cause and effect
- o Classifications
- o Problems and solutions

Producing your Document

Written documents require decisions about design elements. Design elements include white space – free of art text and art work. Margins and line justifications – left justified and rugged right gives the document an open feeling.

- **Design Elements**

- o Headings and Captions – headings help the reader quickly identify the content.
- o Type Face – refers to the physical design of the letters.
- o Type Styles – avoid using type styles that slow your readers down.

Examples of type face are as follows:

- o **Serif Typeface**

Times Roman is often used for text. Helvetica is often used for headings.

TIMES ROMAN IS HARDER TO READ
IN ALL CAPS.

- o **Sans-Serif Typeface**

Helvetica is often used for headings.

HELVETICA IS A CLEANER FACE
EVEN IN ALL CAPS.

- **Design Decisions**

For effective designs pay attention to:

- o Consistency
- o Balance
- o Restraint
- o Detail

Proofreading your Document

Credibility is affected by your lack of attention to detail and format. Use grammar and spell checkers wisely.

Recap

Today we learned to edit messages for content, organizational style, and readability, hence choosing the most correct and most effective words to make the point, rewriting the sentences to clarify the relationships among the ideas, and to make our writing interesting. We also identified the elements of paragraph thus choosing the best design for written documents, rewriting paragraphs using the appropriate development techniques, and proofreading message for mechanics and format.

LESSON 15

MEMORANDUMS, MEETING DOCUMENTS AND PROPOSALS

Outline

- Memorandum
 - Sample of Business Memo
- Minutes of Meeting
 - Types of Meeting Minutes
- Proposal
 - General Structure of Business Proposal

Memorandum

Memorandum is brief, informal report used to establish a record. Memos generalize the communication process by transmitting the message from one or more authors to one or more recipients. E-mail messages typically take the form of memoranda.

Memoranda are written for numerous internal purposes—for example, to request information, to make announcements, to outline policies, and to transmit meeting minutes.

The Memorandum Body

Generally, the topics of the memorandum are organized in order of importance, with the key statements first, and the details further on. The memorandum should normally begin with a brief summary statement, in one or two sentences, identifying the key topic and the scope of the memorandum.

Sample Memo Format / Template

TO:

FROM:

DATE:

SUBJECT:

First Sentence

Reason for the memo

Second Sentence - Main Body

Any Instruction or information

Closing Sentence

What is required of the reader e.g. confirmation, answers or feedback

Meeting Documents

Use meeting documents as tools to encourage productive and efficient meetings. The two principal meeting documents are the *agenda*, which tells participants about the topics that will be discussed at the meeting, and *minutes*, which record what actually occurred.

Agenda

An agenda is a simple list of topics to be discussed (in order of listing), along with the names of individuals who have agreed to lead discussion of those topics. An agenda helps focus a meeting on the core topics, allows you to control the pace and flow of a meeting, and identify important items to be acted upon. Meetings without published agendas generally seem unfocused and unproductive.

Example

Development Team Agenda

1. Report by Mr. Hamid on investigation of possible security software
2. Report by Ms. Sara on development of database prototypes
3. Discussion of possible hardware platforms
4. Review of deadlines for project
5. Agenda for next meeting

Minutes

Minutes, also known as protocols, are the written record of meetings, particularly of Boards of Directors and/or Shareholders of corporations, kept by the secretary of the corporation or organization. They often give an overview of the structure of the meeting, starting with a list of those present, a statement of the various issues before the participants, and each of their responses thereto. They are often created at the moment of the hearing by a typist or court recorder at the meeting, who may record the meeting in shorthand, and then prepare the minutes and issue them to the participants afterwards. Alternatively, the meeting may be audio recorded or notes taken, and the minutes prepared later. However, it is often important for the minutes to be brief and concentrate on material issues rather than being a verbatim report, so the minute-taker should have sufficient understanding of the subject matter to achieve this goal. The minutes of certain entities, such as a corporate board of directors, must be kept and are important legal documents.

Types of Minutes of Meeting

Minutes can be formal or informal. Formal minutes are often required by federal state, or local law, by-laws, charters, or regulations. They are usually distributed to the members of the group before the next meeting, and then approved (sometimes after being amended).

Sample of Meeting Minute

Please view the following links for the sample:

<http://managementhelp.org/boards/minutes.htm>

<http://www.slideshare.net/arlene5162/sample-1175115>

Proposals

A formal written document soliciting business and spelling out what will be delivered, the costs, terms, conditions, and so forth.

The aim of a 'business proposal' is to establish a working relationship to make it happen. It's a way of saying, "I have an idea, I can solve your problem. Let's make it happen together." It also persuades a potential customer to purchase goods or services, or to persuade your employer to fund a project or to implement a program that you would like to launch. A proposal should contain necessary information about the services and products offered. It would enable the

recipient of that proposal to decide whether to approve the project or not. Your proposal must state WHAT you are proposing, HOW you plan to do it, WHEN you plan to do it, and HOW MUCH it is going to cost.

Most organizations rely on successful proposal writing for their continued existence. You will most likely spend a major part of your professional life writing proposals.

General Structure

Learn the basic structure of a proposal. Proposals share a general document architecture, which is usually modified to suit specific circumstances.

The overall structure of a proposal can be broken down into following parts:

Proposal Structure

- Front matter
- Body
- Introduction
- Technical approach
- Management requirements
- Work plan
- End matter

- **Front Matter**

The front matter of a proposal includes the following components:

- Letter of transmittal
- Title page
- Summary
- Table of contents
- List of figures and tables

- **Body**

In the introduction to a proposal, do the following:

- Identify the motivating need or problem.
- Develop the immediate context in which this problem has been highlighted.

In external proposals, be sure you are responding to the published need and motivation as identified by the outside agency.

- **End Matter**

- Bibliography
- Résumés
- Appendixes

For sample 'Business Proposal' templates, please view the following links

<http://www.klariti.com/templates/Proposal-Template.shtml>

<http://www.scribd.com/doc/244716/sample-business-proposal>

<http://www.writinghelptools.com/proposal-sample.html>

LESSON 16

LETTERS

Outline

- Letters
- Types of Letters
- Format of Letters
- Elements of Letters
- Job Application Letters
- Structure of Letters
- Transmittal Letters

Letters

Business letters are formal letters used for business-to-business, business-to-client, or client-to-business correspondence. There are a number of elements to a business letter. Letters are used to communicate outside your organization. Whereas the memorandum is the primary vehicle for communication within an organization, letters are often used to communicate to individuals outside it, especially in formal and semiformal contexts.

Types of Letters

The following are some of the most common types of letters written by people in technical fields:

- Job application letters
- Acceptance letters
- Transmittal letters
- Inquiry letters
- Technical-information letters
- Letters of recommendation

Format of Letter

If your organization has a specific style for business letters, follow that format. Otherwise, follow the guidelines provided here. Business letters are commonly either full-block formatted, with every line starting at the left margin and usually a business letterhead at the top of the page, or modified-block, formatted with the heading and the closing aligned at the center of the page.

Elements of Letter

Business letters have the following elements:

- Heading
- Date
- Recipient's address
- Salutation
- Body

- Closing
- End notations

- **Heading**

If you are using letterhead stationery, include only the date two lines below the bottom of the letterhead. Spell out the name of month.

- **Recipient's Address**

Two to four lines below the date, place the following items:

The recipient's title (such as *Mr.*, *Ms.*, or *Dr.*) and full name (address a woman who does not have a professional title as *Ms.* unless you know she prefers *Miss* or *Mrs.*; if the recipient does not have a title and you are unsure of his or her gender, omit the title).

You need to include the following:

- o The recipient's job title, if appropriate.
- o The name of the company or institution, if appropriate.
- o The full address, following the same format as for the address in the heading.
- o The recipient's address is always aligned on the left margin.

- **Salutation**

Place the salutation two lines below the recipient's address. The salutation begins with the word *Dear*, continues with the recipient's title and last name, and ends with a colon.

- **Body**

Start the letter two lines after the salutation. Body paragraphs should be single spaced with a double space between paragraphs. Indenting the first line of each paragraph is acceptable but is more informal than the unintended style.

- **Closing Phrase**

Write a complimentary closing phrase two lines below the final body paragraph.

Yours truly, *Sincerely*, or *Sincerely yours* are common endings for professional letters.

Capitalize the first letter of the first word of your complimentary closing and end the complimentary closing with a comma.

- **End Notations**

At the bottom of the last page of a business letter, 'End Notations' may show who typed the letter, whether any material is enclosed with the letter, and who is receiving a copy of the letter.

Example

Enclosure: Article by Ali Bashir

Encl. (2)

Enc. (2)

Example

cc: Dr. Maria Aalam
Mr. Waleed Usman

Template of Business Letter

Your Phone Number

Your Email Address

Date

Contact Information

Name

Title

Company

Address

City, State, Zip Code

Salutation

Dear Mr./Ms. Last Name:

Body of Business Letter

Keep your letter simple and focused, so the purpose of your letter is clear.

The first paragraph of your business letter should provide an introduction to why you are writing. Then, in the following paragraphs provide more information and details about your request.

The final paragraph should reiterate the reason you are writing and thank the reader for reviewing your request. Single space your letter and justify your letter to the left. Leave a blank line between each paragraph.

Complimentary Close

Respectfully yours,

Signature

Handwritten Signature (for a mailed letter)

Typed Signature

Job Application Letters

While writing a job application letter, identify a specific area of employment, summarize your qualifications for the job, refer to an enclosed résumé, and request the next step of the application process, usually an interview.

Application letters

Application letters are usually just one page and consist of three sections:

- Front Matter
- Body
- End Matter

- **Front Matter**

State that you are applying for a specific job title or field. Also mention the person who referred you or told you about the job. If you learned of the job from an advertisement, mention that.

- **Body**

Explain specifically why you are qualified for the job. Describe education, work experience, and any other activity that display relevant talents, such as foreign-language proficiencies and leadership or supervisory experience.

- **End Matter**

Refer to your enclosed résumé and express your desire for an interview, stating when and where you will be available for one. In addition, invite further inquiries, and state how you can be contacted.

For sample 'Job Application Letter', please view the following link:

<http://jobsearch.about.com/od/morejobletters/a/jobappletter.htm>

Acceptance Letters

Letters accepting a job not only convey information, but also establish a contractual relationship between you and the organization or person offering you the position.

Consequently, acceptance letters should accurately restate the key terms of employment.

Format

Begin the first paragraph by enthusiastically accepting the job. Be sure to state the exact title of the job and the salary. The second paragraph usually discusses details about the position, especially the date that you will begin work from.

For sample 'Acceptance Letter', please view the following link:

http://www.eduers.com/resume/Acceptance_Letters.htm

Transmittal Letters

A transmittal or cover letter accompanies a larger item, usually a document. The transmittal letter provides the recipient with a specific context in which to place the larger document and simultaneously gives the sender a permanent record of having sent the material.

For sample 'Transmittal Letter', please view the following link:

<http://writing.colostate.edu/guides/documents/ce-trpt/pop9j.cfm>

LESSON 17

LETTERS II

Outline

- Letter of Inquiry
- Sample of Inquiry Letter
- Technical-Information Letters and Memoranda
- References and Letters of Recommendation
- Guidelines for Writing References
- Guidelines for Writing Letters of recommendation

Letters of Inquiry

A letter of inquiry asks someone for specific information. In some cases, such as a request for promotional material, the recipient will have a clear interest in responding to your letter. In other cases, such as a request for specific information on a product, the recipient may or may not be as motivated to respond quickly. Consequently, always make the tone of the letter friendly and make it easy for the recipient to identify and provide the information you need.

Sample of Inquiry Letter

The following letter of inquiry is written by a computer programmer, requesting specific information about an upcoming release of a software product.

Head:

Arlington Heights Programming Associates
16 Oak Street
Springfield, CA 90467

November 11, 1996

Customer Relations
Turing Data Solutions
2345 Maple Avenue
Mountain View, CA 94941

Dear Customer Relations:

Body:

I am a systems engineer at Arlington Heights Programming Associates developing a new client-server networked database system for two non-profit corporations.

My team is considering using your new release of Omega Database Plus 1.0 as a key part of the system. If we incorporate your product into our design, our clients will need to purchase at least a total of 140 copies of your software.

We have read your promotional material and are very interested in using your product. We need, however, the answers to the following questions before we can decide whether or not to use Omega Database Plus:

1. Are you still planning to release the Omega Database Plus Version 1.0 on February 12, 1998?
2. What LAN environments will your product support?
3. Will your product support PGP encryption?

Footer

I would be happy to talk to you further about your product. You can call me at (415) 666-4323 or e-mail me at egarrels@arpro.com.

Sincerely,

Edgar Garrels
Senior Systems Engineer

cc: Mr. R. Williams

Technical-Information Letters and Memoranda

Technical-information letters and memoranda are short documents that announce new technical information, such as a software bug and its solution, or a new feature. Use the memorandum format if the information is being sent inside an organization. Use the letter format if the document will be sent to outside individuals.

Body

The addressing scheme for the World Wide Web relies on Uniform Resource Locators (URLs). Each Web document has a URL, which identifies the protocol being used, the name of the Web server the document is on, and the path name to get to the document. (Note: in common usage, the more specific term “Uniform Resource Locator (URL)” is frequently used where the more general term “Universal Resource Indicator (URI)” would be more appropriate.)

A URL must indicate the protocol, Web server, and path name (e.g., “http://web.mit.edu/cwis/faq/shorturl.html”) as opposed to a relative URL, which assumes the same protocol and server, and just gives the path relative to the location of the current document (e.g., “./comments.html”). A URI can be either a URL or a relative URL. One problem with URLs is that they can become long and unwieldy.

MIT Information Systems has come up with a scheme for shorter URLs for files stored on the Athena network and accessed through the Web server, web.mit.edu. Since electronic publishers at MIT can now use and publicize shorter URLs for their documents, addresses will be easier to reference and remember. In the past, for example, to get the *Technology Review* home page, you had to enter the following URL in your Web browser:

<http://web.mit.edu/afs/athena/org/t/techreview/www/index.html>

References and Letters of Recommendation

A letter of recommendation is a letter that makes a statement of support for a candidate. The writer assesses the qualities, characteristics, and capabilities of the person being recommended in terms of that individual’s ability to perform a particular task or function. Letters of recommendation are typically related to employment, admissions to institutions of higher education or scholarship eligibility.

References are an essential component of almost all admissions, grant, and employment processes. Managers and other individuals in any selection process need evaluations from individuals who have had long and close contact with applicants in order to assess accurately their abilities and accomplishments.

The number of recommendations required by employers and universities usually ranges from one to five, with three being the most common number.

- **Obtaining Letters of Recommendation**

Make your candidacy as strong as possible by carefully soliciting references and letters of recommendation. Letters of recommendation are extremely important in decisions to hire, admit an individual, and to award a scholarship or grant.

- **General Guidelines for Requesting References or Letters of Recommendation**

If possible, always ask one or two more persons than the minimum number you need. Ask a range of persons who can testify to different abilities and accomplishments relevant to the position or award.

If possible, ask someone in person to write a recommendation or to be a reference. If the individual is far away, ask him or her by phone or through a written letter. Generally, unless you know the person extremely well, do not ask someone to be a reference or write a letter of recommendation through e-mail.

- **Guidelines for Written Letters of Recommendation**

Generally, people give more weight to recommendations that contain a waiver of your right to see the recommendation. Sometimes, however, it may be prudent not to waive your right to review the recommendation, especially if you are unsure of the recommender's attitude toward you or his writing ability.

Recommenders are busy people; give them all the necessary material at least three weeks before the recommendation is due.

- **Writing Letters of Recommendation**

Write letters of recommendation to provide relevant information and to present an individual truthfully and positively.

- **Guidelines for Writing Letters of Recommendation**

In most cases, agree to write a letter of recommendation only if you can honestly write a supportive letter. If you cannot portray an individual positively, decline to write the recommendation.

Ask for a current Résumé, and as complete a description as possible of the position or program to which the person is applying. Assemble and review all other relevant information you may have about the person you are recommending. It is often easy to overlook some important accomplishment. In most cases, a letter of recommendation should consist of three or four paragraphs and not be over one page in length.

For sample 'Recommendation Letters', please view the following link:

<http://businessmajors.about.com/od/samplerecommendations/a/RecSample4.htm>
<http://www.eduers.com/images/sample-letter-of-recommendation.gif>

LESSON 18

WRITING DIRECT REQUESTS

Outline

- Organizing Direct Request Message
 - The Main Idea of Direct Request
 - Indicate your confidence that the request will be filled.
 - Provide a sufficient detail for the reader to be able to comply with your request.
 - Clarify complicated request with lists and tables.
 - Close with a courteous request for specific action.
- Order Letters
- Customer Letters
- Requesting Claims and Adjustments

For Organizing Direct Requests

- State the request or main idea
- Give necessary details
- Close with a cordial request for specific action

Direct Request

This approach works well when your request requires no special tact or persuasion.

Example

HKB's store managers are certainly interested in helping Levi's increase sales, just as distributors are interested in filling the HKB order.

- **Main Idea of the Request**

General rule for the first part of the direct request is not only to be understood but also to avoid being misunderstood. Be aware of the difference between a polite request in question form (which requires no question mark) and a question that is part of a request.

Example

Political Request in Question Form	Question that is part of a request
Would you please help us determine whether Kate Kingsley is a suitable applicant for a position as landscape designer.	Did Kate Kingsley demonstrate to work smoothly with client?

- **Justification, Explanation and Details**

In the middle section:

1. Call attention to how the reader will benefit from granting your request.
2. Give details of your request.
3. Ask the most important question first. Then ask related, more specific questions.
4. Use numbered list when you are requesting several items or answers.

Order Letter

An Order Letter is also known as a PO or purchase order letter. It begins the paper trail of a specific purchase. The objective of an order letter is to provide the vendor with detailed instructions for fulfilling an order.

Placing Orders

Order letters are like good mail order forms, although they also provide more room for explaining special needs. When placing an order, you don't need to excite your reader's interest; just state your needs clearly and directly.

Requesting Routine Information and Action

When making a routine request, ask yourself:

- What do you want to know?
- Why is it in the reader's interest to help you?

Request to Company Insiders

A request in memo form:

1. Provides a permanent record.
2. Saves time and question.
3. Tells precisely what is needed.
4. The Basic Request is stated at the beginning.
5. The next two paragraphs explain the problem that made the inquiry necessary.
6. The final paragraph requests action and, with a built-in Questionnaire, makes a response day.

Example i.e. Memo

The Memo begins with the central question.

A little background information orients the reader.

The numbered questions focus on responses, so that they will be easier to tally.

Customer Services

It is the Department or function of an organization that responds to inquiries or complaints from customers of that organization. Customers may communicate in person or via written correspondence, toll telephone, etc.

Various techniques are used to generate correspondence back to the customer, including checklists, form letters, typewritten letters, computer letters (fill-in type), or computer-generated personalized letters. Typewritten letters are best for irate complaints or special situations. Computer letters combine the benefits of personalization with the efficiencies of automation.

Customer service correspondence may be in letterhead or postcard format. Customer service is an important part of the fulfillment function, ensuring that customers will buy again and/or continue to be good customers.

Structure of Customer Letters

The opening paragraph states the reason for the letter. The frank request should arouse curiosity and encourage a frank response. The request for action should be devised for uncovering trouble without actually suggesting that there might be trouble. The actual request for action is left unstated until the end so that it leaves an impression.

Claim

Legal demand or assertion by a claimant for compensation, payment, or reimbursement for a loss under a contract, or an injury due to negligence.

Adjustments

It is the process of handling and settling claims or the amount requested by a policyholder or claimant because of a loss or damage. Adjustment letter is written to offer brief description of the cause of dissatisfaction and prepare the necessary action.

Adjustment letter is a letter in answer to a complaint letter. The answer may either be a refusal or a grant.

Requesting Claims and Adjustments

Claims (Formal Complaints)

Adjustments (Claim Settlements)

You are entitled to request an adjustment whenever you receive a product or experience service that doesn't live up to the supplier's standards.

For sample 'Claim and Adjustment Letters', please view the following links:

<http://officewriting.com/tag/claim-letter/>

http://writing.colostate.edu/guides/documents/business_writing/business_letter/adjustment_letter/sample_adjustment_letterA.pdf

Credit Requests

It is the type of request for credit (oral or written) made in accordance with procedures established or practices followed by the Creditor for the type of credit requested.

Making Routine Credit Requests

The first step in requesting credit is to get an application form. The second step is to supply the necessary information. Order letters are often combined with a request for credit.

For sample 'Routine Credit Requests', please view the following link:

http://public.findlaw.com/consumer/le12_10_1.html

LESSON 19

WRITING ROUTINE, GOOD-NEWS AND GOODWILL MESSAGES

Outline

- Organizing Positive Messages
 - a. Clear Statement of the Main Idea
 - b. Necessary Details
 - c. Courteous Close
- Writing Positive Replies
 - Acknowledging Orders
 - Replies to Requests for Information and Action
 - a. When a Potential Sale is Involved
 - b. When No Potential Sale is Involved
- Responding Favorably to Claims and Adjustment Requests
- Handling Routine Credit Requests
 - a. Approving Credit
 - b. Credit References

Organizing Positive Messages

Whether written or oral, positive messages begin with a clear statement of the main idea, clarify any necessary details and end with a courteous close.

a. Clear Statement of the Main Idea

Almost all business communication has two basic purposes:

- To convey information
- To produce in the audience a favorable (or at least accepting) attitude or response

The main idea is the single most important idea, concisely stated.

For example:

Instead of this	Write this
I am pleased to inform you that after deliberating the matter carefully, our personnel committee has recommended you for appointment as a staff accountant.	You've been selected to join our firm as a staff accountant, starting from March 20.

b. Necessary Details

Your reason for communicating can usually be expressed in a sentence or two, but you will need more spaces or time to explain your point completely so that your audience will have no confusion or lingering doubt.

Necessary details:

- Satisfy reader's information needs
- Reinforce positive tone

- Emphasize positive aspects of disappointing news

c. Courteous Close

Your message is most likely to succeed if your audience is left with the feeling that you have their personal welfare in mind.

Courteous close:

- Summarizes main point
- Indicates what should happen next
- Highlights reader's benefit

Writing Positive Replies for Acknowledging Orders

Acknowledgements are appropriate for large orders, first orders, and orders that cannot be filled right away. Acknowledgement letters are sent to a customer confirming the receipt of an order, payment, or inquiry. It is frequently used in response to credit orders to encourage fast payment or to offer an opportunity to increase the order.

Replies to Requests for Information and Action

To reply requests for information and action, you need to consider that person's opinion of your company, your products, your department, and you yourself will be influenced by how promptly, graciously, and thoroughly the request is handled. There are two types of requests for information and action:

- a. Requests from potential customers
Requests that do not involve a potential sale

a. When a Potential Sale is Involved

While answering requests that involved a potential sale, there are three main goals:

- To respond to the inquiry and answer all questions
- To encourage the future sale
- To leave your reader with a good impression of you and your firm

b. When No Potential Sale is Involved

There are two essential goals when no sale is involved:

- Responding to the request
- Leaving a favorable impression of your company or fostering a good working relationship

Responding Favorably to Claims and Adjustment Requests

You can build customer loyalty by responding favorably to routine claims. Favorable responses to routine claims are known as adjustments. The following sequence is recommended while giving a favorable response to a claim:

- Reveal the good news in the first sentence of the letter
- Explain the various circumstances under which the action has been taken
- Don't blame an individual or a specific department
- Avoid lame excuses such as "Nobody's perfect" or "Mistakes will happen"
- End the letter on a pleasant note

Handling Routine Credit Requests

Handling routine credit requests is important because consumers often carry a wallet full of plastic credit cards, and business of all sizes operates more smoothly because they can pay for their purchases over time. There are two types of positive responses to routine credit requests:

- Approving Credit
- Credit References

Approving Credit

Credit approvals mark the beginning of a business relationship with a customer, so the goal is to convey the necessary information while building good will. To approve the credit request use the direct approach:

- Open with good news that credit has been approved.
- Explain credit arrangements using a positive tone.
- Close by emphasizing the benefits of doing business with the firm (resale information and sales promotion).

Credit References

A credit reference is the information, the name of an individual, or the name of an organization that can provide details about an individual's past track record with credit. Credit references are generally used to determine the credit worthiness of a person or individual. For example, if an applicant's credit history indicates proper, timely payments on all outstanding obligations, a lender may judge it more likely that the applicant will make timely payments on the requested loan.

LESSON 20

WRITING BAD-NEWS MESSAGES

Outline

- Organizing bad-news messages
- Indirect Plan
 - a. A buffer
 - b. Reasons supporting the negative decision
 - c. A clear, diplomatic statement of the negative decision
 - d. A helpful, friendly, and positive close
- Direct Plan
- Conveying bad news about orders

Organizing Bad-News Messages

It's important to realize that some people interpret being rejected as a personal failure; being turned down for a job or for credit or even being rejected in less sensitive areas usually complicate people's lives. As with direct requests and routine, good-news, and goodwill messages, bad-news messages are best communicated across cultures by using the tone, organization, and other cultural conventions that your audience expects. In bad news messages, your tone contributes to your message's effectiveness by supporting three specific goals:

- Helping your audience to understand that your bad-news message represents a firm decision
- Helping your audience to understand that under the circumstances, your decision was fair and reasonable
- Helping your audience to remain disposed towards your business and possibly towards you

With the right tone, you can make an unwelcome point while preserving your audience's ego. The two basic strategies to communicate bad news message are:

- The indirect plan, which presents supporting data before the main idea
- The direct plan, which presents the main idea before the supporting data

I. Indirect Plan

Instead of beginning a business message with a blunt 'no' which might restrain your audience from reading or listening to your reasons, use the indirect plan to ease your audience into the part of your message that demonstrates how fair-minded and eager you are to do business on some other terms.

The indirect plan consists of four parts:

- a. A buffer
- b. Reasons supporting the negative decision
- c. A clear, diplomatic statement of the negative decision
- d. A helpful, friendly, and positive close

a. Buffer

The first step in using the indirect plan is to put the audience in an accepting mood by making a neutral, non-controversial statement closely related to the point of the message. To compose your buffer:

- Avoid giving the impression that good news will follow.
- Avoid saying 'no'.
- Avoid using a know-it-all tone. e.g. You should be aware that...
- Avoid wordy and irrelevant phrases and sentences.
 - We have received your letter.
 - This email is in reply to your request.
 - We are writing in response to your request .
- Avoid apologizing.
- Avoid writing a buffer that is too long.

b. Reasons

After composing the buffer, the reasons will follow naturally. You describe the more positive points first then move on to less positive ones. You must provide enough detail for the audience to understand your reasons, but be concise because a long round about explanation may make your audience impatient. The paragraph states the reasons for refusal in a better way:

- It provides enough detail to make the reason for the refusal logically acceptable.
- It implies that the applicant is better off avoiding a program in which he or she would probably fail, given the background of others who would be working alongside him or her.
- It doesn't rest solely on company's policy. A relevant policy exists but is presented as logical rather than rigid.
- It offers no apology for the decision .
- It avoids negative personal expressions e.g. "You do not meet our requirements".

c. The Bad News

When the bad news is a logical outcome of the reasons that come before it, the audience is psychologically prepared to receive it. However, the audience may still react emotionally if the bad news is handled carelessly. Here are some methods to convey bad news:

- De-emphasize the Bad News.
 - Minimize the space or time devoted to it.
 - Subordinate it in a complex or compound sentence e.g. "My department is already shorthanded, so I shall need all my staff for at least the next two months".
 - Embed it in the middle of a paragraph.
- Do not overemphasize the positive.
- Avoid blunt statements that are likely to cause pain and anger.

The following phrases are likely to offend and should be avoided:

Instead of

1. We must deny
2. We cannot afford to
3. We must reject the proposal

Say this

1. The position has been filled
2. Contact us again...
3. We've accepted the proposal from

4. We must turn down

another builder
4. Please send your payment

Two other techniques are especially useful for saying ‘no’ as clearly but painlessly as possible. **First**, using a conditional (if or when) statement that implies the audience could possibly have received or might someday receive a favorable answer: “When you have more managerial experience, you are welcome to re-apply.”

Second technique is to tell the audience what you did do, can do, or will do rather than what you did not do, cannot do, or won’t do. You can say “We sell exclusively through retailers, and the one nearest you that carries our merchandise is ...” rather than “We are unable to serve you, so please call your nearest dealer.”

d. Positive Close

After giving the bad news, your job is to end the message on a more upbeat note. Whatever type of close you choose, follow these guidelines:

- Don’t refer to or repeat the bad news.
- Don’t apologize for the decision or reveal any doubt that the reasons will be accepted (avoid statements such as “I trust our decision is satisfactory”).
- Don’t urge additional communication unless you really want to discuss your decision (avoid saying anything like “If you have further questions, please write”).
- Don’t anticipate problems (avoid statements such as “Do you have further problems, please let us know”).
- Don’t include clichés that are insincere in view of the bad news (avoid saying “If we can be of any help, please contact us”).
- Don’t reveal any doubt that you will keep the person as a customer (avoid phrases such as “We hope you will continue to do business with us”).

ii) Direct Plan

A bad news message organized on the direct plan starts with a clear statement of the bad news, proceeds to the reasons for the decision, and ends with a courteous close.

Stating the bad news at the beginning has two potential advantages:

- It makes a shorter message possible.
- The audience needs less time to reach the main idea of the message, the bad news itself.

Conveying bad news about orders

For several reasons, business must sometimes convey bad news concerning orders:

- To work toward an eventual sale along the lines of the original order
- To keep instructions or additional information as clear as possible
- To maintain an optimistic, confident tone so that your reader will not lose interest
- When you must back-order for a customer, you have one of the two types of bad news to convey.
- You are able to send only part of the order.
- You are able to send none of the order.

LESSON 21

WRITING PERSUASIVE MESSAGES

Outline

- Motivating with Persuasive Messages
 - a. Needs and appeals
 - b. Emotion and logic
 - c. Credibility
 - d. Semantics
- Organizing Persuasive Messages
- Writing Persuasive Request for Action
- Writing Sales Letters
- Planning Sales Letters
 - a. Determine the main idea
 - b. Define the audience
 - c. Choose the approach and format

Motivating with Persuasive Messages

The persuasive message influences the audience by informing them and growing their understanding – the audience is free to choose. Ethical business people inform customers about the benefits of a product or an action so that customers can recognize how well that product or action will fill a need, they truly have. Persuasive messages aim to influence audiences who are inclined to resist, so they depend heavily on strategic planning.

Before writing a persuasive message, ask yourself certain questions i.e. what you are writing about, who you are writing to, and what you want to happen as a result.

When writing persuasive messages, four things to keep in mind about your audience are:

- a. Needs and appeals
- b. Emotion and logic
- c. Credibility
- d. Semantics

a. Needs and Appeals

Everyone is not interested in economy or fair play. For instance, some people's innermost needs make appeals to status and greed. To accommodate these individual differences, analyze the members of your audience and then construct a message that appeals to their needs.

b. Emotion and Logic

Emotional appeals call on human feelings and emotions; however, such an appeal must be subtle. For instance, you can make use of the emotion surrounding certain words. The word 'freedom' evokes strong feelings, as do words success, prestige, compassion, free, value, and comfort. Such words put your audience in a certain frame of mind and help them accept your message.

However, emotional appeals aren't necessarily effective by themselves. For most business situations, the best use of emotion is working in tandem with logic. Even if your audience reaches a conclusion based on emotions, they will look to you to provide logical support as well.

c. Credibility

The ways of gaining credibility are:

- a. **Being enthusiastic:** Your excitement about the subject of your message can affect your audience.
- b. **Being sincere:** Your honesty, genuineness, good faith, and truthfulness help you focus on your audience's needs.
- c. **Being an expert:** Your knowledge of your message's subject area (or even of some other area) helps you to give your audience the quality information, necessary to make a decision.
- d. **Having good intentions:** Your willingness to keep your audience's best interest at heart helps you create persuasive messages that are ethical.
- e. **Being trustworthy:** Your honesty and dependability help you earn your audience's respect.
- f. **Establishing common ground.** Your beliefs, attitudes, and background experiences that are like those of your audience's, help them identify with you.

d. Semantics

The words, you choose to state your message say much more than their dictionary definitions. For instance, useful, beneficial, and advantageous may be considered synonyms, yet these three words are not interchangeable.

Organizing persuasive messages

Persuasion requires the indirect approach. While framing a persuasive argument or message, effective business people use the AIDA plan which has four phases:

- a. Attention
- b. Interest
- c. Desire
- d. Action

a. Attention

Your first objective is to encourage your audience to hear about your problem, idea, new product—whatever your main idea is. Write a brief engaging opening sentence, with no extravagant claims or irrelevant points and be sure to find some common ground on which to build your case.

b. Interest

Explain the relevance of your message to your audience. Continue the theme you started with, paint a more detailed picture with words.

c. Desire

Help audience members embrace your idea by explaining how the change will benefit them. Reduce resistance by identifying and answering in advance any questions the audience might have. If your idea is complex, you may need to explain how you would implement it. Back up your claims in order to increase audience willingness to take the action that you suggest in the next section. Just remember to make sure that all evidence is directly relevant to your point.

d. Action

Suggest the action you want readers to take. Make it more than a statement such as “Please institute this program soon” or “Send me a refund.” This is the opportunity to remind readers of the benefits of taking action. The secret of successful action phase is to make the action easy, so if possible, give your readers a couple of options for responding, such as a toll-free number to call and a website to visit.

Writing Persuasive Request for Action

In an organization, persuasive techniques are often required to get someone to change policies or procedures, to spend money on new equipment and service to promote a person or to protect turf. The attention-getting device for action, at the beginning of a persuasive request, usually shows the reader that you know something about his or her concerns and that you have some reasons for making such a request.

In this type of persuasive message, flattering comment about the reader is acceptable, especially if it is sincere. You can give facts, explain benefits, and enhance your appeal in the interest and desire sections. You need to convince your readers that helping you will serve to solve a significant problem and close your message with a request for some specific action.

Writing Sales Letters

A sales letter is a document designed to generate sales. It persuades the reader to place an order; to request additional information; or to lend support to the product, or service or cause being offered. It influences the reader to take a specific action by making an offer--not an announcement--to him. To sell, the sales letter must be specific, go to the right audience, appeal to the reader's needs, and it must be informative.

Sales letters are considered binding contracts, so avoid even implying offers or promises that you can't deliver. Making a false statement in a sales letter is fraud if the recipient can prove that:

- You intended to deceive.
- You made your statement regarding a fact (not an opinion or a speculation).
- The recipient was justified in relying on your statement.
- The recipient was damaged by your statement (in a legal sense).

Using a person's name, photograph, or other identity in a sales letter without permission is considered invasion of privacy – with some exceptions. Using a photo of the members of a local softball team in a chamber of commerce mailer may be perfectly legal, if team members are public figures in the community.

Planning Sales Letters

The three steps involved in planning a sales letter are similar to those involved in planning any other persuasive message

- a. Determine the main idea (in sales letters, it revolves around a selling point and related benefits)
- b. Define the audience
- c. Choose the approach and format

a. Determining Selling Points and Benefits

Selling points are the most attractive features of a product. Consumer's benefits are the particular advantages that buyers will realize from those features.

b. Defining the Audience

Marketers seek to define consumer in terms of:

- **Demographics:** age, gender, occupation, income, and education
- **Psychographics:** personality, attitudes, and lifestyle

c. Choose the approach and format

- Choose words that will not be misinterpreted.
- Be sure you do not distort the truth.
- Adopt the “you” attitude by showing your honest concern for audience' needs and interests.

LESSON 22

WRITING SHORT REPORTS

Outline

- Reports
- What Makes a Good Report
 - a. Accuracy
 - Describe facts and Events in concrete terms
 - Put the facts in perspective
 - Give plenty of evidence for your conclusions
 - Present only objective evidence and verifiable conclusions
 - Keep your personal biases in check
 - b. The content shows writer's good judgment
 - c. Responsive format, style and organization
 - What subject does the report cover?
 - Why is the report being prepared?
- Short Report
- Planning Short Reports
- Short Report Format
- Establishing a Basic Structure
- Key Points to Cover
- Organizing Informational Memos and Reports
- Interim Progress Reports
- New Business Proposal to an Outside Client
- Developing Structural Class

Reports

Reports are documents which present focused, salient content to a specific audience. Reports are often used to display the result of an experiment, investigation, or an inquiry. You may be surprised that a variety of documents qualify as reports. The word report covers everything from preprinted forms to brief, informal letters and memos to three-volume manuscripts. It should be noted that reports are considered to be legal documents in the workplace and, thus, they need to be precise, accurate and difficult to misinterpret.

What makes a good report?

Good reports have three things in common:

- a. The information is accurate
- b. The content shows writer's good judgment
- c. The format, style and organization respond to reader's needs

a. Accuracy

The first thing, a business report must learn to do, is to tell the truth. To ensure accuracy:

- Check the facts

- Reduce distortion

- **Describe facts and Events in concrete terms**

It's better to say Sales have increased from Rs. 400,000 to Rs. 450,000 in two months rather than Sales have sky rocketed.

- **Put the facts in perspective**

If you tell your reader that the value of stock has doubled in three weeks, you are only giving a partial picture. They will have a much better understanding, if you say the value of stock has doubled in three weeks rising from Rs. 2 to Rs. 4 per share on the rumor of a potential merger.

- **Give plenty of evidence for your conclusions**

Statements like we have to recognize the sales force or we are bound to lose market share may or may not be true. Readers have no way of knowing unless you provide sufficient data to support your claim.

- **Present only objective evidence and verifiable conclusions**

Try to avoid drawing conclusions from less information and don't assume that a preceding event is a cause of what follows.

Example

If the sales decreased after a new advertising agency was contracted, it does not mean that the agency is to blame. Other factors may have a role to play in this as well.

- **Keep your personal biases in check**

Even if you have a personal bias towards the subject of the report, try to keep your feelings from influencing your choice of words. Such biases not only offend but also obscure the facts and provoke emotional responses.

b. Role of Content in writer's good judgement

The content shows writer's good judgment:

1. Getting the main idea at the beginning of the report
2. Seeing the facts
3. Receiving the whole story
4. Reading language they can understand
5. Learning something that will make their jobs easier

c. Responsive format, style and organization

Before writing you must decide:

- Whether to use a letter, memo, or manuscript format
- Whether to group your ideas one way or another
- Whether to employ an informal style
 - When making decisions about the format, style and organization of a report, consider its:Origin
 - Subject
 - Timing
 - Distribution
 - Purpose
 - Probable reception

- **What subject does the report cover?**

The subject of a business report affects its format and vocabulary.

Example

An audit report would contain a lot more numbers, often in the forms of tables.

- **Why is the report being prepared?**

Reports can be prepared for different purposes that can be:

a. Informational

- Inform or instruct – present information
- Reader sees the details of events, activities or conditions
- No analysis of the situation, no conclusion and no recommendations

b. Analytical

- Written to solve problems
- Information is analyzed
- Conclusions are drawn and recommendations are made

c. Persuasive

- An extension of analytical reports: main focus is to sell an idea, a service, or product.

Short report

The short, informal, report is usually submitted in the form of a letter or memorandum. The short report may range from short statement of facts, presented on a single page, to a longer presentation taking several pages. It does not carry a cover, table of contents or any special display. In style, short report is personal, informal and relaxed.

Planning Short Reports

When planning short reports, be sure to follow the report-writing customs that your audience expects. Following three elements influence length and format of your report:

- Audience
- Purpose
- Subject matter

Short Report Format

You may perceive the report in one of the following formats:

a. Preprinted form

This type of format is basically for ‘fill-in-the-blanks’ reports. It deals with routine information which is often mainly numerical.

b. Letter

This format is used for reports that are directed to outsiders and contain five or fewer pages. They follow the normal letter format.

c. Memo

This is the most common format for short informal reports within an organization. Memos have four headings:

To
From

Date

Subject

d. Manuscript

For a formal approach, manuscripts range from a few pages to several hundred pages.

Establishing a Basic Structure

Choice of a structure involves three decisions:

- o What to say?
- o Direct or indirect
- o Topical or logical organization

Key Points to Cover

Your report should answer audience's key questions. What ideas would you include? When deciding the content of your report, the first step is to put yourself in the audience position. What are major questions that you think your audience has about the subject? Your objective is to answer all those questions in an order that makes more sense.

Organizing Informational Memos and Reports

The purpose of informational report is to explain. When writing informational reports you do not have to worry too much about reader's reaction. To have clarity is the main objective of informational report. Some informational reports are organized according to instructions, supplied by the person requesting the information. Informational reports take many forms. The examples that follow will give you an idea of typical organization and tone.

Interim Progress Reports

Interim progress reports give the customer an idea of the work that has been completed to date. The style of such reports is more formal than internal reports. When writing interim reports, be honest about the problems as well as the accomplishments.

New Business Proposal to an Outside Client

Proposals to outside clients attempt to get products, plans, or projects, accepted by outside businesses or government clients. A simple formula followed by many professionals is:

- here is my problem
- here is the solution
- here is what it will cost

Developing Structural Class

Four tools are particularly essential for giving readers an overall structure of your document and for keeping them on track when they read:

- a. The opening
- b. Headings and lists
- c. Smooth transitions
- d. The ending

a. The Opening

A good opening accomplishes at least three things:

1. Introduces the subject of your report
2. Indicates why the subject is important
3. Gives the readers a preview of main ideas and the order in which they will be covered

b. Headings and lists

In order to help the reader find their way around a report quickly, a report is always divided into clear sections with headings for example, Facts, Discussion, Findings, Costs, Limitations, Advantages, and Conclusions. Usually, a numbering system is used too. The important thing is to be clear and consistent.

c. Smooth transitions

Such phrases as “to continue the analysis”, “on the other hand” and “additional concept” are another type of structural clue.

Additional Details: moreover, furthermore, in addition, besides, etc.

Causal Relationship - therefore, because, accordingly, thus, hence, etc.

d. The ending

Cite your sources to persuade the reader about your information-gathering reliability. These may include interviews, articles, company records, surveys, your own observation, and so on.

Proofread your document carefully before sending it to the reader.

LESSON 23

PLANNING LONG REPORTS

Outline

- Steps in Planning a Report
 - a. Define the outline and purpose
 - b. Outline the issue for investigation
 - c. Prepare a work plan
 - d. Conduct research
 - e. Analyze and interpret data, draw conclusions and develop recommendations
- Defining the Questions
 - a. Developing the Statement of Purpose
 - b. Outlining and organizing of reports
- Informational Reports
 - o In order of Importance
 - o Sequentially
 - o Chronology
 - o Spatially
 - o Geography
 - o Categorically
- Analytical Reports
- Writing Outline: The Rules of Division
- Preparing a Preliminary Outline
 - o Alphanumeric System
 - o Decimal System
- Preparing a Work Plan
- Conduct Research
- Collecting Primary Data
 - o Documents
 - o Observations
- Surveys Analyze and interpret data, draw conclusions and develop recommendations

Steps of Planning a Report

When you gather facts, you need to arrange them in a suitable format. Before putting a single word on the page, follow the following series of steps that form the foundations of any report:

- a. Define the outline and purpose
- b. Outline the issue for investigation
- c. Prepare a work plan
- d. Conduct research
- e. Analyze and interpret data, draw conclusions and develop recommendations

Defining the Questions

The person, who authorizes the report, defines the questions. Such as:

- What needs to be determined?
- Why is this issue important?

- Who is involved in the situation?
- Where is the trouble actually located?
- How did the situation originate?

a. Developing the Statement of Purpose

A purpose statement is a declarative sentence which summarizes the specific topic and goals of a document. It is typically included in the introduction to give the reader an accurate and concrete understanding what the document will cover and what he/she can gain from reading it. An effective statement of purpose should be:

- Specific and precise - not general, broad or obscure
- Concise - one or two sentences
- Clear - not vague, ambiguous or confusing
- Goal-oriented - stated in terms of desired outcomes

For informational report, you might phrase the statement of purpose by saying:

Purpose: To summarize the extent of substance abuse among plant employees.

However for your analytical report, your statement of purpose might be:

Purpose: To analyze the effects of employee substance abuse on productivity and product quality, and recommend ways to counteract these effects.

b. Outlining and Organizing of Report

Informational Reports

These reports offer data, facts, feedback, and other types of information, without analysis of situation or recommendation. In these types of reports, reporting of facts may be factored by sub-topics:

o In order of Importance

If you are reviewing five product lines, you might organize your study in the increasing order of the amount of revenue, they generate.

o Sequentially

If you are studying a process, present your information step by step - 1, 2, 3.

o Chronology

When investigating a chain of events, organize the study according to the event that happens first.

o Spatially

If you are studying a physical object, study it left to right, top to bottom, inside to outside.

o Geography

If the location is important, factor your study geographically.

o Categorically

If you are asked to review several distinct aspects of a subject, you need to look at one category at a time, for example sales, profit, or investment.

Analytical Reports

These reports offer both information and analysis, and they can also purpose recommendations.

For example, an analytical report on “Why are we having trouble in hiring secretaries?” will look into following aspects:

- Salaries are too low
- What do we pay our secretaries?
- How important is pay in influencing secretaries’ job choices?

The said topic can be broken into following parts to start analytical procedure:

- Our location is poor
- Decreased trend of opting profession of secretary

The Rules of Division

You can divide the topic into at least two parts. Choose a significant and useful basis or guiding principle for the division. When dividing a whole into its parts; restrict yourself to one basis at a time and make sure that each group is separate and distinct. Be thorough when listing all the components of a whole.

Preparing a preliminary Outline

The Preliminary Outline is the first step of planning reports. It is basically a plan for organizing the elements of a report.

Following are different ways to create and to present a preliminary outline:

o Alphanumeric System

It contains letters, numbers, punctuation marks, and mathematical and other conventional symbols. e.g.

I. _____
 A. _____
 B. _____
 1. _____
 2. _____
 C. _____
II. _____
 A. _____
 1. _____
 a. _____
 b. _____
 2. _____
 B. _____

o Decimal System

Decimal system is a way of writing numbers. Any number, from huge quantities to tiny fractions, can be written in the decimal system using only the ten basic symbols 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0. The value of any of these symbols depends on the place it occupies in the number. The decimal system is also known as a place-value system.

1.0. _____
 1.1. _____
 1.2. _____
 1.21. _____

- 1.22. _____
- 1.3. _____
- 2.0. _____
- 2.1. _____
- 2.11. _____
- 2.111. _____
- 2.112. _____
- 2.12. _____
- 2.2. _____

c. Preparing a Work Plan

Work plan for report writing is also very important. It can be prepared by the discussion of the sequence of tasks to be accomplished (including the sources of information, required experiments, restrictions of time etc.) and description of the end result that are interpreted from investigation, review of the project assignments, schedules, and resources management.

d. Conduct Research

Collecting Primary Data

The ways to collect primary data are:

- o **Documents**

Documentary evidence and historical records are sources of primary data.

- o **Observations**

Observation applies your five senses and your judgment to investigation. It involves taking organized notes about occurrences in the world. Observations provide your insight about specific people, events, or locales and are useful when you want to learn more about an event without the biased viewpoint.

- o **Surveys**

Often the best way to obtain primary data is to ask people who have relevant experience and opinions. A formal survey is a way of finding out what a cross-section of people think about something. A formal survey requires a number of important decisions.

e. Analyze and interpret data, draw conclusions and develop recommendations

The last step involved in planning a report, is to interpret your investigation and research; and describe the end results and recommendation.

LESSON 24

WRITING LONG REPORTS

Outline

- Report Production
- Composing a Formal Report
 1. Prefatory parts
 2. Body of report
 3. Supplementary parts
- Prefatory Parts
 - a. Title fly
 - b. Title page
- Body of Report
 - a. Introduction
 - b. Text
 - c. Terminal section
- Supplementary Parts
 - a. Appendix
 - b. Bibliography
 - c. Glossary
 - d. Index

Report Production

Planning formal reports and proposals, conducting the necessary research, organizing the ideas, developing visual aids, and drafting the text are demanding and time consuming tasks. After careful editing and rewriting, you still need to produce a polished version.

Composing a formal Report

A professional report conveys the impression that the subject is important. A formal report has many formalities, embellishments, and requirements, which must be completed. A formal report may be divided in three major divisions:

1. Prefatory parts
2. Body of report
3. Supplementary parts

1. Prefatory parts

- a) Title fly
- b) Title page
- c) Letter of authorization
- d) Letter of transmittal
- e) Table of contents
- f) Preface

a. Title fly

The title fly is a plane sheet with only the title of the report on it.

b. Title page:

The title page includes four blocks of information:

- The title of the report
- The name, title and address of the person that authorized the report
- The name, title and address of the person that prepared the report
- The date on which the report was submitted

2. Body of report

- a) Introduction
- b) Text
- c) Terminal section

a. Introduction

A report's introduction summarizes the contents by describing the purpose of the report and giving an overview of the main ideas expressed within it.

The introduction to a report serves a number of important functions:

- Authorization
- Problem/purpose
- Scope
- Background
- Sources and methods
- Definitions
- Limitations
- Report organization

b. Text

The text contains the actual details of the report. It is the main and crucial part of the body. This part consists of major sections or chapters that analyze and interpret the material, gathered as a result of your investigation. The content, organization, language, style, and visual aid should be trimmed to the type of the reader.

c. Terminal Section

Terminal section of the body of the report may comprise one or all of the following elements:

- Summary
- Conclusions
- Recommendations

Summary

This section summarizes the findings of the investigation.

Conclusions

It interprets facts explained. It does not give the writer's personal opinion. The opinion should be unbiased and, should not base on personal likes and dislikes.

Recommendations

This section suggests a plan of action based on findings and conclusions.

3. Supplementary Parts

- e. Appendix
- f. Bibliography
- g. Glossary
- h. Index

a. Appendix

In the appendix you may include tables, pictorials, graphs, charts or some additional information.

b. Bibliography

It refers to the sources from where the data have been collected. The sources may be books, newspapers, magazines and government publications or its statistical departments.

c. Glossary

A glossary is an alphabetic listing of special terms and words with their meaning and definitions. It is useful for both technical and non-technical readers.

d. Index

It includes the list of topics, their divisions and subdivisions with their location in the report. The order of the items listed in the index is alphabetical.

Note

Visual Aids

When illustrating the text of any report, you face the problem of choosing any specific form that best suits your message. Moreover, good business ethics demand you to choose a form of visual aid that will not mislead your audience.

- Tables
- Line and Surface Charts

LESSON 25

GENERAL REPORTS

Outline

- Report-Writing Situations
- How Readers want to use the Information you Provide
- The Questions Readers Ask most Often
- General Superstructure for Reports
 - a. Introduction
 - b. Method of obtaining facts
 - c. Facts
 - d. Discussion
 - e. Conclusions
 - f. Recommendations

Report-writing situations

Report-writing situations may vary such as:

- A one-hundred-page report on a seventh-month project to test a special method of venting high-speed engines for using in space vehicles.
- A twelve-page report, based on library research, to determine which long-distance telephone company provides the most reliable service.
- A two-paragraph report, based upon a manufacturing engineer's visit to a new plant that is about to be put into service.
- A two-hundred-page report, addressed to the general public, concerning the environmental impact of mining certain portions of public land in Baluchistan.

So, the length of report varies according to the situation and the project. There are no definite criteria for it. The length of a report can be from only two paragraphs to two hundred pages.

How readers want to use the information you provide

Your readers may want to use your information to solve:

- **An organizational problem:** Where typical goals are to increase efficiency and profit.
- **A social problem:** Where typical goals are to improve the general health and welfare of groups of people.
- **A personal problem:** Where typical goals are to satisfy individual preferences and values.

The questions that readers ask most often

- What will we gain from your report?
- Are your facts reliable?
- What do you know that is useful to us?
- How do you interpret those facts from our point of view?
- How are those facts significant to us?
- What do you think we should do?

General superstructure of reports

The general superstructure of reports contains six elements, one for each of the six basic questions.

- a. Introduction
- b. Method of obtaining facts
- c. Facts
- d. Discussion
- e. Conclusions
- f. Recommendations

a. Introduction

In the introduction of a report, you answer your readers' question, "What will we gain by reading your report?" In longer reports, your explanation of the relevance of your report to your readers may take many pages, in which you tell things such as:

- What is the problem that your report will help to solve?
- What activities, you performed, towards solving that problem?
- How your audience can apply your information in their own efforts towards solving the problem?

b. Method of Obtaining Facts

It also suggests to your readers, how they can gain additional information on the same subject. For example, if you obtained your information through reading, you direct your readers to those sources and, if you obtained your information through an experiment, survey or other special technique, your account of your method may help others design similar projects.

c. Facts

Your facts are the individual pieces of information that underlie and support your conclusions and recommendations. If your report for example, Ayesha's, is based upon interviews, your facts are the things that people told you. If your report is based upon laboratory, field, or library research, your facts are the verifiable pieces of information that you gathered.

d. Discussion

Taken alone, facts mean nothing. Therefore, an essential element of every report, you prepare will be a discussion in which you interpret your facts in a way that is significant to your readers. It is important to remember that your readers count on you not only to select facts that are relevant to them, but also to discuss those facts in a way that is meaningful to them.

e. Conclusions

Like interpretations, conclusions are general statements, based on your facts. However, conclusions don't simply focus on interpreting the facts but also on answering the readers' question. i.e. "How are those facts significant to us?"

f. Recommendations

Just as conclusions grow out of interpretations of the facts, recommendations grow out of conclusions. They answer the reader's question, "If your conclusions are valid, what should we

do?” Depending on many factors, including the number and complexity of the things you are suggesting, you may state your recommendations in a single sentence or in many pages.

A note about summaries

Many longer reports share another feature i.e. They are preceded by a separate summary of the report overall. Such summaries are often called ‘Executive Summaries’ because they usually are addressed to decision-makers.

LESSON 26

EMPIRICAL RESEARCH REPORT

Outline

- Defining Empirical Research Report
- The Questions Readers Ask Most
- Superstructure for Empirical Research Reports
 - a. Introduction
 - b. Objectives of research
 - c. Methods
 - d. Results
 - e. Discussion
 - f. Conclusions
 - g. Recommendation

Defining Empirical Research Report

An empirical research is a research that reports the results of a study and uses data derived from actual observation or experimentation. Such research is used to answer a question or test a hypothesis.

You will be able to use the superstructure for empirical research reports most successfully, if you understand the purpose of research, discussed in them. When you are writing about empirical research, you will be writing to people who will make decisions, based on the results of your reports.

Example

Ayesha's experiment will be used by engineers, who design engines for employees. The results of Anam's survey will be used by state agency in charge of outdoor recreation as it decides, what sort of facilities, it must provide to meet the needs of older citizens.

A smaller amount of empirical research has a different purpose: to extend general human knowledge. The researchers set out to learn how fish remember, what the molten core of earth is like, etc. The research is carried out for the sake of humanity and is published in Science Journals etc.

In some situations these two aims of research overlap. Some organizations sponsor basic research, usually in the hope that what is learned can later be turned into practical use. Likewise some practical research turns up results that are of interest to those, who desire to learn more about the world in general.

The Questions Readers Ask Most

Whether it aims to support practical decisions, extend human knowledge, or achieve some combination of the two purposes, almost all empirical research are customarily reported in the same superstructure. That's because readers of all types have the same seven general questions about it.

The seven Questions

1. Why is the research important to us?

Readers, concerned with solving specific practical problems, want to know what problems your research will help address. Readers, concerned with extending human knowledge, want to know how you think; your research will contribute to what humans should know.

2. What were you trying to find out?

A key part of an empirical research project is the careful formulation of the research questions that the project will try to answer. Readers want to know what those questions are, so they can determine whether they are significant questions.

3. Was your research method sound?

Your method has to be appropriate to your research and it has to be intellectually sound.

If the research method is not appropriate or intellectually sound, your readers will not rely on your results, conclusions and recommendations.

4. What results did your research produce?

Naturally, your readers will want to find out, what results you obtained.

5. How do you interpret those results?

Your readers will want to interpret those results in ways that are meaningful to them.

6. What is the significance of those results?

What answers do those results imply for your research questions, and how do your results relate to the problems.

7. What do you think we should do?

Readers, concerned with practical problems, want to know what you advise them to do.

Readers, concerned with extending human knowledge, want to know what you think, your results imply for future research.

Superstructure for Empirical research Reports

To answer the readers' typical questions about empirical research reports, writers use a superstructure that has the following elements:

- a. Introduction
- b. Objectives of research
- c. Methods
- d. Results
- e. Discussion
- f. Conclusions
- g. Recommendation

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Report Element	Reader's Questions
Introduction	Why is your research important to us?
Objectives of Research	What were you trying to find out?
Method	Was your research method sound?
Results	What results did your research produce?
Discussion	How do you interpret your research?
Conclusion	What is the significance of those results?
Recommendation	What do you think we should do?

a. Introduction

In the introduction to an empirical report, you should seek to answer the readers' question i.e. "Why is the research important to us?" Typically, writers answer this question in two steps:

- They announce the topic of their research
- Explain the importance of the topic to their readers

Announcing the topic

You can often announce the topic of your research simply by writing the topic as the key phrase in the opening sentence of your report.

Example

For the past eighteen months, the Satellite Products Laboratory has been developing a system that will permit companies with large, nationwide fleets of trucks to communicate directly with their drivers at any time through a satellite link.

Example

Here is the first sentence from a report on the way people develop friendly relations. Social Psychologists know very little about the way, real friendships develop in their natural settings.

Explaining the importance of research

To explain the importance of research to your readers, you can use either or both of the following methods:

- State the relevance of your research to your organization's goals.
- Review the previously published literature on the subject.

Relevance to Organization Goals

In reports, written to readers in organization, (whether it's your own or a client's), you can explain the relevance of your research by relating it to some organizational goal or problem.

Sometimes the importance of research will be so obvious to your readers that merely naming your topic will be sufficient.

At other times, you will need to discuss at length the relevance of your research to the organization. In the first paragraph of the satellite report, for instance, the writers mention the potential market for the satellite communication system, they are developing.

Literature Reviews

First, present the main pieces of knowledge, communicated in the literature. Then, identify some significant gap in this knowledge—the very gap your own research will fill. In this way, you establish the special contribution that your research will make.

A second way to establish the importance of your research is to review the existing knowledge on your subject. Writers usually do this by reviewing the previously published literature. Generally, you can arrange a literature review in two parts.

Example

Literature Reviews

A great deal of research in social psychology has focused on variables influencing an individual's attraction to another at an initial encounter, usually in laboratory settings (Bergscheid and Walster, 1978; Bryne, 1971; Huston and Levinger, 1978), yet very little data exists on the processes by which individuals in the real world move beyond initial attraction to develop a friendship; even less data is known about the way developing friendships are maintained and how they evolve over time (Huston and Burgess, 1979; Levinger, 1980). The writer tells what is known on his topic. The writer identifies the gaps in knowledge that his research will fill.

The writer continues this discussion of previous research for three paragraphs. Each follows the same pattern: it identifies an area of research, tells what is known about that area, and identifies gaps in the knowledge that will be filled by the research that the writer has conducted.

These paragraphs serve an important additional function, also performed by many literature reviews. They introduce the established facts and theories that are relevant to the writer's work and necessary to the understanding of the report.

Writers almost always include literature reviews in the reports they write for professional journals. In contrast, they often omit reviews when writing to readers inside an organization. That's because such reviews are often unnecessary when addressing organizational readers. Organizational readers judge the importance of a report in terms of its relevance to the organization's goals and problems, not in terms of its relation to the general pool of human knowledge. For example, the typical readers of the truck-and-satellite communication report were interested in the report because they wanted to learn how well their company's system would work.

To them, a general survey of the literature on satellite communication would have seemed irrelevant— and perhaps even annoying. A second reason that writers often omit literature reviews when addressing readers in organizations is that such reviews rarely help such readers understand the reports. That's because the research projects undertaken within organizations usually focus so sharply on a particular, local question that published literature on the subject is beside the point. For example, a review of previously published literature on satellite communications would not have helped readers understand the truck-and-satellite report.

Sometimes, of course, literature reviews do appear in reports written to organizational readers. Often, they say something like this: “In a published article, one of our competitors claims to have saved large amounts of money by trying a new technique. The purpose of the research described in this report is to determine whether or not we could enjoy similar results.” Of course, the final standard for judging whether you should include a literature review in your report is your understanding of your purpose and readers. In some way or another, however, the introduction to all your empirical research reports should answer your readers’ question, “Why is this research important to us?”

b. Objectives of the Research

Every empirical research project has carefully constructed objectives. These objectives define the focus of your project, influence the choice of research method, and shape the way you interpret your results. Thus, readers of empirical research reports want and need to know what the objectives are.

The following example from the satellite report shows one way you can tell your readers about your objectives:

In particular, we wanted to test whether we could achieve accurate data transmissions and good-quality voice transmissions in the variety of terrains, typically encountered in long-haul trucking. We wanted also to see what factors might affect the quality of transmissions.

When reporting on research that involves the use of statistics, you can usually state your objectives by stating the hypotheses you tested. Where appropriate, you can explain these hypotheses in terms of existing theory, again citing previous publications on the subject.

The following passage shows how the writer, who studied friendship, explains some of his hypotheses. Notice how the author begins with a statement of the overall goal of the research.

The goal of the study was to identify characteristic of behavioral and attitudinal changes that occurred within interpersonal relationships as they progressed from initial acquaintance to close friendship. With regard to relationships benefits and costs, it was predicted that both benefits and costs would increase as the friendship developed.

The ratings of both the costs and benefits would be positively correlated with the ratings of friendship intensity. In addition, the types of benefits, listed by the subjects, were expected to change as the friendships developed.

c. Method

When reading the reports of your empirical research, people will look for precise details concerning your method. Those details serve three purposes. They let the readers assess the soundness of your research design and appropriateness for problems you are investigating. Second, the details enable your readers to determine the limitations that your method might place upon the conclusions you draw. Third, the description of your method provides information that will help your readers repeat your experiment, if they wish to verify your results or conduct similar research of their own. The kind of information, you provide about your method, depends upon the nature of your research

Example

At the beginning of their first term at the university, college freshmen selected two individuals, whom they had just met and, completed a series of questionnaires regarding their relationships with those two individuals at 3-week intervals through the school term.

In the remaining of the paragraph, the writers explain the questionnaires, asked the freshmen to tell about things such as: their attitudes towards each of the other two individuals. However, the paragraph is a small amount of the researcher's account of his method, actual research being a document of 1200 words.

The writers of the satellite report likewise provided detailed information about their procedures. He provides three paragraphs and two tables explaining their equipment, two paragraphs and one map describing the eleven stage region covered by the trucks.

How can you decide which method is to include? The most obvious way is to follow the general reporting practices of your fields.

List every aspect of your procedure that you made, when planning your research. Identify every aspect of your research what your readers might ask about. Ask yourself what aspects of your procedure might limit the conclusions that you can draw from your results. Identify every procedure that other researchers would need to understand in order to design a similar study.

d. Results

The results of empirical research are the data you obtain. Although your results are the heart of your empirical research project, they may take up a very small portion of it. Generally, results are presented in one of two ways:

- Tables
- Graphs

The satellite report uses two tables. The report on friendship uses four tables and eleven graphs.

Sentences: When placed in sentences, results are often woven into a discussion that combines data and interpretation.

e. Discussion

Sometimes writers briefly present all their results in one section and then discuss them in a separate section. Sometimes they combine the two in a single, integrated section. Whichever method you use, your discussion must link your interpretative comments with the specific results, you are interpreting.

f. Conclusions

Besides interpreting the results of your research, you need to explain what your results mean to in terms of original research questions and the general problem you set to investigate. Your explanations of these matters are conclusions.

g. Recommendations

The readers of some empirical research reports want to know what the writers think we should do. This is especially true in cases where the research is directed at solving a practical problem. Consequently research reports include a section on recommendations.

LESSON 27

FEASIBILITY REPORTS

Outline

- Typical Writing Situation
- The Questions Readers Ask Most Often
- Superstructure for Feasibility Reports
 - a. Introduction
 - b. Criteria
 - o Two ways of presenting criteria
 - o Importance of presenting criteria early
 - o Sources of your criteria
 - o Four common types of criteria
 - c. Method Of Obtaining Facts
 - d. Overview of Alternatives
 - e. Evaluation
 - f. Conclusions
 - g. Recommendations

Typical Writing Situation

All feasibility reports share one essential characteristic i.e. they are written to help decision-makers to choose between two or more courses of action. Even when a feasibility report seems to focus primarily on one course of action, the readers are always considering a second course: to leave things the way they are. An example of leaving things the way they are, is to continue to use metal parts rather than plastic parts in the sailboats. In many situations, however, readers will already have decided that some change is necessary and will be choosing between two or more alternatives to the status quo.

The Questions Readers Ask Most Often

As they think about the choice they must make, decision-makers ask many questions. From situation to situation, these basic questions remain the same. That's why it becomes possible for one to use the similar superstructure of feasibility report for variety of situations. Decision makers ask questions such as:

- a. Why is it important for us to consider these alternatives?
- b. Are your criteria reasonable and appropriate?
- c. Are your facts reliable?
- d. What are the important features of the alternatives?
- e. How do the alternatives stack up against your criteria?
- f. What conclusions do you draw about the alternatives?
- g. What do you think we should do?

a. Why is it important for us to consider these alternatives?

Decision-makers ask this question because they want to know why they have to make any choice in the first place. Your readers may need a detailed explanation of a problem to realize the importance of considering alternative courses of action. On the other hand, if the readers are

familiar with the problem, they may see the importance of considering the alternatives, if you simply remind them of the situation.

b. Are your criteria reasonable and appropriate?

To help your readers choose between the alternative courses of action, you must evaluate the alternatives in terms of specific criteria. At work, people want these criteria to reflect the needs and aims of their organization.

c. Are your facts reliable?

Decision-makers want to be sure that your facts are reliable before they take any action, based on those facts.

d. What are the important features of the alternatives?

Readers want you to present an overview that highlights the key features of each alternative so that, they can understand your detailed discussion of the alternatives.

e. How do the alternatives stack up against your criteria?

The heart of a feasibility study is your evaluation of the alternatives in terms of your criteria. Your readers want to know the results.

f. What conclusions do you draw about the alternatives?

Based upon your detailed evaluation of the alternatives, you will reach some general conclusion about the merits of each alternative. Decision-makers need to know your conclusions because these overall judgments form the basis for decision-making.

g. What do you think we should do?

In the end, your readers must choose one of the alternative courses of action. Because of your expertise on the subject, they want you to help them by telling, what you recommend.

Superstructure for Feasibility Reports

To answer your readers' questions about your feasibility studies, you can use a superstructure that has the following seven elements:

- a. Introduction
- b. Criteria
- c. Method of obtaining facts
- d. Overview of alternatives
- e. Evaluation
- f. Conclusions
- g. Recommendations

You may combine the elements in many different ways, depending on your situation. For instance, you may integrate your conclusions into your evaluation, or you may omit a separate discussion of criteria, if they need no special explanation. But it's better to include each of the seven elements, based upon your understanding of your purpose, audience, and situation.

a. Introduction

In the introduction to a feasibility report you should answer your readers' question, "Why is it important for us to consider these alternatives?" The most persuasive way to answer this question is to identify the problem, your feasibility study will help your readers solve or achieve their goal.

Be sure to identify a problem or goal that is significant from the point of view of your employer or client. Significant goals could include reducing the number of rejected parts, increasing your productivity, and so on.

Example 1: Consider, for example, the way Fawaz wrote the introduction of a feasibility report, he prepared. A process engineer in a paper mill, Fawaz was asked to evaluate the feasibility of substituting one ingredient for another in the furnishing of one of the papers, it produces. At present, we rely on the titanium dioxide in our furnishing to provide the high brightness and opacity, we desire in our paper. However, the price of titanium dioxide has been rising steadily and rapidly for several years. We now pay roughly \$1400 per ton for titanium dioxide, or about 70 cents per pound.

Problem

Some mills are now replacing some of the titanium dioxide in their furnishing with silicate extenders. Because the average price for silicate extenders is only \$500 per ton, well under half the cost titanium dioxide, the savings are very great.

Possible Solution

Introduction

To determine whether we could enjoy a similar savings for our 30-pound book paper, I have studied the physical properties, material handling requirements, and cost of two silicate extenders, Tri-Sil 606 and Zenolux 26 T.

What the writer did to investigate the possible solution

Generally, the introduction to a long feasibility report (and most short ones) should also include a preview of the main conclusions and, perhaps, the major recommendations. Fawaz included his major conclusion: I conclude that one of the silicate extenders, Zenolux 26 T, looks promising enough to be tested in a mill run.

Example 2

Consider the way Shazi wrote the introduction of a feasibility report, she prepared for the board of directors of the bank that employs her. Shazi was asked to evaluate the feasibility of opening a new branch in a particular suburban community. She begins by announcing the topic of her report:

This report discusses the feasibility of opening a branch office of Al-Shami Bank in Gulberg, Lahore. Then, after giving a sentence of background information about the source of the bank's interest in exploring this possibility, Shazi emphasized the importance of such a feasibility study: "In the past, Al-Shami bank has approached the opening of new branches with great care, which is undoubtedly a major reason why it has become the most successful small, privately owned financial institution in Gulberg." Shazi also included her major conclusions: "Overall, Gulberg

offers an appealing opportunity, but would present Al-Shami Bank with some challenges, it has not faced before.” The introduction of a feasibility report is often combined with one or more of the other six elements, such as the description of the criteria, a discussion of the method of obtaining facts, or an overview of the alternatives. In addition, the opening of a feasibility report may also include various kinds of background, explanatory, and forecasting information.

b. Criteria

Criteria are the standards that you apply in a feasibility study to evaluate the alternative courses of action which you are considering. For instance, to assess the feasibility of opening the new branch office, Shazi uses many criteria such as:

- The existence of a large enough market
- A good possibility of attracting depositors away from the competition
- The likelihood that profits on the deposits at the branch will exceed the expenses of operating it.
- The reasonableness of the financial outlay required to open the office.

Two Ways of Presenting Criteria

- Devote a separate section to identify and explaining them: Writers often do this in long reports or in reports where the criteria themselves require extended explanation.
- Integrate your presentation of criteria into other elements of the report: Fawaz did this in the following sentence (from the third paragraph of his introduction).

“To determine whether we could enjoy a similar savings for our 30-pound book paper, I have studied the physical properties, material handling requirements, and cost of two silicate extenders, Tri-Sil 606 and Zenolux 26 T”.

Criteria named

For each of the general criteria named in the quoted sentence, Fawaz had some more specific criteria. For instance, at the beginning of his discussion of physical properties of the two extenders, he named the third property, he evaluated.

Importance of Presenting Criteria Early

There are three good reasons for presenting your criteria early in your report:

First, your readers could know that the validity of your conclusions depends on the criteria, you used to evaluate the alternatives, and they want to evaluate the criteria themselves. Second, your discussion of the criteria tells your readers a great deal about the scope of your study. Third, your decision of the alternative courses of action will make much more sense to your readers, if they know in advance the criteria of their evaluation.

Sources of Your Criteria

Often the person, who asks you to undertake a study, will simply tell you what criteria to apply. In other situations, your readers may expect you to identify the relevant criteria for them, based on technical knowledge that you possess.

Four Common Types of Criteria

As you develop your criteria, you may find it helpful to know that at work, criteria often address one or more of the following questions:

- Will the course of action really do what's wanted?
- Can we implement it?
- Can we afford it?
- Is it desirable?

c. Methods of Obtaining Facts

When you tell about methods of getting facts, you answer your readers' question, "Are your facts reliable?" You assure your readers that your facts form a sound basis for your decision-making. The source of your facts will depend upon the nature of your study:

- Library research
- Calls to manufacturers
- Interviews
- Meetings with other experts in your organization
- Surveys
- Laboratory research

The amount of detail, you need to provide, depends upon your readers and situation, but in each case, your goal is to say enough to satisfy your readers that your information is trustworthy. For example, Shazi used some fairly technical procedures to estimate the amount of deposits that Al-Shami Bank could expect from a new branch in Gulberg, Lahore. Description of your methods depends upon how many different techniques you used. If you used one or two techniques, you could describe each in a paragraph or section, but if you used several techniques, each pertaining to a different part of your analysis, you might mention each of them at the point at which you discuss the results obtained.

d. Overview of Alternatives

Before you begin your detailed evaluation of the alternatives, you must be sure that your readers understand what the alternatives are. Sometimes you need to devote only a few words to that task.

For example, imagine that you worked for a chain of convenience stores that has asked you to investigate the feasibility of increasing starting salaries for store managers as a way of attracting stronger applications for job openings. Surely, your readers will not require any special explanation to understand the course of action you are assessing.

However, you may sometimes need to provide extensive background information or otherwise explain the alternative to your readers.

For example, when Jahangir needed to report on a feasibility of replacing his employer's company-owned building-wide telephone system, he helped his readers to piece together the more detailed comments; he later made it in his point-by-point evaluation of the systems.

e. Evaluation

The heart of a feasibility report is the detailed evaluation of the course or courses of action, you studied. In most feasibility studies, writers organize their evaluation sections around their criteria. For example, in her study of the feasibility of opening a new branch office of a bank, Shazi devoted one section to the size of the market, another to the competition, a third to prospective income and expenses, and so on.

f. Conclusions

Your conclusions are your overall assessment of the feasibility of the courses of action, you studied. You might present your conclusions in two or three places in your report. You should certainly mention them in summary form in the beginning of your report.

g. Recommendations

It is customary to end a feasibility report by answering the decision-maker's question, "What do you think we should do?" Sometimes your recommendations will pertain directly to the course of action you studied: "Do this" or "Do not do it". You may also discover that you were unable to gather all the information, you needed to make a firm recommendation.

LESSON 28

PROGRESS REPORTS

Outline

- Progress Report
- Typical Writing Situations
- Readers' Concern with the Future
- The Questions Readers Ask Most Often
- Superstructure for Progress Reports
 - Introduction
 - Facts and Discussion
 - Answering Your Readers' Questions
 - Organizing the Discussion
 - Emphasizing Important Findings and Problems
 - Conclusions
 - Recommendations

Progress Report

The progress report states the progress made towards the goal during the reporting period, discusses significant costs and scheduling issues, and lists future objectives to be carried out. Project monitoring and accountability are the main objectives of a progress report.

Typical Writing Situations

Progress reports are prepared in two types of situations.

In the first, you tell your readers about your progress on one *particular* project. As a geologist employed by an engineering consulting firm, Lee must do this. His employer has assigned him to study the site that a large city would like to use for a civic center and a large office building. The city is worried that the site might not be geologically suited for such construction. Every two weeks, Lee must submit a progress report to his supervisor and to the city engineer. Lee's supervisor uses the progress report to be sure that Lee is conducting the study in a rapid and technically sound manner. The city engineer uses the report to see that Lee's study is proceeding according to the tight schedule planned for it. She also uses it to look for preliminary indications about the likely outcome of the study. Other work could be speeded up or halted as a result of these preliminary findings.

In the second type of situation, you prepare progress reports that tell about your work on *all* your projects. Many employers require their workers to report on their activities at regular intervals all year round, year in and year out. Jacqueline is a person who must write such progress reports (often called periodic reports). She works in the research division of a large manufacturer of consumer products, where she manages a department that is responsible for improving the formulas for the company's laundry detergents making them clean and smell better, making them less expensive to manufacture, and making them safer for the environment. At any one time, Jacqueline's staff is working on ten to twenty different projects.

As part of her regular responsibilities, Jacqueline must write a report every two weeks to summarize the progress on each of the projects. These reports have many readers, including the following people: her immediate superiors, who want to be sure that her department's work is proceeding satisfactorily; discoveries they can use in the products they are responsible for (for example, dishwashing detergents); and corporate planners, who want to anticipate changes in formulas that will require alternations in production lines, advertising, and so on. As the examples of Lee and Jacqueline indicate, progress reports can vary from one another in many ways: they may cover one project or many; they may be addressed to people inside the writer's organization or outside it. They may be used by people with a variety of reasons for reading them, such as learning things they need to know to manage and to make decisions.

Readers' Concern with the Future

Despite their diversity, however, almost all progress reports have this in common: their readers are primarily concerned with the *future*. That is, even though most of the progress reports talk primarily about what has happened in the past, their readers usually want that information so that they can plan for and act in the future. Why? Consider the responsibilities that your readers will be fulfilled by reading your progress reports. From your report, they may be trying to learn the things they need to know to manage *your* project. They will want to know, for instance, what they should do (if anything) to keep your project going smoothly or to get it back on track. The reports written by Lee and Jacqueline are used for this purpose by some of their readers. From your report, some people may also be trying to learn things they need to know to manage other projects. This is because almost all projects in an organization are interdependent with other projects.

For example, other people and departments may need the results of your project as they work on their own projects. Maybe you are conducting a marketing survey whose results they need so that they can design an advertising campaign, or maybe your company can install other equipment. If your project is going to be late, the schedules of those projects will have to be adjusted accordingly. Similarly, if your project costs more than expected, money and resources will have to be taken away from other activities to compensate. Because of such interdependencies, your readers need information about the past accomplishments and problems in your project so that they can make plans for the future. Similarly, your readers will often be interested in learning the preliminary results of your work.

Suppose, for instance, that you complete one part of a research project before you complete the others. Your audience may very well be able to use the result of that part immediately. The city engineer who reads Lee's reports about the possible building site is especially interested in making use of the information Lee provides.

The Questions Readers Ask Most Often

The readers' concern with the implications of your progress for their future work and decisions leads them to want you to answer the following questions in your progress reports. If your report describes more than one project, your readers will ask these questions about each of them.

What work does your report cover?

In order to understand anything in a progress report, readers must know what project or projects and what time period the report covers.

What is the purpose of the work?

Readers need to know the purpose of your work to see how your work relates to their responsibilities and to the other work, present and future of the organization.

Is your work progressing as planned or expected?

Your readers will want to determine if adjustments are required in the schedule, budget, or the number of people assigned to the project or projects you are working on.

What results did you produce?

The results you produce in one reporting period may influence the shape of work in future periods. Even when you are still in the midst of a project, readers will want to know about any results they can use in other projects, before you finish your overall work.

What progress do you expect during the next reporting period?

Again, your readers' interests will focus on such management concerns as schedule and budget and on the kinds of results they can expect.

How do things stand overall?

This question arises especially in long reports. Readers want to know what the overall status of your work is, something they may not be able to tell readily from all the details you provide.

What do you think we should do?

If you are experiencing or expecting problems, your readers will want your recommendations about what should be done. If you have other ideas about how the project could be improved, they too will probably be welcomed.

Superstructure for Progress Reports

To answer your reader's questions, you can use the conventional superstructure for writing progress reports, which has the following elements:

1. Introduction
2. Facts
3. Discussion
4. Conclusions
5. Recommendations

Introduction

In the introduction to a progress report, you should answer the following two questions:

1. "What work does your report cover?"
2. "What is the purpose of the work?"

You can usually answer the question, "What work does your report cover?", by opening with a sentence that tells what project or projects your report concerns and what time period it covers.

Sometimes you do not need to answer the second question “What is the purpose of the work?” because all your readers will already be quite familiar with your work’s purpose. At other times, however, it will be crucial for you to tell your work’s purpose because your readers will include people who don’t know or may have forgotten it. You are especially likely to have such readers when your written report will be widely circulated in your own organization or when you are writing to another organization that has hired your employer to do the work you describe.

You can usually explain purpose most helpfully by describing the problem that your project will help your readers solve. The following sentences show how one manager answered the readers’ first two questions: This report covers the work done on the Focus Project from July 1 through September 1. Sponsored by the U.S. Department of Energy, the aim of the Focus Project is to overcome the technical difficulties encountered in manufacturing photovoltaic cells that can be used to generate commercial amounts of electricity.

Facts and Discussion

In the discussion section of your progress report, you should answer questions from your readers:

“Is your work progressing as planned or expected?”

“What results did you produce?” and,

“What progress do you expect during the next reporting period?”

Answering Your Readers’ Questions

In many situations, the work for each reporting period is planned in advance. In such cases you can easily tell about your progress by comparing what happened with what was planned. Where there are significant discrepancies between the two, your readers will want to know the reason. The information you provide about the causes of problems will help your readers decide how to remedy them. It will also help you explain any recommendations you make later in your report. When you are discussing preliminary results that your readers might use, be sure to explain them in terms that allow your readers to see their significance. In research projects, preliminary results are often tentative. If this is the case for you, let your readers know how certain or uncertain the results are. This information will help your readers decide how to use the results.

When preparing progress reports, people often wonder how much information they should include. Generally, progress reports are brief because readers want them that way. While you need to provide your readers with specific information about your work, don’t include details except when the details will help your readers decide how to manage your project or when you believe that your readers can make some immediate use of them.

In many projects, you will learn lots of little things and you will have lots of little setbacks and triumphs along the way. Avoid talking about these matters. No matter how interesting they may be to you, they are not likely to be interesting to your readers. Stick to the information your readers can use.

Organizing the Discussion

You can organize your discussion section in many ways. One is to arrange your material around time periods;

1. What happened during the most recent time period?
2. What's expected to happen during the next time period?

You will find that this organization is especially well-suited for reports in which you discuss a single project that has distinct and separate stages, so that you work on only one task at a time. However, you can also expand this structure for reports that cover either several projects or one project in which several tasks are performed simultaneously:

- What happened during the most recent time period?
- Project A (or Task A)
- Project B
- What's expected to happen during the next time period?
- Project A
- Project B
- When, you prepare reports that cover more than one project or more than one task, you might also consider organizing around those projects or tasks:
- Work on Project A (or Task A)
- What happened during the last time period?
- What's expected to happen during the next time period?
- Work on Project B
- What happened during the last time period?
- What's expected to happen during the next time period?

This organization works very well in reports that are more than a few paragraphs long because it keeps all the information on each project together, making the report easy for readers to follow.

Emphasizing Important Findings and Problems

As mentioned, your findings and problems are important to your readers. Your findings are important because they may involve information that can be used right away by others. The problems you encounter are important because they may require your readers to change their plans. Because your findings and problems can be so important to your readers, be sure that you devote enough discussion to them to satisfy your readers' needs and desires for information. Also, place these devices so that they are easy to find.

Conclusions

Your conclusions are your overall views on the progress of your work. In short progress reports, there may be no need to include them, but if your report covers many projects or tasks, a conclusion may help your readers understand the general state of our progress.

Recommendations

If you have any ideas about how to improve the project or increase the value of its results, your readers will probably want you to include them. Your recommendations might be directed at overcoming problems in the future or they might be directed at refocusing or otherwise altering the period.

LESSON 29

PROPOSALS

Outline

- Proposal
- The Variety of Proposal Writing Situations
- Proposal Readers are Investors
- The Questions Readers Ask Most Often
- Strategy of the Conventional Superstructure for Proposals
- Various Lengths of proposals
- Superstructure of Proposals
 - o Introduction
 - o Problem
 - o Objectives
 - o Product
 - o Method
 - o Resources
 - o Schedule
 - o Qualification
 - o Management
 - o Costs

Proposal

A **proposal** is a special type of analytical report designed to get products, plans, or projects accepted by outside business or government clients.

The Variety of Proposal Writing Situations

You may write proposals in a wide variety of situations. Your readers may be employed in your organization, or they may be employed in other organizations. Your readers may have asked you to submit a proposal, or you may submit it to them on your own initiative. Your proposal may be in competition against others, or it may be considered on its own merits alone. Your proposal may need to be approved by various people in your organization before you submit it to your readers, or you may submit it directly yourself. You may have to follow regulations concerning the content, structure and format of your proposal, or you may be free to write your proposal entirely as you think. Once you have delivered the proposal to your readers, they may follow any of the wide variety of methods for evaluating it.

Example- Situation 1

Helen wanted a permission to undertake a special project. She thought that her employers should develop a computer system that employees could use to reserve conference rooms. She concluded that her company needed such a system as she had arrived for a meeting several times only to find out that the room was reserved. As she is employed to write computer programs, she is well qualified to write one. However, she cannot work on it without the permission of her boss. Consequently, she wrote a proposal to them.

As she wrote, she had to think about two people, her boss and her boss's boss, who had to decide without consulting other people. Because her employers had no specific guidelines, she could use any format, structure and content to write her proposal. Furthermore, she did not need anyone else's permission to write the proposal, although she would need an approval for sending a proposal to another department.

Finally, Helen did not need to worry about competition from other departments, because hers would be considered on its own merits. However, her proposal had to be persuasive enough to convince her readers that her time would be better utilized than doing her regular duties.

Example- Situation 2

The second proposal was written under much different circumstances than was Helen's. To begin with, three people wrote it. The writers were a producer, a scriptwriter and a business manager, seeking funds from a non-profit organization, and the federal government to produce television programs. The department learned that the Government was interested in making programs about the environment. To learn more about what the Government wanted, the writers obtained copies for "requests for proposals".

In their proposal, the writers addressed an audience much different from Helen's. The government receives about four proposals daily, one it can fund. To evaluate the proposals, it sends the proposals to experts in the country. The reviews of these proposals are reviewed by the staff of the Government. Those that receive the best response are funded.

Before the writers could even mail the proposal to the Government, they had to obtain the approval for it from several administrators at the station. That is because the proposal if accepted would be a contract between the station and the Government. By means of its approval process, the station assures itself that all the contacts it makes are beneficial to it.

Proposal Readers are Investors

The proposals written by Helen and the three writers from the TV station illustrate some of the differences between different proposal writing situations.

Despite these differences, however, almost all proposal writing situations have two important features in common.

- In your proposals, you ask decision-makers to invest some resources, such as time and money, so that the thing you propose can be done.
- Your readers will make their investment decisions cautiously. They will be accurately aware that their resources are limited, that if they decide to invest in the purchase of projects you propose, those resources will not be available for other uses.

The Questions Readers Ask Most Often

As cautious investors, proposal readers ask many questions about purchases, projects, and others things proposed to them. But from situation to situation the questions remain basically the same. Furthermore, the answers that people at work find persuasive and satisfying are also the same type.

Problem

Your readers will want to know why you are making the proposal and why they should be interested in it. What problems, need, or goal does your proposal address – and why is that problem, need, or goal important to them.

Solution

Your readers exactly want to know what you propose to do and how it relates to the problem you described. Therefore, they will ask “What kind of a solution will be a successful solution to this problem has to do?” They might ask “How do you propose to do these things?”

They will examine carefully your responses, trying to determine whether it is likely that your overall strategy and your specific plan will work.

Costs

What will be your proposed product or activity cost your readers and is it worth the cost to them?

Capability

If your readers pay or authorize you to perform this work, how do they know they can depend on you to deliver what you expected?

Strategy of the Conventional Superstructure for Proposals

The conventional superstructure for proposals is a framework for answering those questions one that has been found successful in repeated use in the kinds of situations you will encounter on the job. When you follow this superstructure, you provide information on the up to ten topics, which will be discussed shortly. In some cases, you will include information on all ten topics, but in others you will cover only some of them. Even in the briefest proposals, however, you will probably need to treat the following four topics:

- Introduction
- Problem
- Solution
- Costs

When you provide information on the above mentioned topics, however, you should do much more than provide data. You should also try to make persuasive points. The following tables describe the persuasive points for each of the ten superstructures.

Topic	Your reader's questions	Your persuasive points
Introduction	What is the communication about?	Briefly, I propose to do the following.
Problem	Why is the proposed project needed?	The proposed action addresses a problem that is important to you.
Objectives	What features will a solution to this problem need in order to be successful?	A successful solution must achieve the following objectives.

Topic	Your reader's questions	Your persuasive points
Product	How do you propose to do those things?	Here is what I plan to produce and how it will work effectively at achieving the objectives.
Method Resources Schedule Qualifications Management	Are you going to be able to deliver what you described here?	Yes, because I have a good plan of action; the necessary facilities, equipment etc...
Costs	What will it cost?	The cost is reasonable.

As you write, you need to see the relationships among the ten topics. Think of them as a sequence in which you lead your readers through the following progression of thoughts. The readers learn generally what you want to do (**Introduction**). The readers are persuaded that there is a problem, need, or goal that is important to them (**Problem**). The readers are persuaded that the proposed action plan will be effective in solving the problem, meeting the need, and achieving the goal that readers now agree is important (**Objectives**).

The readers are persuaded that you are capable of planning and managing the proposed solution (**Method, resources, schedule, qualifications and management**). The readers are persuaded that the cost of the proposed action is reasonable in the light of the benefits the action will bring (**Cost**). There is no guarantee that your readers will actually read your proposal from beginning to end or concentrate on each and every word you write.

Consider how readers approach long proposals

Each volume of your proposal is evaluated by a different set of experts, specializing in their own domains. Even when readers do not read your proposal straight through, the account given above of the relationships among the parts can help you. You can write keeping in mind a tightly focused proposal in which all the parts support one another effectively.

Various Lengths of Proposals

The preceding discussion mentions proposals that are several volumes long. Such proposals can run into hundreds or even thousands of pages. On the other hand, some proposals are less than a page. How do you know how long your proposals should be? Sometimes you can be brief and

still very persuasive. Often you need to touch upon only a few of the ten items listed in the table described before.

For instance, Helen's proposal involved only one person Helen. Similarly, her proposal didn't need any management plan because her readers were already aware of her abilities as a writer of programs. She didn't have to say anything about them, except perhaps to say a few words about the experience she had in writing such programs. And because she was asking only two weeks' time to prepare the program; she didn't have to present a detailed budget report, though she needed to justify her proposal schedule.

In other situations such as writing to NASA or some other big department you need to write lengthy proposals. Those proposals will be long as you would need to address the ten topics, and your discussion of each of these topics must answer fully the questions you have. Finally, in order to decide how long a proposal should be, you must think about your readers, anticipating their questions and their reactions to what you are writing.

Superstructure for Proposals

In the remaining of the lecture, we will describe in detail each of the ten topics that form the conventional superstructure for proposals. As you go along, keep in mind that the conventional superstructure represents only a general plan. You must use your imagination and creativity to adapt it effectively to your particular situation. In addition, as you plan and write your proposal, remember that the ten topics identify the kinds of information you need to provide, not necessarily the titles of sections you will include. In brief proposals, some parts take only a sentence or a paragraph, so that several are grouped together.

For example, writers often combine their announcements of their proposal, their discussion of the problem, and their explanation of the objectives under a single heading which might be "Introduction", "Problem" or "Need". Also remember that the conventional superstructure may be used with any of the three common formats:

1. Letters
2. Memos
3. Books

While writing your proposal, you should have sufficient information about the particular format you are going to see.

Introduction

At the beginning of a proposal you want to do the same thing that you do at the beginning of something else you write on the job. Tell your readers what you are writing about. In a proposal this means announcing what you are proposing. How long and detailed should the introductory announcement be? In proposals, the introductory announcements vary considerably in length but are almost always very brief. By custom the writers reserve the full custom of what they propose until later, after they have discussed the problem that their proposal will help to solve. You may be able to introduce your proposal in a single sentence. Helen did this in her proposal, 'I request a permission to spend two weeks writing, testing and implementing a program for scheduling

conference rooms.’ When you propose something more complex than a two-week project, you may need more words to introduce it. In addition, sometimes you may need to provide background information to help your readers understand what you have in mind.

Problem

Once you have announced what you are proposing, you must persuade your readers that your proposed action will address the problem significant to them. Your description of the problem is crucial to the success of the proposal. You must not only define the problem but also make the problem seem relevant to the readers. When the readers define the problem for you, you need to do the least research. This can happen when the reader has asked you to submit the proposal. In such situation, your primary purpose in describing the problem will be to show your readers that you thoroughly understand what they want.

In some situations, you may not have the aid of explicit statements from your readers to help you formulate the problem. This is most likely to happen when you are preparing a proposal on your own initiative, without being asked by someone to submit it. In this case, you need to devote research and creativity in writing a proposal. You should also find out what sort of problem your readers will consider important.

Product

When you describe the product your proposal will produce, you explain your plan for achieving the objectives you told your readers about. To describe your product persuasively, you need to do the following three things:

- Tell your readers how you reach your objectives.
- Provide enough details to satisfy your reader.
- Explain the desirability of the product of your project.

Method

Sometimes the decision makers who act upon proposals need to be assured that you can, in fact, produce the results you promise. That happens especially in situations where you are offering something that takes special expertise – something to be customized or created only if your proposal is approved.

Resources

By discussing the facilities, equipment, and other resources to be used for your project, you assure that your readers will use the required equipment properly. If part of your proposal is to request the equipment, tell your readers what and why you need to acquire.

Schedule

People who read or listen to your proposals have several reasons for wanting to know the schedule of your plan. The most common way to present a schedule is to provide a schedule chart. The details of schedule charts will be discussed in future lectures.

Qualifications

When proposal readers are thinking of investing in your project, they want to be sure that the proposers have the experience and capability to carry out the project properly. For that reason, a discussion of the qualifications of the personnel involved with the project is a standard part of the most proposals.

Management

When you propose a project that involves more than about four people, you increase the persuasiveness of your proposal by describing the management structure of your group. That's because proposal readers know that even qualified people cannot work effectively if their activities are not coordinated.

Costs

When you propose something, you are asking the readers to invest resources, usually money and time. Naturally, you need to tell them how much the project will cost. In some proposals, you may demonstrate the reasonableness of the proposal as well by calculating the savings that will result from your project.

LESSON 30

INSTRUCTIONS

Outline

- The Variety of Instructions
- Three Important Points to Remember
- Instructions Shape Attitudes of the Readers
- Good Visual Design is Essential
 - Page Design
 - Visual Aids
- Testing of Instructions is Often Indispensable
- Conventional Superstructure for Instructions
 - Introduction
 - Subject
 - Aim
 - Intended Readers
 - Scope
 - Organization
 - Usage
 - Motivation
 - Background
 - Description of the Equipment
 - Theory of Operation
 - List of Materials and Equipment
 - Directions

The Variety of Instructions

If you were to look at a sampling of the various kinds of instructions written at work, you would see that instructions vary greatly in length and complexity. The simplest and the shortest are only a few sentences long. Consider, for example, the instructions that the state of Ohio prints on the back of the 1 x 1 -inch registrations stickers that Ohio citizens must buy and affix to their automobile license plates each year: Position sticker on clean, dry surface in lower right-hand corner of rear plate (truck tractor front plate). If the plate has a previous sticker, you should place new sticker to cover old sticker. Rub edges down firmly. Other instructions are hundreds—or even thousands of pages long. Examples of these long and highly complex instructions are those written by General Electric, Rolls Royce, and McDonnell Douglas for servicing the airplane engines they manufacture. Other examples are the manuals that IBM, Control Data, and NCR write to accompany their large mainframe computers.

This chapter describes the superstructure for instructions in a way that will enable you to use the patterns for any instructions you write at work, whether long or short.

Three Important Points to Remember

While writing instructions, you should keep in mind the following three points:

- Instructions shape attitudes of the readers.
- Good visual design is essential.
- Testing of the instructions is often indispensable.

Each of these points is discussed briefly in the following paragraphs.

Instructions Shape Attitudes of the Readers

All the communications you write at work have a double aim: to help your readers perform some task and to affect your reader's attitudes in some way. However, many writers of the instructions focus their attention so sharply on the task they want to help their readers perform that they forget about their readers' attitudes.

To write effective instructions, you must not commit this oversight. The most important attitude with which you should concern yourself is that of your reader's toward the instructions themselves. Most of the readers dislike using instructions. When faced with the work of reading, interpreting and following a set of instructions, they are often tempted to toss the instructions aside and try to do the job using common sense.

However, you and your employer will often have good reasons for wanting people to use the instructions you write. Maybe the job you are describing is dangerous if it isn't done a certain way, or maybe the product or equipment involved can be damaged. Maybe you know that failure to follow instructions will lead many readers to an unsatisfactory outcome, which they might then blame on your employer.

For these reasons, it is often very important for you to persuade your readers that they should use your instructions. In addition, as an instructional writer, you may want to shape your readers' attitudes toward your company and its products. If your readers feel that the product is reliable and that the company thoroughly backs it with complete support (including good instructions), they will be more likely to buy other products from your employer and to recommend those products to other people.

Good Visual Design is Essential

To create instructions that help your readers and also shape their attitudes in the way you want, you must pay special attention to instructions. These include visual design, including both page design and the design of the drawings, charts, flow diagrams etc.

Page Design

In instructions, you need to have a good page design for several important reasons. First, readers almost invariably, use instructions by alternating between reading and acting. They read a step and then do the step, read the next step and do that step.

By designing your pages effectively, you can help your readers easily find the instructions for the next step each time they turn their eyes back to the page. This may seem a trivial concern, but readers quickly become frustrated if they have to search through a page or paragraph to find their

required step. When readers are frustrated by a set of instructions, they may quit trying to use them.

Through good page design you can help your readers grasp quickly the connections between related blocks of material in your instructions, such as the connection between an instruction and a drawing or other visual aid that accompanies it. It is also important to remember that the appearance of instructions influences the readers to use or not to use them. If the instructions appear dense and difficult to follow or if they appear unclear and unattractive, readers may decide not even to use them.

Visual Aids

You can increase the effectiveness of most instructions by including visual aids. Well designed visual aids are much more economical than words in showing readers where the parts of the machine are located or what the result of a procedure should look like. On the other hand, visual aids that are poorly planned and prepared can be just as confusing and frustrating for readers as poorly written prose.

Testing of the Instructions is Often Indispensable

It may seem that instructions are among the easiest of all communications to write and, therefore, among those that need to be tested. After all, when you write instructions, you usually describe a procedure you know very well. Your objective is to tell the reader as clearly and directly as possible what to do. Actually instructions present a considerable challenge to the writer. You will find that it is often difficult to find the words that will tell your readers what to do in a way that they will understand quickly and clearly. Also because you know the procedure so well, it will be easy for you to accidentally leave out some critical information because you don't realize that your readers may need to be told it.

The consequences of even relatively small slips in writing even only a few directions in a set of instructions can be very great. Every step contributes to the successful completion of the task, and the difficulties the readers have with any step can prevent them from completing the task satisfactorily. Even if the readers eventually figure out how to perform all the steps, their initial confusion with one or two can greatly increase the time it takes them to complete the procedure. Furthermore, in steps that are potentially dangerous, one little mistake can create tremendous problems.

For these reasons, it is often absolutely necessary to determine for certain whether your instructions will work for your intended audience. And the only way to find this out for sure is to give a draft to the representatives of your audience and ask them to try the instructions. Gather information without interfering with the readers' activity.

Conventional Superstructure for Instructions

The conventional superstructure for instructions contains five elements:

- Introduction
- Description of the equipment (if the instructions are for running a piece of equipment)
- Theory of operations

- Lists of material and equipment
- Guide to trouble shooting

The simplest instructions contain only directions. The most complex instructions contain some or all of the other five elements, the selection depending upon the aims of the writer and the needs of the readers. Many instructions also contain elements found in longer communications such as reports and proposals.

Among these elements are cover, title page, table of contents, appendixes, list of references, glossary, list of symbols and index. Because these elements are not particular to instructions, they will not be discussed here in this lecture.

As we discussed earlier, some instructions contain only directions and no introduction. However, readers often find an introduction to be helpful – or even necessary.

In the following example, you will see how to apply that general advice when you are writing instructions. The conventional superstructure for instructions tells some or all of the following things about instructions:

- Subject
- Aim
- Intended reader
- Scope
- Organization
- Usage
- Motivation
- Background
- Directions

Subject

Writers usually announce the subject of their instructions in the first sentence. Here is the first sentence from the operating manual of a ten ton machine used at the ends of assembly lines that make automobile and truck tires. This manual tells you how to operate the Tire Uniformity optimizer. Here is the second sentence from the owner's manual for a small, lightweight, personal computer. This manual introduces you to the Apple Macintosh TM Computer. These sentences are intentionally kept simple for the sake of understanding.

Aim

From the beginning, readers want to know the answer to the question "What can we achieve by doing the things this communication instructs us to do?" With some instructions you write, the purpose or outcome of the procedure described will be obvious. For example, most people who buy computers know many of the things which can be done with them. For the reason, a statement about what computers can do, would be unnecessary in the Macintosh instructions, which in fact contain none. However, other instructions do have to answer readers' questions about the aim of instructions.

In operating instructions for pieces of equipment, for example, writers often answer the reader's questions about what the procedure will achieve by telling capabilities of the equipment, depending upon your options to use machine, it may do any or all of the following jobs.

- Test tires
- Find irregularities in tires
- Grind to correct the irregularities, if possible
- Grade tires
- Mark tires according to grade
- Sort tires by grade

Intended Readers

Many readers will ask themselves “Are these instructions written for us or for people who differ from us in interests, responsibilities, level of knowledge and so on?” Often readers will know the answer to that question without being told explicitly. In contrast, people who pick up computer manuals often wonder whether the manual will assume that they know more (or less) about computers than they do. In such situations, it is most appropriate for you to answer the question you don't need to know anything about the Macintosh or any other Computer.

Scope

Information about the scope of the instructions answers the reader's questions, “What kinds of things will we learn to do in these instructions -- and what things won't we learn?” For example, the writers of a Tire Uniformity Manual would answer that question in their third or fourth sentence. The writers of the Macintosh manual answer the same question in this way. The manual tells you how to use the mouse and keyboard to control your Macintosh

Organization

By describing the organization of the instructions, writers answer the readers' question. How is the given information given here put together? Your readers may want to know the answer so they can look for specific pieces of information. They may want to know about the overall organization simply because they can then understand the instructions more rapidly and thoroughly than they could without the instructions. The writers of the Macintosh Manual announce its organization at the same time they tell the manual's scope.

Usage

As they begin to use the set of instructions, readers often ask themselves “How can we get the information we need as quickly as possible?” Sometimes the obvious answer is to simply follow the instructions from beginning to end or to look for a certain set of steps and then to follow them. The manual for the Tire Uniformity optimizer is used in just such a straightforward way, so it contains the special advice about how readers should use it. In contrast, in some of the instructions you write, you may be able to help your readers considerably by providing the advice about how to use your communication.

Motivation

As pointed out above, when people are faced with the work of using a set of instructions, they often are tempted to toss the instructions aside and try to use the job using common sense. You can do several things to persuade your readers not to ignore your instructions.

For instance, you can use an inviting and supportive tone and an attractive appearance; such are used in Macintosh Manual.

You can tell the user directly, why it is important for him to read the manual and follow the instructions. In the examples that follow, we describe two kinds of statements that writers provide.

Examples

- ‘From the operating instructions of typewriters’
- To take advantage of the automatic features of the IBM 60 you need to take time to do the training exercises offered in this manual.
- ‘From the operating instructions of an office Photocopy Machine’
- Please read the manual thoroughly to ensure correct operation.

Background

The particular pieces of background information your readers need, vary from one instruction to the next. Two kinds of background information are important:

- A description of the equipment
- Explanation of the theory of operations

Directions

- Present the steps in a list.
- In your list give one set at a time.
- For example,
 - First drain the canister.
 - Release the latch that locks the canister’s drain cap.
 - Unscrew the cap.
- Use headings and titles to indicate the overall structure of the task.
- Use the active voice and imperative mood.
- Set the dial to seven (much simpler than “the operator then sets the dial to seven”).
- Use illustrations how to perform the steps.
- What should be the result?
- Place warnings where readers will see them before performing the steps to which they apply.
- Where alternative steps may be taken, help your readers quickly find the one they want.
- Provide enough detail for your readers to do everything they must do.

LESSON 31

USING VISUAL AIDS

Outline

- Visual Aids
- More Than Just Visual Aids
- Computers and Visual Aids
- Guidelines
- Clarify the Relationships Among Numerical Data
- Support Your Arguments
- Make Detailed Information Easy to Find
- Consider Your Readers' Tasks
- Consider Your Readers' Attitudes
- Make Your Visual Aids Simple
- Label the Important Content Clearly
- Provide Informative Titles
- Fully Integrate Your Visual Aids With Your Prose
 - Introduce Your Visual Aids in Your Prose
 - State the Conclusions You Want Your Readers to Draw
 - Make Your Visual Aids Easy to Find

Visual Aids

Visual aids can be defined as instructional aids such as posters, scale models, graphs, tables, diagrams, flow charts or videotapes, that present information visually.

Visual aids can be a great way of enhancing a presentation VISUALLY when they are used sensibly and with a clear purpose. Visual aids can add a new dimension to presentations.

More than Just Visual Aids

In some situations, visual aids can carry the entire message. For instance, if you've ever flown, you may recall reaching the pocket on the back of the seat ahead of you to pull out a sheet of instructions for leaving the plane in an emergency. Many airlines use sheets that are wordless.

Computers and Visual Aids

For instance, if you are using a program to make a line graph, you will still have to decide which variable to place on the horizontal axis and which on the vertical axis. You will still have to decide what intervals to use for your variables, and what your labels should say.

Guidelines

The first step in using visual aids effectively is to search actively for places where they can help you achieve your communication objectives.

Clarify the Relationships Among Numerical Data

On the job, you may need to describe the relationships among various pieces of data, which may be from laboratory research, surveys etc.

Visual aids can help you make those relationships immediately clear to your readers using graphs and other visual techniques.

Support Your Arguments

You can also use visual aids to present information in support of your persuasive points. For example, the manufacturer of a plastic insulating material can use visual aids like graphs to persuade greenhouse owners of the comparable effects of different kinds of plastics.

Make Detailed Information Easy to Find

For many tasks, visual aids are much easier than prose for readers to use. For example, a manufacturer of photographic film wants to inform trainees about the time period, they should leave the film in the developer solution. Since the time depends on several factors like tank size, and temperature etc., the information can be conveyed effectively using a simple table.

Consider Your Readers' Tasks

Different visual aids are suitable for different reading tasks, often the same information can be presented in many different ways. For instance, Ben has collected information on the starting salaries of people who graduated from three different departments. Which visual aid should he use?

Consider Your Readers' Attitudes

In addition to thinking about your readers' tasks, you should also look to pick the type of visual aid that most quickly and dramatically communicates the evidence that supports your persuasive point.

For instance, showing the effect of a decrease in revenue in a line graph is much more suitable than a tabular form which requires the readers to do a lot of subtracting to appreciate the extent of the decrease. Although they are very informative to people who understand the symbols and conventions used, they will only baffle others. Be especially careful to avoid making the mistake of assuming your potential readers know how to read specialized figures.

Make Your Visual Aids Simple

Avoid the temptations of cramming too much information into your visual aids. Sometimes, two or three visual aids can communicate the same information more effectively than one. Simplifying visual aids also means removing unnecessary details.

Label the Important Content Clearly

While it is important for you to eliminate unnecessary details from your visual aids, it is also critical to include labels for the important content. Labels also help people know what they are seeing when they read a figure.

Provide Informative Titles

Titles help your audience find the visual aids they are looking for and know what the visual aids contain when they find them. To help your audience understand and use your visual aids, you should make the descriptive part of your titles as brief – yet informative – as possible.

Titles typically include both a number and a description. Visual aids are numbered consecutively, either in one long sequence through the entire communication, or with a new sequence in each chapter.

According to the custom, the numbers assigned to figures are usually Arabic (1, 2, 3...) while numbers assigned to tables are either Arabic or Roman (I, II, III...)

You should note that sometimes you *don't* need to provide a title for a visual aid. That happens, for instance, when you are including a very short table in your text in a way that makes perfectly clear what it contains. Similarly, the visual aids in brochures are often untitled, though they are much rarer in reports and proposals.

Fully Integrate Your Visual Aids with Your Prose

You should integrate your visual aids with your prose so that they work together harmoniously to create a single, unified message.

Three ways to do that are:

- Introduce your visual aids in your prose.
- State the conclusions you want your readers to draw.
- Make your visual aids easy to find.

Introduce Your Visual Aids in Your Prose

Sometimes, your introduction to a visual aid will have to include information your readers or listeners need in order to understand or use the visual aid. Whatever kind of introduction you make to a visual aid, place it at the exact point where you would like your readers to focus their attention to it.

State the Conclusions You Want Your Readers to Draw

You might find it helpful to think of the sentences in which you explain a visual aid's significance as a special kind of topic sentence. Just as the topic sentence at the head of a paragraph, you can tell your audience the point to be derived from the various facts that follow.

Make your Visual Aids Easy to Find

If you place the figure farther away than that (for instance in an appendix), you can help your readers by providing the number of the page on which the figure may be found.

LESSON 32

CREATING TWELVE TYPES OF VISUAL AIDS

Outline

In this lecture, we will learn how to construct:

- Tables
- Bar graphs
- Pictographs
- Line graphs
- Pie charts
- Photographs
- Drawings
- Diagrams
- Flow charts
- Organizational charts
- Schedule charts
- Budget statements

Tables

The table is one of the most versatile and widely used visual aids. Tables are used so often because they can help writers achieve several common objectives. For example, they are an excellent tool for groups of detailed facts in a concise and readable form.

How to construct a table?

To create a table, you should systematically arrange information in rows and columns. You should adjust the basic structure as needed to create an attractive visual aid that your readers will find easy to use. For example, if your table is crowded you can separate columns (or groups of columns) with vertical lines, and to help them read across rows, you can place horizontal or leave a blank row after every five lines or so.

Note that fancier variations of the basic design may be used where attractiveness is especially important, as in advertising brochures and annual reports to stockholders.

When deciding how to display your information within the framework of your table, you have several basic decisions to make:

- How to order the rows and columns
- Which labels to use for the columns and which for the rows
- How to align entries in the columns
- Where to place special notes

Bar Graphs

Like a table, a bar graph can represent numerical quantities, which is done using rectangles called bars. The greater the quantity, the longer the bar will be.

Some uses of bar graphs are as follows:

1. To compare quantities at a glance
2. To show trends
3. To indicate the composition of a whole

How to construct a bar graph?

Begin by drawing your axis so that your graph will be roughly square. In graph, along one axis place tick marks at regular intervals to indicate quantities (\$5 million, \$10 million etc.; 50 psi, 100 psi, etc.). Plan the tick marks so that the longest bar will extend nearly to the end of its parallel axis.

How to avoid misleading your readers?

A common mistake that results in accidentally misleading the readers is to omit the zero point on the axis that shows the quantity. If you simply cannot use the entire quantity scale, indicate that fact to your readers, perhaps by using hash marks to signal a break in the quantity axis in the bars themselves.

Pictographs

Pictographs are a special kind of bar graph in which the bars are replaced by drawings that represent the thing being described. The chief advantage of the pictograph is that it uses drawings to symbolize concretely the quantities you are talking about in your graph. You will find pictographs especially useful where you want to do one or both of the following:

- Emphasize the practical consequences of the data represented.
- Make your data visually interesting and memorable.

How to create a pictograph?

The procedure for creating a pictograph is nearly identical to that for creating a bar graph. The difference is that you draw pictures instead of rectangles to represent quantities.

How to avoid misleading your readers?

Like bar graphs, pictographs can mislead the reader if they are not drawn properly. When using pictographs, you can avoid misleading your readers if you keep all of your pictures the same size and use more of them to represent greater quantities.

Line graphs

A line graph shows how one quantity changes as a function changes in another quantity. You can use line graphs in many ways, including the following:

- To show trends and cycles

When you want to show a pattern of change over time, line graphs can be very helpful – especially when compared with a table.

- To compare trends

Line graphs are also very useful for showing readers how two or more trends compare with one another.

- To show how two or more variables interact:

Line graphs are well-suited to display interactions between variables.

How to create a line graph?

In line graphs, you generally show how variation in one thing (called the *dependent variable*) is affected by variation in another thing (the *independent variable*). Line graphs almost always show the dependent variable on the vertical axis and the independent variable on the horizontal one. Time is usually treated as an independent variable so it goes on the horizontal axis.

Mark off each axis at regular intervals, using labeled tick marks. In some situations, however, your readers may find it easier to read your line graph if you extend the tick marks all the way across the graph to form a grid. If you do this, make the grid with a thinner line than you use to represent the quantities you are describing, so that your data stands out.

Pie Charts

Pie charts are unsurpassed in their ability to depict the composition of a whole. For example, to show how much each of several food sources contributes to the total amount of dietary fat consumed by the average American.

How to create a pie chart?

To create a pie chart, you draw a circle and draw lines that slice it into wedges. Each wedge occupies a portion of the circle's circumference proportional to the amount of the total pie that the wedge represents. Arrange the wedges in a way that helps your audience determine the rank order of the wedges and compare the relative sizes of particular wedges.

Photographs

With a photograph, you can show your readers exactly what they would see if they personally were to look at an object. Photographs can help you achieve a variety of communication purposes such as:

1. *To show the appearance of something the readers have never seen:* This could include a new product, or the inside of the human heart etc.
2. *To show the condition of something:* For example, result of a skin treatment etc.
3. *To help the readers recognize something:* For example, in a lab manual you might include photographs that would enable your readers to identify the imperfections they might encounter in steel sheet.
4. *To help your audience find something:* For example, you could show parts of machinery in an instructional manual.

Diagrams

A diagram is much like a drawing except that drawings accurately convey the actual appearance of things, diagrams depict subjects more abstractly.

Diagrams can convey complex information, such as the system used for industrial processing of fruits, without actually showing the actual machinery.

How to create a diagram?

- Decide exactly what you want to show.
- Create an appropriate means to represent your subject with geometric shapes, or perhaps sketches that suggest their appearance.
- Provide the explanations people need in order to understand your diagram as a separate key, in the title or as part of the diagram itself.

Flow Charts

Flow charts are an excellent means of representing the succession of events in a process or procedure. The simplest flow charts use rectangles, circles, diamonds, or other geometric shapes to represent events, and arrows to show the progress from one event to another.

How to create a flow chart?

A few conventions govern the creation of flow charts.

The labels that identify the activities are placed *inside* the boxes that represent those activities. Boxes are arranged so that activity flows from left to right, or from top to bottom, or both.

Organizational charts

An organizational chart uses rectangles and lines to represent the arrangement of people and departments in an organization. It reveals the organization's hierarchy, indicating how the smaller units are combined to create larger units. It also indicates who reports to whom and who gives direction to whom.

How to create an organizational chart?

Because of the hierarchical nature of most business organizations, organizational charts are usually pyramidal. You do not need to show every part of the organization, only those relevant to your readers. Sometimes, you may need to represent more than one kind of relationship by using different lines for the different relationships.

Schedule charts

A schedule chart identifies the major steps in a project and tells when they will be performed. They are often used in project proposals to show the proposer's plan of work.

You can also use schedule charts in progress reports to show what you have accomplished and what you have left to do.

How to create a schedule chart?

One of the principal considerations in creating a schedule chart is deciding how much detail to include, which depends on the audience's needs and expectations.

Tasks are always listed along the vertical axis, with indentation used to distinguish subtasks from major tasks.

Intervals (weeks, months) are usually marked off with vertical lines to help the readers.

Budget statements

A budget statement is a table that shows how the money will be gained or spent.

It may be very simple or very elaborate depending on your reader's needs.

On the job, you can use budget statements in the following situations:

- To explain the expenses involved with a project purchase.
- To summarize the savings to be realized by following a recommendation you are making.
- To report the costs that have been incurred by a project for which you are responsible.
- To explain the sources of revenue associated with some project or activity.

LESSON 33

WRITING SPECIFICATIONS AND ANALYSIS REPORTS

Outline

- Introduction
- Types of Specifications
 - Requirement Specifications
 - Functional Specifications
 - Design Specifications
 - Test Specifications
- Analysis Reports
- Title Page
- Abstracts
- Table of Contents
- List of Symbols
- Introduction
- Discussion
- Conclusion
- Recommendations
- Appendix

Introduction

For everyone involved in the design phase of the computer industry– hardware engineers, software engineers, technicians, and programmers – specifications are the most important document to be read or written. The situation is even worse when work has to be undone or redone because of bad specifications. Specifications can be categorized into four types:

- Requirement specifications
- Functional specifications
- Design specifications
- Test specifications

Requirement Specifications

The result of market research is requirement specifications. In it, the marketing people attempt to specify what the market is looking for, what people or companies who use computers would find useful and would like to have.

Product definition

This is as accurate a description as can be written by marketing about the desired product. It should answer the question: “What is it?”

Functions list

This is a description of what the desired product should be capable of doing. It leads to the next type of specification.

Cost

This is a ballpark estimate as to what the desired product should cost to be competitive in the marketplace. We then move onto the functional specification.

Functional Specifications

These specifications will form the basis for the highly precise design specifications.

Hardware functional specifications as a rule should contain the following:

- Functional description
- Configuration specification
- Electrical description
- Physical characteristics
- Standards
- Environmental requirements
- Diagnostic requirements
- Power requirements
- Cost target
- Maintenance cost target
- Resource requirements
- Documentation
- Risks
- Assumptions
- Unresolved issues
- Glossary

Software functional specifications usually contain the following:

- Functional description of the product
- Product features dependencies
- Physical characteristics
- Risks
- Assumptions
- Cost target
- Maintenance
- Resources
- Documentation
- Glossary

Design Specifications

Design specifications are later used as the basis for test plans and user documentation.

Hardware design specifications generally contain some version of the following components:

- Introduction
- Applicable documents
- Functional description
- External interfaces
- Detailed design
- Programming considerations
- Power requirements
- Reliability
- Diagnostic considerations
- Standards
- Environmental requirements
- Glossary

Software design specifications should contain the following:

- Introduction
- Application documents
- Functional description
- General design
- Memory requirements, performance, and restrictions
- Product requirements
- Test strategy
- Deviations from functional specifications
- Interfaces
- Glossary

Test Specifications

Test specifications contain the following:

- Introduction
- Applicable documents: these documents might describe test procedures on similar products designed and developed in the past.
- Description of unit to be tested.
- Testing method: this section provides a step-by-step description of the testing procedure.
- Precautions
- Glossary

Analysis Reports

The important thing to remember is that no report format is perfect. Company documentation standards attempt to resolve the issue by prescribing a format into which all analysis reports are poured. Report design should be flexible enough to meet a variety of writer purposes and audience needs.

Title Page

A title page should be designed with the visual order in mind. It should be balanced from top to bottom and from left to right. It should provide enough information for readers to be able to tell what the context of the report is and what the report is about.

Abstracts

Abstracts are condensations of entire reports, focusing on the main issues: what was done, what was found out, and its significance. Abstracts are self-sufficient. The procedure for many companies is to take the abstract from the analysis report, copy it a number of times, circulate it to readers, and allow readers to order the full report if they feel like they need the information.

Table of Contents

The table of contents provides an outline of analysis reports for readers who do not wish to read the entire report or flip through it looking for the section which contains what they are looking for. It should be made up of headings and subheadings of the report, word-for-word, with the accompanying page numbers.

List of Symbols

This is an optional addition to the front matter of an analysis report. Include it if you think the readers will need to have symbols defined. The same thing applies to the inclusion of a glossary.

Introduction

This is the place for the three-part purpose statement introduction. It will orient readers to the main issue of the report, to the technical issues which are important to the report, and to what the report is intended to accomplish.

Discussion

The discussion contains an analysis of the technical issues important to the report. It supports the main issue of the report by providing evidence and explanations. It should be subdivided into topics, each with a subheading.

Conclusion

This section presents the results of the analysis, the evaluation of what was presented in the discussion. Sometimes, listing the conclusion is a good way to organize them. It calls attention to the conclusion individually, but still enables writers to explain them as is necessary.

Recommendations

Recommendations are optional, not all analysis reports have them. Those reports that do have recommendations, tell the readers what to do with the information provided in the report.

Appendix

Usually this would include derivations of equations, tables of raw data, sample equations, and so forth. Whatever is placed in the appendix should be according to the audience needs.

LESSON 34

HOW TO AVOID COMMON WRITING PROBLEMS

Outline

- Writer's Block
- Lack of a Well-Defined Purpose
- Poorly Analyzed Structure
- Lack of Confidence
- Organizational Problems
- Punctuation Problems
- Readability Problems
 - Gunning's Fog Index
- Writing Style Problems
- How to Edit your Work
 - Organizational Logic
 - Mechanical Development of the Topic
 - Writer's Style
 - Quality of the Manuscript

Writer's Block

Writer's block is what we call the experience of getting stuck while writing. Although the results are the same, there are many factors of writer's block: lack of information, lack of a well-defined purpose, poor knowledge of the audience, and lack of confidence etc.

Lack of Information

If it is the result of poor research, then you will have to stop writing and collect more information. If you find yourself doing this often, you might correctly guess that you have a problem in defining your communication purpose.

Lack of a Well-Defined Purpose

A poorly defined purpose of your communication will inevitably make writing more difficult, and may block it altogether. Sometimes, you will experience this as a lack of information; often you will notice it since paragraphs, sections, or entire reports or papers shift topic in the middle. In any case of poorly defined purpose, the solution is the same. Develop a three-part purpose statement for the communication, and develop an outline of topic sentences based on the purpose statements.

Poorly Analyzed Audience

Audience analysis that is performed poorly or not at all can be the source of writer's block. At such times you find yourself staring at the video display screen wondering who is going to read your report and what on earth they want from it.

Lack of Confidence

Lack of confidence in your abilities as a writer is a common factor of writer's block, and it is usually self-fulfilling. If you do not think you can communicate effectively, you will not be able to write. Your systematic approaches of writing problems are the solution to this problem.

Organizational Problems

Organizational problems are discovered during the editing phase. Finding and fixing these problems is what makes editing important. If they are not fixed, readers experience these organizational problems as complete breakdowns in communication.

Punctuation Problems

Accurate punctuation does not ensure accurate communication, but accurate communication is tremendously enhanced by accurate punctuation. Take the following punctuation test, first without looking at the correct version which follows, to see how well you know punctuation. The test focuses on the most common punctuation problems in technical writing.

Incorrect

"Professor Bashir wrote The Future of Artificial Intelligence he has become well known as a result."

Correct

"Professor Bashir wrote "The Future of Artificial Intelligence"; he has become well known as a result."

Readability Problems

Readability is a buzz word with which most of us are familiar. Much has been said about it, and there are numerous formulas which supposedly test it. Readability is the likelihood that a project audience will be able to read and comprehend a piece of documentation.

Gunning's Fog Index

This is a simple formula aimed at locating the audience on a grade scale which is supposedly based on their reading abilities.

- Select a part of the text which is approximately 100 words long, to the nearest period. Introductions, leads, and conclusions usually exhibit slightly different communication techniques which will skew the accuracy of this test.
- Count the number of sentences in the selected text.
- Determine the average length of sentences by dividing the number of words in the text by the number of sentences.
- Count the number of words which have three or more syllables. But *do not* count words which are capitalized, words which have three syllables because prefixes or suffixes have been added, or words which are combinations of one- or two-syllable words.
- Add the number for the average sentence length to the number of three-syllable words in the text.
- Multiply this sum by 0.04.
- The result is the Fog Index. If you place it on a scale of 1-20, you will be able to have the approximate reading level required to understand the text.

Writing Style Problems

Style is a result of sentence structure. Although you might not think so, sentence structure is simple and easy to understand. There are four basic types of sentences:

Subject-verb sentences (SV)

Example:

The programmer (S) quits (V).

Subject-verb-object sentences (SVO)

Example:

The programmer (S) kicked the terminal (O).

Subject-linking verb – complement sentence (SLVC)

Example:

The programmer (S) felt (LV) sick (C).

Subject-verb-indirect object – object (SVIO)

Example:

The programmer (S) gave (V) the engineer (IO) a headache (O).

How to Edit Your Work?

This lecture will present some ways that can be helpful for writers for assessing the quality of their work and the work of others. Good editing divides the task of improving a document into a limited number of areas which are:

1. Organizational logic
2. Mechanical development of the topic
3. Writer's style
4. Quality of the manuscript

Organizational Logic

The work should have the organizational logic. Organizational logic can be achieved by arranging the events chronologically or spatially.

Mechanical Development of the Topic

Look to see if there is a transition between paragraphs, even between sentences. Transition is what links the ideas together. Transition can be accomplished in three ways:

- a) The writer might repeat an important word in two adjoining paragraphs or sentences.
- b) Structure can accomplish transition.
- c) Transitional words and phrases can be used to establish links between ideas in an obvious way, such as "Finally".

Writer's Style

If you wish to sell an idea or a product, then the style must be persuasive. If you wish to convey information only, such as in a report to superiors, then the style should appear to be passively objective.

Quality of the Manuscript

The last thing a writer needs to examine when editing a document is the quality of the manuscript. A manuscript should be visually attractive. This means that it should have proper order, that is, there should be obvious divisions and subdivisions. A manuscript should invite readership. Have you ever seen a report or paper which had writing crowded out to the edges of the paper from top to bottom and side to side? Such a manuscript looks hard to read.

The type should be clear in a manuscript, and the production should not be sloppy. A report or paper must be sufficiently detailed. Only the writer knows how much detail is sufficient. There should be enough detail, though, to satisfy the projected readers' needs for information. If the writer has paid attention to logical organization and development of the topic, the document will be detailed and as short as it has to be. After this, the document must be proofread, which should not be confused with editing. Proofreading is a quick checking for errors, while editing requires being judgmental.

LESSON 35

LANGUAGE REVIEW

Outline

- Paragraph Unity
- Paragraph Coherence
- Transitional Words and Phrases
- Common Transitional Words and Phrases
- Paragraph Development
 - Exemplification
 - Narration
 - Process
 - Description
 - Analogy
 - Cause and Effect
 - Comparison and Contrast
 - Classification and Division
 - Definition
 - Analysis
 - Enumeration

Paragraph Unity

The latest electronic innovation, still under development is called "adaptive optics." Adaptive optics is an electronic feedback mechanism capable of correcting the distorting effects of the earth's atmosphere and thus allowing much sharper images of astronomical objects. The earth's atmosphere is constantly shimmering, because of moving pockets of air and changes in temperature, and such shimmering causes passing light rays to bend one way then another. In effect, the shifting atmosphere acts as a rapidly changing lens, smearing out and defocusing images. In adaptive optics, motorized cushions are replaced behind the telescope's secondary mirror and constantly reshape the mirror's surface to counteract the defocusing effect of the atmosphere.

The cushions are given instructions by a computer, which analyzes the image of a "guide star" in the same field of view as whatever the telescope is looking at. With no atmospheric distortion, the image of a star should be a single point of light. By analyzing how the actual image of the guide star differs from a point, the computer can infer the distortion of the atmosphere and tell the cushions how to alter the mirror to bring the guide star, and all the objects near it, back into sharp focus. Corrections must be made rapidly, because the atmosphere is rapidly shifting. In practice, the computer will analyze the image of a guide star and give new instructions to the reshaping cushions every 0.01 to 0.1 seconds.

--Alan Lightman, *Ancient Light*

Topic sentence

Time became a key word in the language of physics during the seventeenth century. Isaac Newton wove the passage of time directly into his equations, as in *force = mass × acceleration*. Today, it is difficult for any physicist to examine the universe without thinking of time in much the same way as the illustrious Briton did more than 300 years ago. Most of the laws of physics continue to be written in the style of Newton; they are designed to show how things change from one moment to the next. Each event under study, such as the path of a ball thrown into the air or the thermodynamics of a melting ice cube, is broken down into a series of freeze-frames that, run like a movie, show how nature works.

Newton had placed a clock upon the mantel of the universe. This Newtonian time piece ticked and ticked, chiming like some cosmic Big Ben, in step with all the celestial inhabitants, no matter, what their speed or position. That meant that a clock situated at the edge of the universe or zipping about the cosmos at high velocities would register the same passage of time, identical minutes and identical seconds, as an earthbound clock. More important, the Newtonian clock was never affected by the events going on around it. Time was aloof and absolute, alike for all as galaxies collided; solar systems formed, and moons orbited planets. **Time led an independent existence, separate from nature itself.**

Marcia Bartusiak, "When the Universe Began, What Time Was It?" *Technology Review*

Paragraph Coherence

Weak Version

Limited investment in the housing sector makes it practically impossible to allocate sufficient resources for urban dwellers' housing needs. A high rate of urban population growth has increased the country's needs for housing. A small group of city officials has laid out a new plan to combat the crisis. A solution to the housing-shortage problem is a vital policy issue here. The housing problem has grown in the last twenty years. [Although related by topic (housing shortage), each sentence makes its own separate point with no link to the sentences before or after. The result is a group of related yet separate ideas instead of one coherent paragraph.]

Improved Version

Limited investment in the housing sector makes it practically impossible to allocate sufficient resources for urban dwellers' housing needs. **In fact, the problem has grown in the last twenty years. Because** a high rate of urban population growth has increased the country's needs for housing, a solution to the housing-shortage problem is a vital policy issue here. A small group of city officials has laid out a new plan to combat the crisis. [Each separate fact now flows into the next, creating a coherent whole.]

Samuel Nunn, "Role of Local Infrastructure Policies and Economic Development Incentives in Metropolitan Inter Jurisdictional Cooperation," *Journal of Urban Planning and Development*

Transitional Words and Phrases

Weak version

Reducing drag in an aerospace vehicle is an important design consideration with financial and operational consequences. Poorly designed rocket fuselage scan triple fuel and launch costs. Drag

increases stress on key joints. This proposed project will develop a model to reduce aerodynamic drag on the RX100.

Improved version

Reducing drag in an aerospace vehicle is an important design consideration. **For example**, poorly designed rocket fuselages can triple fuel and launch costs. **Moreover**, drag increases stress on key joints. **Therefore**, this proposed project will develop a model to reduce aerodynamic drag on the RX100.

Linking Pronouns

Weak version

In 1912, the German chemist von Laue hypothesized that in a crystal x-ray, scattering patterns are related to atomic spacing. A series of experiments demonstrated the wave nature of x-rays and the periodic arrangement of atoms. Spots on a photographic plate provided the proof for the hypothesis.

Improved version

In 1912, the German chemist von Laue hypothesized that in a crystal x-ray, scattering patterns are related to atomic spacing. **His** series of experiments demonstrated the wave nature of x-rays and the periodic arrangement of atoms. Spots on a photographic plate provided the proof for **his** hypothesis.

Repetition of Key Words

Weak version

This broadcast packet switching should be distinguished from the store-and-forward variety. To handle the demands of growth, our system can be extended using repeaters for signal regeneration, filters for traffic localization, or gateways for internet work address extension.

Improved version

This broadcast **packet** switching should be distinguished from the store-and-forward variety. To handle the demands of growth, our system can be extended using **packet** repeaters for signal regeneration, **packet** filters for traffic localization, or **packet** gateways for internet work address extension. [The main point, *packets*, is now highlighted.]

R. M. Metcalfe and D. R. Boggs, "Ethernet: Distributed Packet Switching for Local Networks" (modified)

Paragraph Development

Develop paragraphs in a variety of patterns that reflect your thinking about the material. As you write the topic sentence and its supporting sentences, look for ways to structure your thinking. Where one author advances his or her material by narrating a series of events, another undertakes a physical description and another undertakes an analysis of the topic.

Exemplification

Use exemplification in paragraphs to provide instances that clarify your topic statement.

In the following paragraph, the topic sentence is supported in examples that illustrate, support, and clarify the main point.

Example

Vitamins and minerals can be added to enrich (replace nutrients lost in processing) or fortify (add nutrients not normally present) foods to improve their nutritional quality. Breads and cereals are usually enriched with some B vitamins and iron. Common examples of fortification include the addition of vitamin D to milk, vitamin A to margarine, vitamin C to fruit drinks, calcium to orange juice, and iodide to table salt.

--P. Insel and W. Roth, *Core Concepts in Health*

Narration

Use narration to establish a series of events that tells the reader what happened. Narration follows a chronological pattern of development. It is a convincing mode of paragraph development to the extent that it tells a coherent story. This pattern or time line is usually very easy to understand.

In the following narrative, the first narrative paragraph is followed by two descriptive paragraphs. Note the use of transitional words such as thereafter, first, next, and after.

Containment and Treatment of the Love Canal Landfill Leachate Temporary Treatment Program

The carbon feasibility studies were completed in October, 1978. Immediately thereafter, the U.S. Environmental Protection Agency (EPA) "Blue Magoo" was dispatched to the site to provide on-site emergency treatment. First, wastewater generated during construction was collected, pH adjusted, clarified, sand filtered, and carbon treated. Next, treated effluent was analyzed and was found to confirm Calgon's study findings. After this process, the New York State Department of Environmental Conservation granted a discharge permit on October 27, 1978.

On October 29, 1978, the EPA Emergency Treatment System was replaced by a larger system provided by Newco Chemical Waste Systems, Inc. and Calgon Corp. . .

The two-stage adsorption system, providing ongoing treatment at the Love Canal site, is a skid-mounted system designed for rapid installation. The absorbers are pressure vessels, complete with all process and carbon transfer piping, valving, and instrumentation. Each absorber holds awful truckload of 9,072 kg (20,000 lb) of granular carbon and can hydraulically process up to 662l/min (175 gal) of wastewater. When a carbon bed is spent, the spent carbon is pneumatically and hydraulically transferred to. . .

--W. McDougall and R. A. Fusco, "Containment and Treatment of the Love Canal Landfill Leachate," *Journal of the Water Pollution and Control Federation*

Process

Use process in paragraphs to develop sequences that describe how an action is carried out or how something works. The following paragraph shows a typical sequential treatment of a general physical phenomenon. Note the concentration of process verbs such as *to find*, *samples*, *sums*, and *provides*.

Example

Ideally, an image should contain a region of high-intensity pixels that form the target, and a low-intensity background. To find the target region, the algorithm first samples the images in overlapping windows and sums the pixel intensities contained in each window. The window with the highest sum is assumed to contain the target, and the average of the remaining windows is assumed to be indicative of the background level. Thus, subtracting the average of the window sums from the highest window sum provides a measure of the target strength over the background noise level. If an image does not contain a target, then the difference between the highest sum and the average sum will be very small. The difference will also be small for images containing faint targets and high levels of background noise.

--M. Menon, E. Boudreau, and P. J. Kolodzy, "An Automatic Ship Classification System for ISAR Imagery," *Lincoln Laboratory Journal*

Description

Use descriptive prose to provide a physical picture or a functional view of the subject. Physical description develops a picture by identifying the shapes, materials, position, and functions of its subject. Such prose often serves as the raw material for more elaborate forms of analytical prose.

Boundary-Layer Test Section

The test section (0.86 m × 2.44 m) of the boundary layer tunnel is situated between the nozzle and the diffuser. It consists of a flat aluminium test plate, a contoured wall, and two transparent side walls. A bleed-scoop layer at the leading edge of the test plate removes the inlet boundary layer. The contoured wall opposite the test plate generates the required pressure distribution. The two differently-contoured walls used in this investigation generate either squared-off pressure distribution or aft-loaded pressure distribution.

--O. P. Sharma et al., "Boundary Layer Development on Turbine Airfoil Suction Surfaces," *Transactions of the ASME*

Analogy

Use analogy to explain one object or process in terms of another. The aptness of the analogy is generally a point of subtle judgment. Some analogies are more valid than others. Comparing an apple to the space shuttle is not likely to be an effective analogy. Explaining the Internet by reference to a highway system might make a better analogy. In the following analogy, a body infection is compared with an invading army of attack organisms.

Example

The Immunological Defenders and How They Work

The immune response of billions of cellular defenders is carried out by different kinds of white blood cells, all of which are continuously being produced in the bone marrow. Neutrophils, one type of white blood cell, travel in the blood stream to areas of invasion, attacking and ingesting pathogens. Macrophages, or "big eaters," take up stations in tissues and act as scavengers, devouring pathogen sand worn-out cells. Natural killer cells directly destroy virus-infected cells

and cells that have turned cancerous. When lymph nodes are actively involved in fighting an invasion of microorganisms, they fill with lymphocytes.

P. Insel and W. Roth, *Core Concepts in Health*

Cause and Effect

Use cause and effect in paragraphs when you are tracking the development of one situation or event out of another. Cause and effect is an analytical mode of paragraph development. It attempts to show how events are influenced by or caused by others—the linkage of causation. In the following paragraph, the development follows the inductive pattern of reasoning from effects back to causes.

Example

Global climate change resulting from the accumulation of greenhouse gases, for example, is likely to have significant health effects, both direct and indirect. An average global temperature rise of 3-4°C, predicted for the year 2100 by the Intergovernmental Panel on Climate Change, will greatly increase the number of days in the United States with temperatures over 38°C(100°F), with a resulting sharp rise in heat-related mortality. Deaths would occur primarily from heat strokes, heart attacks, and cerebral strokes. The very young, poor, and elderly, as well as those with chronic cardiovascular and respiratory diseases, are most at risk. During the two-week heat wave of July 1993 in the eastern United States, 84 people died in Philadelphia alone as a result of the higher temperatures.

E. Chivan, "The Ultimate Preventive Medicine," *Technology Review*

Comparison and Contrast

Use comparison and contrast to develop a topic by examining its similarities or dissimilarities to another thing, process, or state. Comparison emphasizes the similarities, contrast the differences. A paragraph may use both comparison and contrast. In the following example, two kinds of electrical cable are compared. The aim here is to convey the superiority of A over B for two categories of performance.

Coaxial vs. Fiber-Optic Cable: Comparative Cable-Length Performances

For a number of critical performing characteristics, fiber-optic cable offers considerable advantages over standard coaxial cables. The most obvious distinction between the two is the greater bandwidth-distance capacity of fibers. The high-frequency capacity of coaxial cables decreases rapidly with increased length, but the bandwidth of a commercial fiber-optic system will remain constant with length. A commercial fiber-optic system like that of Artel, remains constant for a bandwidth over a distance of 4,000 ft, while three different sizes of coaxial cable rapidly drop in less than half the distance.

For RG-179 coax, a 1,024 × 1,024 signal is limited to 50 ft; RG-59 rolls off 3 dB at 170 ft. Larger, bulkier cables such as RG-11 can reach up to 250 ft, but are impractical to install, since three such cables are required for RGB color. Fiber-optic cable, on the other hand, allows transmission of more than 60 MHz video clock over a mile, and 20 MHz over 2½ miles, with no repeaters or equalizers.

Noise interference is another important area in which performance differs greatly. Coaxial cables are susceptible to induced interference (EMI/RFI) from such noise generators as fluorescent lights, computers, power cables, industrial equipment, and even other communications cables. Cable frequency equalization further aggravates this noise problem. Fiber-optic cable is, in contrast, immune to all forms of EMI, RFI, and crosstalk.

--Artel Communications Corporation, "Fiber Optics in RGB Color Computer Graphics Communications," Application Note CG-1

Classification and Division

Use classification and division to develop material by relating parts to wholes. In classification, you associate similar things or processes by grouping them into classes. You can classify organisms, mechanisms, processes according to shapes, magnitudes, effects, and so on. In division, you develop a topic by breaking it down into smaller parts. Classification is the tutorial prose strategy. It is an effective approach for showing the terrain of a subject by elaborating upon its essential types. In the following example, corrosion-resistant ceramics are broken down into types.

Acid Service: Choice of Materials

Careful design and selection of corrosion-resistant ceramics by process engineers and designers is necessary for long-lasting, reliable, and cost-effective ceramic linings for process equipment. The following types of ceramics are used for acid service.

These bricks are manufactured from iron-bearing sedimentary clays prepared with low-melting additives. The clay mixture is extruded through a die and then wire-cut into individual bricks. The units are fired to form a bond of melted material between the clay particles. . . .

Stoneware and porcelain: A vitreous or semi-vitreous ceramic ware, stoneware is made with a fine texture, low-melting-point fireclay. The uniform, chemically resistant microstructure of a stoneware part offers chemical resistance throughout its service lifetime. Stoneware is used in distributors, packing supports, and. . .

Glazed ceramic tile: Industrial glazed ceramic tile units are made of fireclays with an iron oxide content of less than 2%. The clays are processed and then extruded into various shapes. The shaped parts are coated on the process side before firing with a glass-forming glaze solution. Then the tile is fired, the clay body. . .

--Adapted from K. Brooks and M. W. Martin, "Ceramics Stand Up to Acid Service," *Chemical Engineering*

Definition

Develop paragraphs by definition when you want to set working generalizations that will help control the meaning and scope of important terms. Defining is an effective way of controlling the scope of terms. In the following paragraph, an extended definition is used as part of the introduction to a research article. The intention here is both to establish the terms of the discourse and to establish the importance of the subject. By exploring the meaning of the term

bimetals, the writer creates a shared concept that focuses the discussion that follows. Note the use of other devices, such as functional description and enumeration.

Bimetallic Components

Bimetals are components made up of two separate metallic units, each occupying a distinct position in the component. Bimetal rods or wires (also called clad metal, duo- or dual-metal) are made of dissimilar metals. The rod core, a cylindrical body made of one metal, is surrounded by a concentric, cylindrical sleeve of another metal. Some fibrous metals may also be regarded as bimetallic; for example, rods made by unidirectional solidification of some eutectic compositions contain a metallic (or nonmetallic) compound of fibrous filaments embedded in an almost pure metallic matrix. The structure of a present-day Nb-Sn superconducting core can be even more complex. It is multi metallic--containing more than two dissimilar metals. The two elements of a bimetallic product are usually intimately interlocked, so that they function in unison.

Bimetal rods or wire stems make it possible to combine properties of dissimilar metals. For example:

- Aluminium-clad steel wire combines the strength of steel with the electrical conductivity and corrosion resistivity of aluminium.
- Superconductor core clad with copper sleeve combines superconductivity at cryogenic temperatures with assurance against failure when a local temporary rise in resistance or temperature occurs.

Although the number of desired bimetallic combinations for practical use is virtually unlimited, manufacturing difficulties restrict the number of bimetallic combinations actually in use.

--Based on B. Avitzur et al., "Criterion for the Prevention of Core Fracture during Extrusion of Bimetal Rods," *Journal of Engineering for*

Analysis

Analysis examines a subject by evaluating one of its aspects--weighing evidence and possible causal linkages. It resembles other forms of paragraph development, especially classification and division. The object of analysis, however, is to get to the center of how something works. The following paragraph considers the link between cancer, poverty, and stress.

One possible explanation for these statistics on cancer can be found in the high levels of stress associated with poverty. Studies have found that stress can dampen the immune system, the body's first line of defence against cancer, and experiments with animals have shown that a stressful environment can enhance the growth of a variety of tumours. The link between poverty, stress, and cancer mortality in humans has not been proven, but studies have shown a link between stress and other illnesses.

--Thomas D. Fahey, Paul M. Insel, and Walton T. Roth, *Fit and Well: Core Concepts in Physical Fitness and Wellness*

Enumeration

Use enumeration in paragraphs when you want to itemize or list a set of topics or a series of some kind. Enumeration is a powerful way to establish a series of observations and to emphasize each element. In the following paragraph, the items are enumerated in a series of itemized recommendations.

Have your blood cholesterol measured, if you've never had it done. Finger-prick tests at health fairs and other public places are generally fairly accurate, especially if they're offered by a hospital or other reputable health group. When you know your "number," follow these guidelines from the National Cholesterol Education Program:

- If your cholesterol is under 200 mg/dl, maintain a healthy lifestyle--including eating a low-fat diet, getting regular exercise, maintaining a healthy body weight, and not smoking--and get another test within five years.
- If your cholesterol is between 200 and 239 mg/dl, have a second test performed and average the results. If that number falls in the same range, and if you do have any form of cardiovascular disease, change your diet to improve your cholesterol. In addition, eliminate any other risk factors you have and get tested again in about one year.
- If your cholesterol is 240 mg/dl or more, your physician should order a more detailed cholesterol analysis and recommend therapy based on the results. You should begin a cholesterol-improving diet immediately.

--P. Insel and W. Roth, *Core Concepts in Health*

LESSON 36

LANGUAGE REVIEW: SENTENCES

Outline

- Stacked Modifiers and Nouns
- Wordiness
 - Passive Voice and Active Voice
 - Nominalizations
 - Unnecessary Repetition
 - Unnecessary Words and Phrases
- Overloaded Sentences
 - Sentence Fragments
 - Comma Splice
 - Fused Sentences
 - Stringy Sentences
- Agreement

Stacked Modifiers and Nouns

Avoid using long strings of modifiers or nouns. These stacked modifiers and nouns can be hard to read and sometimes create ambiguity. Add a few words (especially prepositions and conjunctions) to make the relationships between nouns clear to the reader.

Wordiness

Say what you have to say in as a few words as possible without sacrificing clarity or omitting vital information. Conciseness is desirable in all writing, but especially so in technical writing. Excessive use of the passive voice, excessive nominalization, unnecessary repetition, and unnecessary words and phrases are some common causes of wordy writing.

Passive Voice and Active Voice

Use the active voice whenever the passive voice is not appropriate. Active verbs make for concise prose; sentences with passive verbs use more words. Moreover, passive verbs de-emphasize or even eliminate mention of the performer of the action conveyed by the verb.

Nominalizations

Where possible, use verb forms instead of noun forms. Excessive or unnecessary nominalization (turning verbs into nouns) can make your writing wordy because it requires a noun and a verb instead of just the verb form.

Unnecessary Repetition

Avoid unnecessary repetition. One of the most common types of unnecessary repetition involves modifiers that repeat information given in the word modified. We will discuss further a few examples of recognizing and eliminating repetition.

Unnecessary Words and Phrases

Make sure that each word and phrase in your sentences contributes to meaning and clarity. Try to avoid the two commonly used constructions *There is/are*. . . And *It is*

Delete superfluous material when you revise your first draft.

Overloaded Sentences

Avoid sentences that contain more information than the reader can easily follow.

Instead, divide such sentences into more manageable pieces that can be easily grasped.

Sentence Fragments

A sentence fragment is missing a subject, a verb, or both, but is punctuated as if it were a complete sentence.

Examples

1. Driving in the city during the evening rush hour.
2. To apply for a job at the new store in the mall.

Comma Splice

Never link two independent clauses with just a comma; this is known as a comma splice error.

Examples

1. The sun is high, put on some sun block.
2. This computer doesn't make sense to me, it came without a manual.

You can correct a comma splice in four ways:

- Separate the independent clauses into two separate sentences. Punctuate both sentences with periods.
- Replace the comma with a semicolon or with a semicolon and a conjunctive adverb such as *however* or *furthermore*. (The conjunctive adverb is then normally followed by a comma.)
- Replace the comma with a comma and a coordinating conjunction.
- Make one of the clauses into a subordinate clause.

Fused Sentences

Do not allow two independent clauses to run together without a conjunction or punctuation between them. This error produces a fused sentence. To join two main clauses, follow the options listed under comma splice.

Examples:

I got up late this morning I didn't have time for breakfast.

The sun is 93 million miles away it can still burn a person's skin badly.

Stringy Sentences

Avoid stringing several clauses that would be easier to read and understand if they were broken up into separate clauses. The following example makes the point of how incoherent the language becomes with the use of stringy sentences.

Agreement

Agreement between subject and verb and between a pronoun and its antecedent is important for paragraph coherence, as well as for style and grammar.

When editing your document, check for agreement, paying close attention to subjects, verbs, and pronouns. Make sure your subject agrees with your verb (subject-verb agreement).

Make sure your pronouns agree in gender and number with their antecedents (pronoun-antecedent agreement). Make sure the form of your pronoun is appropriate for how you are using the pronoun in the sentence (pronoun case). For the sake of clarity, make sure your pronouns are closely linked to their antecedents (pronoun reference).

LESSON 37

LANGUAGE REVIEW: SENTENCES II

Outline

- Lack of Parallelism
- Choppy Sentences
- Interrupted Sentence Structure
- Modifiers of Nouns
- Adverb Modifiers
- Dangling Modifiers
- Double Negatives
- Inappropriate Shifts
- Sequence of tenses
- Pronoun Reference
- Pronoun Case

Lack of Parallelism

Parallelism refers to the principle that parts of a sentence which are the same in function should be the same in structure. Words or phrases joined by coordinating or correlative conjunctions should have the same form. All items or phrases in list(s) must be parallel. Make sure all headings and subheadings are parallel with the other headings and subheadings of the same level. Make sure that all entries of the same level in an outline are parallel.

Example

Incorrect: An important consideration in **orthopedic surgery** and **how to implant prostheses** is the possibility of infection.

Correct: An important consideration in **orthopedic surgery** and **prosthesis implants** is the possibility of infection.

Choppy Sentences

Avoid using too many short sentences that will create choppy prose. Vary your sentence types and combine short related sentences by making some elements dependent clauses or phrases.

Misplaced Modifiers

To ensure clarity, place your modifiers carefully. Make sure that your placement of modifiers does not interrupt the sentence structure or create ambiguity.

Interrupted Sentence Structure

Placing a modifier between the subject and the verb or between the verb and the direct object can weaken the structure of the sentence and make the sentence difficult to interpret. In general, longer and more complicated modifier weakens the sentence.

Although, you can often get away with interrupting the structure of the sentence with a short (one-word) modifier, adding a longer modifier significantly worsens the sentence.

Example

Weak: The heron, egret, and stork colonies in Everglades National Park that once each contained tens of thousands of birds whose bustling extravagance helped inspire the founding in 1905 of the National Association of Audubon Societies (later the National Audubon Society) have shrunk by 95 percent since the 1930s.

Improved: The bird colonies in Everglades National Park once each contained tens of thousands of birds whose bustling extravagance helped inspire the founding in 1905 of the National Association of Audubon Societies (later the National Audubon Society). These colonies of herons, egrets, and storks have shrunk by 95 percent since the 1930s.

Modifiers of Nouns

Modifiers of nouns should be placed either immediately before or immediately after the noun. If another phrase is used to separate the noun and its modifier, the modifier may be misinterpreted as applying to a noun in the separating phrase rather than to the original noun.

Example

Weak: More than 750 metric tons of lead ingots were examined by the quality control inspectors that circle the base of the tower. [The ingots, not the quality control inspectors, circle the base of the tower.]

Improved

- More than 750 metric tons of lead ingots that circle the base of the tower were examined by the quality control inspectors.
- The quality control inspectors examined more than 750 metric tons of lead ingots that circle the base of the tower.

Adverb Modifiers

Adverbs should be placed as close as possible to the words or phrases that they modify. If you allow an adverb to be separated from the word or phrase that it modifies, the interpretation of the adverb may become ambiguous. Always place a quantity adverb immediately before the word it modifies.

Dangling Modifiers

A modifier whose connection to the sentence is implied or intended but not actually made explicit is said to be dangled. Dangling modifiers disturb the clarity of your writing, so you should make sure that your modifiers are properly connected to the words they modify. To repair a dangling modifier, add the noun or phrase to whom the modifier was intended to modify and rephrase the sentence accordingly.

Example

Weak: When traveling at the speed of sound, the moon is approximately 320 hours away. [The moon does not travel at the speed of sound.]

Improved: An object traveling at the speed of sound will reach the moon in approximately 320 hours.

Double Negatives

Use only one negative word to express a negative idea. In English, using two negative words to express one negative idea creates a positive rather than a negative interpretation.

Example

The water management model simulated how water would flow through today's Everglades if all the pumps, gates, and other water control devices had not never been built. [Not never means at some time.]

Faulty Comparisons

Comparing one item with another can be a very powerful way to describe an object or a process (see the discussion of comparison and contrast). To make your comparison effective, however, you must maintain parallelism in your comparison. Include the basis of your comparison, and ensure that your comparison is not ambiguous.

Nonparallel Comparisons

When you construct a comparison, you must make the two items being compared parallel in structure.

Example

He likes cricket and playing football. (Incorrect)

He likes cricket and football. (Correct)

Incomplete Comparisons

Incomplete comparisons should be avoided to ensure clarity in your writing. To be complete, a comparison must include both the item being compared and the item it is being compared with. If you leave out the item being compared with, the reader may not understand your intended meaning.

Example

Shoaib Akhtar is a better player. (Incorrect)

Shoaib Akhtar is a better player than Bret Lee. (correct)

Inappropriate Shifts

Be consistent in your choice of tense, mood, person, and voice. Shifting any of these categories without good reason will detract from the clarity of your writing.

Inappropriate Shifts in Tense

As a general rule, verb tenses within a sentence or a paragraph should be consistent. A shift in tense without reason distorts the sequence of events being described and will confuse your reader. For example, if you begin a description with a verb in the past tense, do not switch to a verb in the present tense.

Inappropriate Shifts in Mood

Mood (indicative, imperative, or subjunctive) is used to express the attitude of the writer toward the state or action, or the certainty or truthfulness of the state or action.

Be consistent in your choice of mood. A shift in mood without reason will confuse your reader. For example, do not combine an imperative clause with an indicative clause in the same sentence.

Example

Incorrect

Read the instructions carefully [imperative] and you must assemble the equipment completely [indicative] before beginning the procedure.

Correct

1. Read the instructions carefully [imperative] and assemble the equipment completely [imperative] before beginning the procedure.
2. You must read the instructions carefully [indicative] and assemble the equipment completely [indicative] before beginning the procedure.

Sequence of Tenses

Choose the tenses of your verbs accurately to express the timing or sequence of events that you are describing. Often, the particular sequence of events that you are describing will require you to use several different verb tenses within a single sentence or paragraph. Although it is appropriate to vary your verb tenses in accordance with the actual timing of the events, you should avoid shifting tenses unnecessarily.

Sequence of Tenses and Timing of Events

To emphasize that an event occurred or was completed before another event, use a form of the perfect auxiliary *have*.

Example

The reaction appears to have finished already.

Pronoun Reference

Pronoun reference refers to the identification of a pronoun with its intended antecedent. Two common problems in pronoun reference are unclear pronoun reference and broad pronoun reference. Make sure all of your pronouns can be easily identified.

Unclear Pronoun Reference

Use a pronoun instead of a noun only if the connection to the intended antecedent of the pronoun is quite strong. Make sure no other nouns with the same gender and number appear between your pronoun and its intended antecedent. Otherwise, your pronoun reference may be unclear.

Example

Weak: When a second character arrives at the port before the first character has been unloaded, the port stores the second character in the same register, overwriting it.

Improved: When a second character arrives at the port before the first character has been unloaded, the port stores the second character in the same register as the first one, overwriting the first character.

Broad Pronoun Reference

Use a demonstrative pronoun only if the connection to the intended antecedent of the pronoun is quite strong. Otherwise, your pronoun reference may be too broad, thus unclear.

Example

Weak: The sophisticated computer sound system lets the user input pitch and duration from the MIDI keyboard. This facilitates musical transcription. [Does **this** refer to the sophisticated computer sound system, to letting the user, or to the inputting of pitch and duration?]

Improved: Sophisticated computer sound systems let the user input pitch and duration from the MIDI keyboard. This direct input facilitates musical transcription.

Pronoun Case

A pronoun can appear in one of three cases:

- subjective, in which the pronoun functions as a subject
- objective, in which the pronoun functions as an object
- possessive, in which the pronoun functions as a possessor

The following list shows the subjective, objective, and possessive forms of the personal pronouns.

Subjective	Objective	Possessive
I	Me	My
You	You	Your
He	Him	His
She	Her	Her
It	It	Its
We	Us	Our
They	Them	Their
Who	Whom	Whose
Whoever	Whomever	Whose

Important Links

<http://www.mhhe.com/mayfieldpub/tsw/toc.htm>

LESSON 38

LANGUAGE REVIEW

Outline

- Words and Punctuation
- Abstract and General Language
- Vague Language
- Ornate Language
- Technical Terms
- Biased Language
- Sexist Language
 - Ageist Language
 - Language Biased against People with Disabilities
 - Ethnically and Racially Biased Language
- Punctuation
- Periods
- Commas
 - Introductory Elements
 - Coordinating Conjunctions Joining Independent Clauses
 - Elements in a Series
 - Coordinate Modifiers
 - Nonrestrictive Modifiers
 - Parenthetical Elements
 - Elliptical Constructions
 - Specialized Uses of Commas
 - Superfluous Commas
 - Placement of Commas with Other Punctuation

Abstract and General Language

Clear writing consists of specific, carefully chosen words, not abstract and general language. Prose cluttered with language that is overly abstract, ornate, or vague becomes unreadable, either too dense or too vague to be understandable.

Vague Language

Although the amount of detail in your writing will depend on your audience, use specific facts whenever possible. These facts make the difference between vague assertions and accurate scientific reporting.

Ornate Language

- Clear writing uses the simplest, most direct words possible
- Used for their own sake, ornate words simply distract the reader from your main point

Technical terms

Technical terms are an essential part of all technical and scientific writing. Each field and specialty typically uses a vocabulary that relays a variety of specialized concepts by means of technical language. These special terms convey concentrated meanings that have been built up over significant periods of study of a field. Match terminology to the ability of the audience. You may use a term with great accuracy and still not reach your audience. It is important that you should be aware of your audience's level of understanding. If they are not experts in your field, you will need to substitute more general terms for your specialized terms. It means that you may not be able to write with great accuracy about your topic.

Biased Language

Avoid language that could be interpreted as biased on the basis of sex, age, physical ability, or ethnic or racial identity. Instead, use language that is inclusive and avoids unintended stereotypes, and refer to people and groups using labels they prefer. Some of the categories/types of biased language are:

- Ageist language
- Language biased against people with disabilities
- Ethnically or racially biased language

Punctuation

Punctuate your prose in order to help clarify how words, clauses, and sentences fit together. Many scientific and technical organizations have detailed style guides outlining appropriate and inappropriate uses of punctuation for technical documents in their respective disciplines. Follow the appropriate style in your particular field. Detailed information on punctuation marks is given in the following entries:

- Periods .
- Commas ,
- Colons :
- Semicolons ;
- Question marks ?
- Exclamation points !
- Apostrophes '
- Quotation marks " "
- Hyphens –
- Dashes –
- Parentheses ()
- Brackets []

Periods

Use periods to indicate the end of declarative or imperative sentences. Failing to place a period after a complete sentence may produce a comma splice or fused sentence. Placing a period at the end of an incomplete sentence may produce a sentence fragment.

Example

The Newcomen engine utilizes the condensation of steam to create a partial vacuum beneath a piston.

Some Uses of Periods

- Use a period after numbers or letters in an enumerated list.
- End each item in an enumerated list with a period if one or more items in the list are complete sentences. (For the sake of parallelism, normally all items or none should be complete.
- If a vertical list completes a sentence begun in the introduction to the list, the final period is omitted unless the items in the list are separated by commas or semicolons.
- Periods stand for decimal points within numbers.
- Use ellipsis points, three periods with spaces between and on both sides, to indicate omitted portions of a quotation.
- If the omitted portion follows a sentence period (or other end punctuation), retain the end punctuation before the ellipsis points. Retain other punctuation marks that precede or follow the skipped portion for clarity and precision.
- Use a period after certain abbreviations, especially those that themselves spell words. Use a period after certain abbreviations, especially those that themselves spell words.
- Place a period inside quotation marks.
- Place a period after the parenthesis or bracket at the end of a sentence (unless the parentheses or brackets enclose a complete new sentence).

Commas

Use commas to keep your writing clear. Omitted or incorrectly used, commas can cause confusion or even change meaning. Commas should be used with the following elements:

Introductory Elements

Use commas to set off transitional words and phrases, introductory clauses, or introductory phrases to signal where the introductory element finishes and the main part starts.

Transitional Words and Phrases

Place a comma after a transitional word or phrase that begins a sentence.

Introductory Clauses

Place a comma after an introductory dependent clause.

Coordinating Conjunctions Joining Independent Clauses

Place a comma before a coordinating conjunction that joins two independent clauses. However, if the clauses are very short and closely related, you may omit the comma.

Elements in a Series

Use a comma to separate items in a series. Although placing a final comma before the coordinating conjunction is often considered optional, omitting it can sometimes cause confusion. Consequently, most scientific and technical writing routinely uses a final comma in a series to prevent possible ambiguities.

Coordinate Modifiers

Use a comma between coordinate modifiers. Modifiers are coordinate if they modify the same word. You can test to see if the modifiers are coordinate by inserting *and* between them. If the description still makes sense, then the modifiers are coordinate.

Non-restrictive Modifiers

Use commas to set off nonrestrictive modifiers. A nonrestrictive modifier is usually introduced by *which* and contains information that is not essential for establishing the meaning of what it modifies.

Parenthetical Elements

Use commas to set off parenthetical elements.

Elliptical Constructions

Use a comma to indicate the omission of a word or words readily understood from the context.

Specialized Uses of Commas

In numbers with five or more digits, Anglo-American usage dictates that there should be commas before groups of three digits, counting from the right, except for a group of three digits at the beginning of the number.

Examples

Customers reported a total of **212,413** hardware malfunctions.

In **1994, 212** cases had been diagnosed.

Memorization Superfluous Commas

Except after an introductory dependent clause, do not use a comma to separate a dependent clause from a main clause unless the dependent clause provides nonessential information.

Placement of Commas with Other Punctuation

Place commas inside quotation marks but outside parentheses.

LESSON 39

LANGUAGE REVIEW: PUNCTUATION II

Outline

- Colons
- Semicolons
- Question Marks
- Exclamation Marks
- Apostrophes
- Quotation marks
- Hyphens
- Dashes
- Parentheses
- Brackets

Colons

Use *colons* for the following purposes:

- to introduce and emphasize lists, quotations and explanations and certain appositional elements
- to express ratios
- to separate numbers signifying different nouns, such as in separating units of time or elements in a bibliographic citation
- to separate titles from subtitles

To Set off and Emphasize Lists

- The market for photovoltaic power systems includes the following items: intrusion alarms, flood monitors, calculators, and telephone call boxes.

OR

- The market for photovoltaic power systems includes the following items:
 - intrusion alarms
 - flood monitors
 - calculators
 - telephone call boxes

(Begin each element of lists, series, or phrases with lowercase letters.)

To Set off and Emphasize Quotations

- The contract reads: “DL-400 coaxial cable shall be used for all platform instrument installations at Site 5, unless a specific exception is justified in the approved work order.”
- Kulik noted: “Even potatoes are probably much better guarded today than radioactive materials.” Phil Williams, and Paul N. Woessner, “The Real Threat of Nuclear Smuggling,” Scientific American
(Place colons outside quotation marks.)

To Set off and Emphasize Explanations and Appositional Elements

- In designing the tachometer, the team first posed a question: What operations are needed on the input signal in order to generate the desired output?

To Express Ratios

- The ratio of drag torque to bearing friction torque cannot exceed 3:1
- The anti-GAP 43, anti-MAP 2, and anti-synaptophys in antibodies were diluted 1:1000, 1:300, and 1:100, respectively, in phosphate-buffered saline containing 10% bovine serum albumin.

Andreas Schwarz et al., "A Regulatory Role for Sphingolipids in Neuronal Growth,"
Journal of Chemical Biology

To Separate Units of Time

- The main thruster engines ignited at 7:05 a.m. EDT
- Thu Mar 16 03:21:44 1995

To Separate Elements in a Citation (in certain documentation styles)

- E. F. Lyon, "Airport Surface Traffic Automation," Lincoln Laboratory Journal 4:151 (1991)

Semicolons

- Use semicolons to join two independent clauses or to separate parts of a sentence that have commas in them
- **To Join Two Independent Clauses**
The system has three beam launchers; two are in the two-tube combiner, and one is in the OP receiver
- **To Separate Sentence Elements with Commas**
Italicize titles of journals, books, newsletters, and manuals; letters, words, terms, and equation symbols; foreign words; and names of specific vessels.

Question Marks

- Use a question mark to end an interrogative sentence.
Have past efforts to develop an AIDS vaccine been based on the wrong approach?
- Use a question mark to change a declarative or imperative sentence into a question.
Their testing of the system was exhaustive? [declarative changed to interrogative] Start production on Friday? [imperative changed to interrogative]
- When a directive or a command is phrased as a question, a question mark is optional.

Exclamation Points

In technical and scientific writing, use exclamation points only to end warning or caution statements or to add specialized scientific notation. For other purposes, use a period or question mark.

Apostrophes

Use apostrophes to form the possessive case of nouns and indefinite pronouns, and contractions. Optionally, apostrophes may also be used in the plurals of abbreviations and numbers. Form the possessive of singular nouns and indefinite pronouns and of plural nouns that do not end in -s by adding -'s.

Quotation Marks

- Unless the documentation style you are following specifies otherwise, use quotation marks:
 - To enclose the names of articles, short reports, and other brief documents cited in your document
 - To indicate direct quotations of speech or excerpts from other documents
- Do not put quotation marks around a quotation in block form (that is, indented to set it off from the main text).
- Avoid using quotation marks for emphasis.

To Enclose the Names of Articles, Short Reports, and Other Brief Documents

The source of the design information is the 1982 article “Boundary Layer Development on Turbine Airfoil Suction Surfaces,” which appeared in the *Journal of Engineering for Power*.

Hyphens

Use hyphens to link:

- certain prefixes, suffixes, letters, and numbers with nouns
- compound nouns
- compound modifiers
- spelled-out numbers

Also use hyphens for the following purposes:

- To clarify the meaning of certain words
- To divide words
- To express to or through between two letters or numbers
- For specialized scientific notation

To Link Certain Prefixes, Suffixes, Letters, and Numbers with Nouns

Use hyphens to connect certain prefixes to nouns. In most scientific and technical styles, the following prefixes are usually followed by a hyphen:

- all-
- ex-
- half-
- quasi-
- self-
- hex-

However, scientific and technical writing styles omit the hyphen between most prefixes, especially prefixes that are not words themselves. The following list of prefixes that normally are

not followed by a hyphen is adapted from Scientific Style and Format by the Council of Biology Editors:

aero	electro	meta	pre
after	exo	micro	pro
ante	extra	mid	pseudo
anti	geo	mid	re
astro	hemo	mini	semi
auto	hyper	multi	sub
bi	hypo	non	super
bio	in	over	supra
chemo	infra	photo	trans
co	inter	physio	un
counter	iso	poly	
de	macro	post	

When adding a prefix to a noun forms a homograph (a word with two meanings), use a hyphen for clarity.

multiply	multi-ply
recover	re-cover
unionize	un-ionize

Use hyphens to connect numbers or letters used as prefixes to a noun.

- The T-cell
- 10-cylinder

Use a hyphen to connect any prefix to a capitalized noun.

- post-Newtonian universe
- ex-Soviet scientist

In most cases, do not place a hyphen before a suffix.

In most scientific and technical styles, however, the following suffixes are preceded by a hyphen.

- designate
- elect
- type

To Link Compound Nouns

Use a hyphen to link compound nouns, especially when the lack of a hyphen would change the meaning of the term.

- light-year
- light year

[The first term is a unit of measurement, not of time; the second pair of words, on the other hand, may indicate a year that is not heavy.]

To Link Compound Modifiers

Use a hyphen to connect compound modifiers to promote clarity and prevent ambiguity.

Examples

- laser-alignment process [compound modifier + noun] laser alignment [modifier + noun]
- the two-tube combiner
- wire-grid aperture cap [aperture cap for a wire grid]
- wire grid-aperture cap [a wire cap for a grid aperture]
- wire-grid level adjustment
- wire grid-level adjustment
- heavy-water cavity [a cavity for heavy water]
- heavy water cavity [a water cavity that is heavy]

To Link Spelled-Out Numbers

Use a hyphen to join spelled-out numbers from 21 through 99 and spelled-out fractions.

Examples

- twenty-one moving parts
- the thirty-third experiment
- four-fifths of the subjects

To Divide Words

In general, avoid dividing words. However, use hyphens to split words at the end of a line to prevent large spaces between words in justified text and noticeably uneven margins in unjustified text. The following guidelines for dividing words are adapted from the Chicago Manual of Style and the NASA Style Guide and the Council of Biology Editors' manual.

- o Divide words between syllables. If you are unsure of the syllabification, consult a standard dictionary.
 - com-pu-ter

- o Divide between the compound parts of compound words:
 - light-year
- o Divide after a prefix or before a suffix:
 - intra-system
 - hyper-tension
 - maintain-ability
- o Divide a word after any two-letter syllable within a word but do not divide a word before a final two-letter ending.
- o Do not divide a word in which the part beginning the next line will appear to be a separate word.
- o Do not divide the last word of a paragraph or page.

To Stand for to or through between Letters and Numbers

Use hyphens to stand for through or to, especially in bibliographies and reference lists; however, when a number, letter, or date is preceded by the word from, use the word to instead of a hyphen.

Examples

- pages 25-63 sections 15.2-15.8
- 1901-1911
- from 1901 to 1911

Specialized Uses

Use a hyphen in the following circumstances:

- To represent single bonds in chemical formulas: $(\text{CH}_3)_2\text{-CH-CH}_2\text{-CH(NH}_2\text{)-OH}$
- Between the spelled-out name of a chemical element and the mass number of the specific isotope: Carbon-14
- Between sequences of amino acids: Asp-His-Lys

Suspended Hyphens

If all unit modifiers in a series end with the same term, the term does not have to be repeated each time; for brevity you may suspend the hyphens and use the modified term only at the end of the series.

Examples

- The first-order, second-order, and third-order equations have all been solved.
- The first-, second-, and third-order equations have all been solved.
- 2- and 3-phase controllers

Dashes

Use dashes “sparingly” to indicate abrupt shifts in thought and to set off or emphasize appositional or parenthetical elements or interjections. In most cases, use commas or parentheses instead.

- Although we have made these comments with specific reference to water--only because of our familiarity with water--all pure substances exhibit the same behavior.

In typewritten documents, you should use two hyphens (--) with no spaces between or around them to form a dash.

Parentheses

Use parentheses to enclose qualifying detail that is of secondary importance to the main discussion.

- Use parentheses sparingly within sentences; commas often do the job better.
- Parentheses can also be used to enclose one or more entire sentences that add relevant but not essential detail to the main discussion.

Brackets

Use brackets to set off an explanatory reference, your own comments, or corrections within material you are quoting.

- According to Smith, “Proton energy levels [in the accelerator] are consistently higher than expected.” [These comments were made before Broodier became aware of Light man’s experiments.]

Unless the documentation style you are following specifies otherwise, use the Latin term *sic* in brackets to indicate that material in a quotation is incorrect.

- Freedman stated, “Various Indo-European languages such as Rumanian, Hindi, Hungarian [sic], and Serbian exhibit similar morphological patterns.” [Hungarian is not an Indo-European language.]

Use brackets to enclose parenthetical material that is within material already in parentheses.

- The first extant cosmological theories were developed by the early Babylonians and Greeks. (See Alan Lightman, *Ancient Light* [Cambridge: Harvard University Press], pp.5-9.)

Use brackets to indicate the isotope of a specific chemical.

- [14C] urea

LESSON 40

LANGUAGE REVIEW: MECHANICS

Outline

- Capitalization
- Italics
- Abbreviations
- Acronyms
- Numbers
- Enumeration
- Symbols
- Equations
- Spelling

Capitalization

Although there are many specialized rules for capitalizing letters, the following are the most common.

1. Capitalize the first words of sentences, including sentences cited in quotations. For example:
The QA engineer has been quoted as saying, “The main source of connector failure found in the analysis is seal deformation caused by pressures in excess of 1000 psig.”
2. Capitalize proper names, including any particular person, object, place, project, institution, river, vessel, genus, culture, ethnic group, or formal job title.
3. Unless you are following a documentation style that specifies otherwise, capitalize titles of books, periodicals, published and unpublished reports, articles, and document sections.

Rules for Capitalizing Multiple-Word Titles and Proper Names

Unless you are following a documentation style that specifies otherwise, observe the following rules for capitalizing multiple word titles and proper nouns. Capitalize all nouns, pronouns, verbs, adjectives, adverbs, and subordinating conjunctions. Capitalize any word, regardless of the part of speech, if it is the first or last word of the title or subtitle or a proper name or if it follows a punctuation mark indicating a break in the title.

General Guidelines for Capitalizing Scientific Terms

Each discipline has its own specific conventions for determining which terms should be capitalized. In general, scientific writing tends to minimize capitalized nouns.

- Capitalize astronomical terms such as the names of galaxies, constellations, stars, planets and their satellites, and asteroids.
- However, the terms *earth*, *sun*, and *moon* are often not capitalized unless they appear in a sentence that refers to other astronomical bodies.

Example

The **sun** is an ordinary star. **Venus** and **Earth** differ significantly in the composition of their atmospheres.

- Do not capitalize medical terms except for any part of a term consisting of a proper noun:

Examples

1. infectious mononucleosis
2. brachial plexus
3. Parkinson's disease

Italics

Unless you are following a style guide that specifies otherwise, observe the following conventions.

Italicize titles of journals, books, newsletters, and manuals; letters, words, terms, and equation symbols that are being highlighted for discussion; foreign words; words or phrases that are being emphasized; and names of specific vessels.

Titles of Journals, Books, Newsletters, and Manuals

Examples

- *The Journal of the American Chemical Society*
- *Aviation Week and Space Technology*
- *Handbook of Physical Constants*
- *Operator's Manual: TD-100 B&S Spectroscope*
- *Pollution Abstracts*

Letters, Words, Terms, and Equation Symbols that are Being Highlighted for Discussion

Examples

- If either 1 or 2 is negative, *Equation 8* describes a convex reflecting surface.
- How does one program the computer, for example, to pronounce the letter combination *gh*? In the word *thorough*, *gh* has no sound; in *enough*, it is pronounced *f*; in *ghost*, it is pronounced *g*.
- The term *dielectric* is used here to refer to all. . .

Foreign Words

Examples

- Against the criminally stubborn conviction of the professional officer corps that courage, *élan*, and naked steel must carry the day, the machine gun was the ultimate argument.
- Bohr returned to Göttingen as a *Privat dozent* working under Born. [In German all nouns are capitalized.]
--Richard Rhodes, *The Making of the Atomic Bomb*
- The SPOT (for *système probatoire d'observation de la terre*) views the area in question every 2.5 days.

Emphasis

Example

The Chernobyl reactor surged from its standby level to 50 percent of its capacity *in just 10 seconds*.

Names of Specific Vessels

Do not italicize the model's class, manufacturer, or model number.

Examples

The experiment is scheduled to be performed during a future mission of the space shuttle *Enterprise*.

He returned on a Boeing 757.

Abbreviations

Unless you are following a style guide that specifies otherwise, observe the following conventions.

- Abbreviations, shortened forms of words, are commonly employed in scientific and technical writing. However, avoid unnecessary abbreviations, which can confuse a reader.
- Some abbreviations are always followed by a period.
- Always abbreviate certain words and phrases in your text. Those always abbreviated include
Mr., Ms., B.A., Ph.D., B.C., B.C.E.
cf. (from the Latin for “compare”)
et al. (from the Latin “and others”)
i.e. (from the Latin “that is”)
e.g. (from the Latin “for example”)

Acronyms

Unless you are following a style guide that specifies otherwise, observe the following conventions.

Use acronyms to shorten phrases in order to save space or to avoid awkward repetition of phrases. Acronyms are abbreviations of the things they represent and are formed by combining the first, and sometimes other, letters of the principal words.

Examples

AIDS -- Acquired Immunodeficiency Syndrome

RAM -- random-access memory

ROM -- read-only memory

DOS -- Disk Operating System

FTP -- file transfer protocol

HTML -- Hypertext Markup Language

HIV -- Human Immunodeficiency Virus

Numbers

Unless you are following a style guide that specifies otherwise, observe the following guidelines in using numbers.

In general, use Arabic numerals instead of words in scientific and technical writing for both cardinal and ordinal numbers:

- **3** subroutines
- **6** braces
- **61** amino acids
- the **3rd** subroutine

- the **6th** brace
- the **61st** amino acid

British and American Formation of Numbers

Form integers of two to four digits without any punctuation or spacing:

- 21 412
- 8024

Use the period (.) to indicate the decimal point and use an initial zero (0) for numbers less than 1.0:

- 31.3 1.41
- 0.414

Form numbers of five digits or more by using a comma (,) to mark off groups of three digits, starting at the decimal point:

1. 10,000
2. 12,341
3. 12,341.34
4. 12,432,421

European and International Standards for Formation of Numbers

Form integers of two to four digits without any punctuation or spacing:

- 21 412
- 8024

Use the comma (,) to indicate the decimal point and use an initial zero (0) for numbers less than 1,0:

- 31,3 1,41
- 0,414

General Guidelines for Using Numbers in Non-technical Prose

When using numbers in nonscientific text, spell out numbers less than one hundred or numbers of any size that begin a sentence.

In addition, spell out round numbers of any size and use Arabic numerals followed by the terms *million* and *billion* to express numbers larger than one million.

- seventy-three hours
- 173 hours
- nine hundred thousand

Form numbers of five digits or more by using a period (.) to mark off groups of three digits, starting at the decimal point:

- 10.000 12.341
- 12.341,34

- 12.432.421

Enumeration

Use enumeration in reports and other documents to identify sequences of chapters, sections, page numbers, figures and tables, equations, footnotes, and appendixes. Lengthy reports may contain and enumerate all these items. Any technical or scientific document of more than one page, however, will at least enumerate its pages, as well as any other of these elements that are present.

Chapter-Section Enumeration

Of the two general enumeration systems widely used, the numerical system is clearer than the alphanumerical system. In the numerical system, the reader can always locate his or her place in the document from the single decimal number.

Pagination

Number the front matter in italic lowercase roman numerals (*i, ii, iii, iv*, and so on).

Normally, number the pages in the body of the document with Arabic numerals, starting with page 1.

Tables and Figures

Number, tables, and figures sequentially as *Table 1, Table 2, Table 3*, and so on.

In long documents, however, table and figure numbers are often prefixed with a chapter number: *Table 5-1* or *Table 5.1*, for example, refers to the first table of Chapter 5.

Symbols

Use symbols consistently and in keeping with the common practice of your discipline.

Biology, chemistry, engineering, mathematics, and physics, among many other fields, have extensive and precise systems to represent quantities, objects, and actions. Check with a relevant style guide, textbook, or handbook.

If you are not certain that your readers will recognize a symbol, give the full spelling in parentheses the first time you use the symbol. If your document contains a large number of symbols that may be unfamiliar to your readers, consider including a list of symbols in the front matter, following the list of tables.

Equations

Unless you are following a style guide that specifies otherwise, observe the following conventions.

- Integrate equations into the body of your document by including in the text one or more explicit references to each one and, if appropriate, a short explanation of each term.
- Include only the main equations in the body of the document. Detailed derivations and calculations, if appropriate, should be put in appendixes.
- Set off equations from the text by displaying them, centered on the longest line, and with equation numbers as shown.

Example

An ion in crossed electric and magnetic fields drifts at right angles to both fields with a velocity of

$$V_d = E_s / B$$

(Eq. 7)

where V_d is the drift velocity, E_s is the magnitude of the static field, and B is the magnetic field strength. If V_d were to approach unity, the behavior of the electric. . .

Spelling

Here are a few suggestions to help ensure that your document is free of spelling errors.

- Always proofread your document for misspellings.
- If you are writing on a word processor, always use the spell checker but do not rely on it alone.
- It cannot catch one word substituted for another (*discreet* for *discrete*) or a typographical error that is a word (*cod* instead of *code*).
- Be consistent in the spelling of words in your document.
- Use the same dictionary when writing your first draft as when revising or editing the document.
- If you first learned British or Commonwealth English, be careful to use American English spellings of words rather than British forms.

The following list summarizes some of the most common differences between American English and British English spelling.

<i>American English</i>	<i>British English</i>
center, fiber	center, fibre
color, labor, odor	colour, labour, odour
defense, offense	defence, offence
encyclopedia, medieval	encyclopaedia, mediaeval
enroll, fulfill	enrol, fulfil
organize, civilization	organise, civilisation

Following dictionaries can be consulted to resolve any confusion regarding spellings of words.

- Desk Dictionaries
- Unabridged Dictionaries
- ESL Dictionaries
- Technical Dictionaries

LESSON 41

LISTENING AND INTERVIEWING

Outline

- Facing a Communication Dilemma at Rockport
- Communicating Orally
- Speaking
- Listening
 - What Happens When You Listen
 - The Three Types of Listening
 - How to be a Better Listener
- Conducting Interviews on the Job
- Categorizing Interviews

Facing a Communication Dilemma at Rockport

Calling a meeting is not unusual; executives do it every day. Even so, few executives shut down an entire company to bring everyone to a meeting, but that is exactly what Rockport president John Thornback decided to do. Rockport is a footwear subsidiary of Reebok, and except for the handful of people left behind to answer telephones in the company's headquarters, all 350 managers and employees were asked to gather in a huge room for a two-day meeting.

Communicating Orally

Rockport's John Thornback knows that speaking and listening are the communication skills we use the most. Given a choice, people would rather talk to each other than write to each other. Talking takes less time and needs no composing, typing, rewriting, retyping, duplicating, or distributing. By communicating with facial expressions, eye contact, tone of voice, gestures and posture, people can send subtle messages that add another dimension to the spoken words. Oral communication satisfies people's need to be part of the human community and makes them feel good. Talking things over helps people in organizations build morale and establish a group identity.

When communicating orally, try to take advantage of the positive characteristics while minimizing the dangers. To achieve that goal, work on improving two key skills:

- Speaking
- Listening

Speaking

Organize your thoughts in a logical way, decide on a style that suits the occasion, and edit your remarks mentally. As you speak, watch the other person, judging from verbal and nonverbal feedback whether your message is making the desired impression. If not, revise and try again. Just as various writing assignments call for different writing styles, various situations call for different speaking styles. Your speaking style depends on the level of intimacy between you and the other person and on the nature of your conversation. When you are talking with a friend, you naturally speak more frankly than when you're talking to your boss or a stranger. An important

tool of oral communication, the telephone, can extend your reach across town and around the world.

However, if your telephone skills are lacking, you may waste valuable time and appear rude. You can minimize your time on the telephone while raising your phone productivity by delivering one-way information by fax.

Other ways of increasing your phone productivity by

- jotting down an agenda before making a call
- saving social chitchat for the end of a call
- saving up all the short calls you need to make to one person during a given day and simply making one longer call
- sending your message by fax, if you can't reach someone by the phone
- making sure you're your assistant has a list of people whose calls you'll accept even if you're in a meeting

Listening

If you are typical, you spend over half your communication time listening. Listening supports effective relationships within the organization, enhances the organization's delivery of products, alerts the organization to the innovations growing from both internal and external forces, and allows the organization to manage the growing diversity both in the workplace and in the customers it serves.

What Happens When You Listen?

- Sensing
- Interpreting
- Evaluating
- Remembering
- Responding

The Three Types of Listening

Various situations call for different listening skills. The three types of listening differ not only in purpose but also in the amount of feedback or interaction that occurs.

The goal of **content listening** is to understand and retain information imparted by a speaker. You may ask questions, but basically information flows from the speaker to you. Your job is to identify the key points of the message, so be sure to listen for clues to its structure:

- Previews
- Transitions
- Summaries
- Enumerated points

Critical Listening

Critical listening is a much more active behaviour than informational listening and usually involves some sort of problem solving or decision making. We can be said to be engaged in critical listening when the goal is to evaluate or scrutinize what is being said. Informational

listening may be mostly concerned with receiving facts and/or new information; critical listening is about analyzing opinion and making a judgment.

When the word ‘critical’ is used to describe listening, reading or thinking it does not necessarily mean that you are claiming that the information you are listening to is somehow faulty or flawed. Rather, critical listening means engaging in what you are listening to by asking yourself questions such as, ‘what is the speaker trying to say?’ or ‘what is the main argument being presented?’, ‘how does what I’m hearing differ from my beliefs, knowledge or opinion?’. Critical listening is, therefore, fundamental to true learning.

It is often important, when listening critically, to have an open-mind and not be biased by stereotypes or preconceived ideas. By doing this you will become a better listener and broaden your knowledge and perception of other people and your relationships.

Active Listening

Active listening means, as its name suggests, actively listening. That is fully concentrating on what is being said rather than just passively ‘hearing’ the message of the speaker. Active listening is a skill that can be acquired and developed with practice.

Active listening involves listening with all senses as well as giving full attention to the speaker. Interest can be conveyed to the speaker by using both verbal and non-verbal messages such as maintaining eye contact, nodding your head and smiling, agreeing by saying ‘yes’ or simply ‘hmm, hmm, etc.’ to encourage them to continue. This ‘feedback’ helps the speaker to feel at ease and let him communicate more easily, openly and honestly.

How to Be a Better Listener

Regardless of whether the situation calls for content, critical, or active listening, you can improve your listening ability by becoming more aware of the habits that distinguish good listeners from bad listeners.

In addition, put nonverbal skills to work as you listen:

- Maintain eye contact
- React responsively with head nods or spoken signals
- Pay attention to the speaker’s body language

You might even test yourself from time to time: when someone is talking, ask yourself whether you’re actually listening to the speaker or mentally rehearsing how you’ll respond.

Above all, try to be open to the information that will lead to higher-quality decisions, and try to accept the feeling that will build understanding and mutual respect. If you do, you’ll be well on the way to becoming a good listener – an important quality required to be good in conducting business interviews.

To Listen Effectively	The Bad Listener	The Good Listener
Find areas of interest	Tunes out dry subjects	Opportunizes; ask “What’s in it for me”
Judge content, not delivery	Tunes out if delivery is poor	Judges content; skips over delivery error
Hold your fire	Tends to enter into argument	Doesn’t judge until comprehension is complete; interrupts only to clarify
Listen for ideas	Listens for facts	Listens for central themes
Be flexible	Takes extensive notes using only one system	Takes fewer notes; uses four to five different systems, depending on the speaker.
Work at listening	Shows no energy output; fakes attention	Works hard; exhibits active body state
Resist distractions	Is distracted easily	Fights or avoids distractions; tolerates bad habits; knows how to concentrate
Exercise your mind	Resists difficult expository material; seeks light, recreational material	Uses heavier material as exercise for the mind
Keep your mind open	Reacts to emotional words	Interprets emotional words; does not get hung up on them
Capitalize on the fact that thought is faster than speech	Tends to daydream with slow speakers	Challenges, anticipates, mentally summarizes

Conducting Interviews on the Job

The conversation bounces back and forth from interviewer to interviewee. Although the interviewer guides the conversation, the interviewee may also seek to accomplish a purpose, perhaps to:

- obtain or provide information
- solve a problem
- to create goodwill
- persuade the other person to take action

Categorizing Interviews

- Job interviews
- Informative interviews
- Persuasive interviews

- Exit interview
- Evaluation interview
- Counseling interviews
- Conflict-resolution interviews
- Disciplinary interviews
- Termination interviews

LESSON 42

PLANNING INTERVIEWS AND CONDUCTING MEETINGS

Outline

- Planning interviews
- Asking yourself the following questions will help you prepare for interviews
- Interview questions
 - Open-ended questions
 - Direct open-ended questions
 - Closed-ended questions
 - Restatement questions
- Interview structure
- Participating in small groups and meetings
- Understanding group dynamics
- Role-playing
 - Self-oriented roles
 - Group-maintenance roles
 - Task-facilitating roles
- Group norms
- Arranging the meeting
- Contributing to a productive meeting

Planning Interviews

Planning an interview is similar to planning any other form of communication. You begin by stating your purpose, analyzing the other person, and formulating your main idea. Then you decide on the length, style, and organization of the interview. Even as an interviewee, you gain some control over the conversation by anticipating the interviewer's questions and then planning your answers so that the points you want to make will be covered. You can also introduce questions and topics of your own. In addition, by your comments and nonverbal cues, you can affect the relationship between you and the interviewer.

Asking Yourself the Following Questions Will Help You Prepare for Interviews

- What are your respective roles?
- What does this person expect from you?
- Is it to your advantage to confirm those expectations?
- Will you be more likely to accomplish your objective by being friendly and open or by conveying an impression of professional detachment?

If you are the interviewer, responsibility for planning the session falls on you. On the simplest level, your job is to schedule the interview and see that it's held in a comfortable and convenient location. Good interviewers are good at collecting information, listening, and probing, so you should develop a set of interview questions and decide on their sequence.

Interview Questions

The purpose of the interview and the nature of the participants determine the types of questions that are asked. When you plan the interview, bear in mind that you'll ask questions:

- To get information
- To motivate the interviewee to respond honestly and appropriately
- To create a good working relationship with the other person

Open-Ended Questions

To obtain both factual information and underlying feelings, you'll probably use various types of questions. Open-ended questions invite the interviewee to offer an opinion, not just a yes, no, or one-word answer. You can learn some interesting and unexpected things from open-ended questions, but they may diminish your control of the interview. The other person's idea of what's relevant may not coincide with yours, and you may waste some time getting the interview back on track. Use open-ended questions to warm up the interviewee and look for information when you have plenty of time to conduct the conversation.

Direct Open-Ended Questions

To suggest a response, use direct open-ended questions. For example, asking "What have you done about ..." assumes that something has been done and calls for an explanation.

With direct open-ended questions you have somewhat more control over the interview; but, you still give the other person some freedom in framing a response.

Closed-Ended Questions

Closed-ended questions require yes or no answers or call for short responses. For example, "Did you make a reservation for the flight?"

Questions like these produce specific information, save time, require less effort to answer, and eliminate bias and prejudice in answers. The disadvantage of such questions is that they limit the respondent's initiative and may prevent important information from being revealed. They are better for gathering information than for prompting an exchange of feelings.

Restatement Questions

Questions that mirror a respondent's previous answer are called restatement questions. They invite the respondent to expand on an answer: "you said you dislike completing travel vouchers. Is that correct?" They also signal the interviewee that you're paying attention.

Restatements provide opportunities to clarify points and correct misunderstandings. Use them to pursue a subject further or to encourage the other person to explain a statement. You can also use restatement questions to soothe upset customers or coworkers because by acknowledging the other person's complaint, you gain credibility.

Interview Structure

Good interviews have an opening, a body, and a close. The opening establishes rapport and orients the interviewee to the remainder of the session. You might begin by introducing yourself, asking a few polite questions, and then explaining the purpose and ground rules of the interview.

At this point, you may want to clear the use of notes or a tape recorder with the interviewee, especially if the subject is complex or if you plan to quote the interviewee in a written document such as a business report. The questions in the body of the interview reflect the nature of your relationship with the interview.

For an informational session, such as a market research interview, you may want to structure the interview and prepare a detailed list of specific questions. This approach enables you to control the interview and use your time efficiently. It also facilitates repeating the interview with other participants. You may even like to provide the interviewee with a list of questions before the interview, giving the other person a chance to prepare coherent and well-developed answers.

On the other hand, if the interview is designed to explore problems or to persuade an interviewee, you may prefer a less-structured approach. You might simply prepare a checklist of general subjects and then let the interview evolve on the basis of the participant's responses. In the body of the interview, use a mix of question types. One good technique is to use closed-ended questions to pin down specific facts that emerge during an open-ended response. You might follow up an open-ended response by asking "How many people did you contact to get this information?"

The close of the interview is when you summarize the outcome, preview what comes next, and underscore the rapport that has been established. Restate the interviewee's key points, allowing the person to clarify any misunderstandings or add any other ideas. To signal that the interview is coming to an end, you might lean back in your chair, smile, and use an open, palms-up gesture as you say, "Well, I guess that takes care of all my questions. Would you like to add anything?" If the interviewee has no comments, you might go on to say, "Thank you so much for your help. You've given me all the information; I need to finish my report. I should have it completed within two weeks; I'll send you a copy."

Then you might rise, shake hands, and approach the door. In parting, you could add a friendly comment to reaffirm your interest in the other person: "I hope you have a nice trip to Murree. I was there when I was a kid, and I've never forgotten the experience." From a practical standpoint, you need to be certain that your interview outline is about the right length for the time you've scheduled. People can speak at the rate of about 125 to 150 words (roughly one paragraph) per minute.

Assuming that you are using a mix of various types of questions, you can probably handle about 20 questions in a half hour (or about the same amount of information that you would cover in a 10-to 12-page single-spaced document. However, you may want to allow more or less time for each question and response, depending on the subject matter and the complexity of the questions. Bear in mind that open-ended questions take longer to answer than other types do.

When you have concluded the interview, take a few moments to write down your thoughts. If it was an information gathering session, go over your notes. Fill in any blanks while the interview is fresh in your mind. In addition, you might write a short letter or memo that thanks the interviewee for cooperating, confirms understanding between you and, if appropriate, outlines the next steps.

Participating in Small Groups and Meetings

Working in small groups and attending meetings involve more people and can be more complicated than one-on-one interviews. As more and more corporations embrace the concept of participative management, involving employees in a company's decision making, the importance of teamwork has increased.

At their best, meetings can be an extremely useful forum for making key decisions and coordinating the activities of people and departments. Theoretically, the interaction of the participants should lead to good decisions based on the combined intelligence of the group. Whether the meeting is held to solve a problem or to share information, the participants gain a sense of involvement and importance from their attendance. At worse meetings are unproductive and frustrating. They waste everyone's time and they're expensive.

More important, poor meetings may actually be counter-productive, because they may result in bad decisions. When people are pressured to conform, they abandon their sense of personal responsibility and agree to ill-founded plans. We will now examine how to understand group dynamics, how to arrange meetings, and how to contribute in a productive meeting.

Understanding Group Dynamics

A meeting is called for some purpose, and this purpose gives form to the meeting. People are assembled to achieve a work-related task, but at the same time, each person has a hidden agenda, private motives that affect the group's interaction. Such personal motives either contribute to or detract from the group's ability to perform its task.

Role-Playing

The roles people play in meetings fall into three categories:

- Self-oriented roles
- Group-maintenance roles
- Task-facilitating roles

Members who assume self-oriented roles are motivated mainly to fulfill personal needs, and they tend to be less productive than the other two types. Far more likely to contribute to group goals are: those who assume group-maintenance roles to help members work well together, and those who assume task-facilitating roles to help members solve the problem or make the decision.

To a great extent, the role we assume in a group depends on our status in that group. In most groups, a certain amount of "politics" occurs as people try to establish their relative status. One or two people typically emerge as the leaders, but often an undercurrent of tension remains as members of the group vie for better positions in the pecking order. These power struggles often get in the way of real work.

Self-Oriented Roles

Controlling: dominating other by exhibiting superiority or authority.

Withdrawing: retiring from the group either by becoming silent or by refusing to deal with a particular aspect of the group's work.

Attention seeking: calling attention to self and demanding recognition the group.

Diverting: focusing group discussion on topics of interest to the individual instead of those relevant to the task.

Group-Maintenance Roles

Encouraging: drawing out other members by showing verbal and nonverbal support, praise, or agreement.

Harmonizing: reconciling differences among group members through mediation or by using humor to relieve tension.

Compromising: offering to yield on a point in the interest of reaching mutually acceptable decision.

Task-Facilitating Roles

Initiating: getting the group started on a line of inquiry.

Information Giving or Seeking: offering (or seeking) information relevant to questions faced by the group.

Coordinating: showing relationships among ideas, clarifying issues, summarizing what the group has done.

Procedure Setting: suggesting decision-making procedures that will move the group toward the goal.

Group Norms

A group that meets regularly develops unwritten rules governing the behavior of the members. To one degree or another, people are expected to conform to these norms. For example, there may be an unspoken agreement that it's okay to be 10 minutes late for meetings but not 15 minutes late.

In the context of work, the most productive groups tend to develop norms that are conducive to business. When a group has a strong identity, the members all observe the norms religiously. They are upset by any deviation, and individuals feel a great deal of pressure to conform. This sense of group loyalty can be highly motivated to see that the group succeeds. However, such group loyalty can also lead members into groupthink, the willingness of individual members to set aside their personal opinions to go along with everyone else, even if everyone else is wrong, simply because belonging to the group is important to them.

Group Decision Making

Groups usually reach their decision in a predictable pattern. The process can be viewed as passing through four phases:

- Orientation phase
- Conflict phase
- Emergence phase
- Reinforcement phase

In the orientation phase, group members socialize, establish their roles, and agree on their reason for meeting. In the conflict phase, members begin to discuss their positions on the problem.

If group members have been carefully selected to represent a variety of viewpoints and expertise, disagreements are a natural part of this phase. At the end of this phase, group members begin to settle on a single solution to the problem. In the emergence phase, members reach a decision. Those who advocated different solutions put aside their objection, either because they're convinced that the majority solution is better or because they recognize that arguing is futile. Finally, in the reinforcement phase, group feeling is rebuilt and the solution is summarized. Members receive their assignments for carrying out the group's decision and make arrangements for the following up on these assignments.

Arranging the Meeting

By being aware of how small groups of people interact, meeting leaders can take steps to ensure that their meetings are productive. The key to productive meetings is careful planning of purpose, participants, agenda and location. The trick is to bring the right people together in the right place for just enough time to accomplish your goals.

In order to do that, special attention should be given to the following:

- Determining the purpose
- Selecting the participants
- Setting the agenda
- Preparing the location

Contributing to a Productive Meeting

Whether the meeting is conducted electronically or conventionally, its success depends on how effective the leader is. If the leader is prepared and has selected the participants carefully, the meeting will generally be productive. Listening skills are especially important to meeting leaders; the leader's ability to listen will facilitate good meetings.

As meeting leader, you're responsible for keeping the ball rolling. Avoid being so domineering that you close off suggestions. At the same time, don't be so passive that you lose control of the group. If the discussion lags, call on those who haven't been heard from. Pace the presentation and discussion, you'll have time to complete the agenda. As time begins to run out, interrupt the discussions and summarize what has been accomplished.

Another leadership task is either to arrange for someone to record the proceedings or to ask a participant to take notes during the meeting. As leader, you're also expected to follow the agenda; participants have prepared for the meeting on the basis of the announced agenda. However, don't be rigid. Allow enough time for discussion and give people a chance to raise related issues. If you cut off discussions too quickly or limit the subject too narrowly, no real consensus can emerge.

As the meeting gets underway, you'll discover that some participants are too quiet and other are too talkative. To draw out the shy types, ask for their input on issues that particularly pertain to them. You might say something like "Irfan, you have done a lot of work in this area. What do you think?" For the overly talkative, simply say that time is limited and others need to be heard from.

The best meetings are those in which everyone participates, so don't let one or two people dominate your meeting while others doodle on their notepads. As you move through your agenda, stop at the end of each item, summarize what you understand to be the feeling of the group, and state the important points made during the discussion.

At the end of the meeting, tie up the loose ends. Either summarize the general conclusion of the group or list the suggestions. Wrapping things up ensures that all participants agree on the outcome and gives people a chance to clear up any misunderstandings. As soon as possible after the meeting, the leader gives all participants a copy of the minutes or notes, showing recommended actions, schedules, and responsibilities.

The minutes will remind everyone of what took place and will provide a reference for future actions. Like leaders, participants have responsibilities during meetings. If you've been included in the group, try to contribute to both the subject of the meeting and the smooth interaction of the participants. Use your listening skills and powers of observation to size up the interpersonal dynamics of the people; then, adapt your behavior to help the group achieve its goals. Speak up if you have something useful to say, but don't monopolize the discussion.

LESSON 43

GIVING SPEECHES AND ORAL PRESENTATIONS I

Outline

- Facing a communication dilemma at the Keys Group
- Preparing to speak
 - Defining your purpose
 - Analyzing your audience
 - Planning your speech or presentation
 - Establishing the main idea
 - Organizing an outline
 - Estimate the length
 - Deciding on the style
- Developing formal speeches and presentations
 - The introduction
 - Arousing interest
 - Building credibility
 - You might plan to say something like this
 - Preview the presentation

Facing a Communication Dilemma at the Keys Group

Brad Keys believes that acceptance in the community is the key. His company – the Keys Group – operates 11 KFC fast-food restaurants in Georgia. When Keys started out in the restaurant business nearly 30 years ago, he realized that good food was only half the battle. Keys realized that if he wanted to succeed in business, he'd have to gain people's respect. He'd have to persuade bankers to loan him money and big companies to do business with him. He'd have to convince employees to work hard and customers to trust him but how?

Preparing to Speak

If you were Keys, whether you were addressing a large crowd or an audience of one, what would you need to know about preparing, developing, and delivering speeches?

You need to:

- Define your purpose
- Analyze your audience
- Develop a plan for presenting your points

Defining Your Purpose

Speeches and presentations can be categorized according to their purpose, much as interviews and meetings are. The purpose helps you determine content and style. It also affects the amount of audience participation that occurs. When you're trying to motivate or entertain your audience you generally do most of the talking. During your speech the audience plays an essentially passive role, listening to your remarks but providing little direct input in the form of comments or questions. You control the content of the message. When your purpose is to provide

information or analyze a situation, you and the audience generally interact somewhat to fulfil the objective.

Basically, a group of people meet to hear the oral equivalent of a written report. Then, the audience members offer comments or ask questions. The most interaction occurs when your purpose is to persuade people to take particular action or to collaborate with them in solving a problem or reaching to a decision. You generally begin by providing facts and figures that increase understanding of the subject of your audience. You might also offer arguments in defense of certain conclusions or recommendations.

In addition, you invite the audience members to participate by expressing their needs, suggesting solutions, and formulating conclusions and recommendations. Because persuasive and collaborative presentations involve so much audience interaction, you have relatively little control of the material. To be flexible enough to adjust to new input and unexpected reactions, you cannot adhere to a prewritten script. A speech or presentation can often accomplish several of these purposes simultaneously.

Analyzing Your Audience

Once you have your purpose firmly in mind, think about another basic element of your speech or presentation: your audience. This is particularly important because you'll be gearing the style and content of your speech to your audience's needs and interests. First consider the size and composition of the audience. You can easily involve audience members in your presentation when you speak to a relatively small group. With more than 12 people it gets difficult to manage the give-and-take what's essential to building a consensus, so your approach may lean more toward telling than asking.

A homogenous group will benefit from a focused speech or presentation, a diverse group requires a more generalized approach, using less technical jargon and presenting a broader picture. Another important factor is your audience's likely reaction to your speech or presentation. Decide whether your audience will be hostile, receptive, or indifferent to your point of view. Learn as much as you can about their level of understanding: how much do they already know about your subject?

Take a cold, hard look at their relationship with you:

- Do they already know you?
- Do they respect your judgment?

The answers to the above questions will help you decide on the best way to go about planning your speech.

Planning Your Speech or Presentation

Planning an oral message is similar to planning a written message.

- You develop the main idea
- Construct an outline
- Estimate the appropriate length
- Decide on the most effective style

Establishing the Main Idea

Start by focusing on the “big picture”. What is the main idea (or theme) that you want to convey to the audience? Look for a one-sentence generalization that links your subject and the purpose to the audience’s frame of reference, much as an advertising slogan points out how a product can benefit consumers. For example,

- Demand for your low-calorie, high-quality frozen foods will increase because of basic social and economic trends.
- Reorganizing our data-processing department will lead to better service at a lower cost.
- We should build a new plant in Texas to reduce our operating costs and to capitalize on growing demand in the Southwest.

Each of these statements puts a particular slant on the subject, one that is positive and directly related to the audience’s interest.

Organizing an Outline

With a well-crafted main idea to guide you, you can begin to outline the speech or presentation. Gear the structure:

- The subject
- The purpose
- The audience
- Time allotted for your speech or presentation

If you have ten minutes or less to deliver your message, organize your thoughts as much as you would a letter or brief memo. Use the direct approach if the subject involves routine information or good news, but use the indirect approach if the subject involves bad news or persuasion.

Longer speeches and presentations are organized like reports. If the purpose is to entertain, motivate, or inform, use a direct order imposed naturally by the subject. If the purpose is to analyze, persuade, or collaborate, organize your material around conclusions and recommendations or around a logical argument. Use direct order if the audience is receptive, indirect if you expect simplicity of organization especially useful in oral communication.

A carefully prepared outline may be more than just the starting point for composing a speech or presentation. If you plan to deliver your presentation from notes rather than from a written text, your outline will also be your final “script”. For this reason, the headings on the outline should be complete sentences or lengthy phrases rather than one-or two-word topic headings. Many speakers also include notes that indicate where visual aids will be useful. You might want to write out the transitional sentences; you’ll use to connect main points.

Experienced speakers often use a two-column format that separates the “stage directions” from the content. You may have to adjust your organization in response to input from the audience, especially if your purpose is to collaborate. You might want to think of several organizational possibilities, based on “what if” assumptions about the audience’s reactions.

Estimate the Length

Time for speeches and presentations is often strictly regulated, so you'll need to tailor your material to the available time. You can use your outline to estimate how long your speech or presentation will take.

The average speaker can deliver about 125 to 150 words a minute, which corresponds to 20 to 25 double-spaced, typed pages of text. The average paragraph is about 125 to 150 words in length, so most of us can speak at the rate of about one paragraph per minute. Suppose, for example, that you want to make three basic points. In a 10-minute speech, you could take about 2 minutes to explain each of these points, using roughly two paragraphs for each point.

If you devote a minute each to the introduction and the conclusion, you would have 2 minutes left over to interact with the audience. If you have an hour, you might spend the first 5 minutes introducing the presentation, establishing rapport with the audience, providing background information, and giving an overview of your topic. In the next 30 to 50 minutes, you could explain each of the three points, spending about 10 to 13 minutes per point (the equivalent of 5 or 6 typewritten pages).

Your conclusions might take another 3 to 5 minutes. The remaining 10 to 20 minutes would then be available for responding to questions and comments from the audience. Which is better, the 10 minute speech or the hour long presentation? If your speech doesn't have to fit into a specified time slot, the answer depends on

- Your subject
- Your audience's attitude and knowledge
- The relationship you have with your audience

For a simple, easily accepted message, 10 minutes may be enough. On the other hand if your subject is complex or your audience is skeptical, you will probably need more time. Do not squeeze a complex presentation into a period that is too brief, and don't draw out a simple talk any longer than necessary.

Deciding on the Style

Another important element in your planning is the style most suitable to the occasion. Is this a formal speech or presentation in an impressive setting, with professionally devoted visual aids? Or is it a casual, roll-up-your-sleeves working session? The size of the audience, the subject, your purpose, your budget and the time available for preparation, all determine the style.

In general if you are speaking to a relatively small group, you can use a casual approach that encourages audience participation. A small conference room, with the audience seated around a table, may be appropriate. Use simple visual aids. Invite the audience to interject comments. Deliver your remarks in a conversational tone, using notes to jog your memory if necessary.

On the other hand if you are addressing a large audience and the event is an important one, you will want to establish a more formal atmosphere. Hold the presentation in an auditorium or a convention hall, and seat the audience in rows. Show slides on films to dramatize your message.

Ask people to hold their questions until after you've completed your remarks. Use detailed notes or a complete script to guide your delivery.

Developing Formal Speeches and Presentations

Developing a major speech or presentation is much like writing a formal report, with one important difference: you need to adjust your technique to an oral communication channel. This is both an opportunity and a challenge. The opportunity lies in the interaction that's possible between you and the audience.

When you speak before a group, you can receive information as well as transmit it. You can adjust both the content and delivery of your message as you go along; edit your speech or presentation to make it clearer and more compelling. Instead of simply expressing your ideas, you can draw out the audience's ideas and use them to reach a mutually acceptable conclusion. You can also capitalize on nonverbal signals to convey information to and from your audience.

The challenge lies in maintaining control and accommodating your audience's limitations. To get the benefits of oral communication, be flexible. The more you plan to interact with your audience, the less control you'll have. Halfway through your presentation an unexpected comment from someone in the audience could force you to shift to a new line of thought, which requires great skill.

At the same time, accommodate the limitations of your listeners. To prevent your audience from losing interest or getting lost, use special techniques when developing the various elements of the presentation:

- The introduction
- The body
- The close
- The question-and-answer period
- Visual aids

The Introduction

You have a lot to accomplish during the first few minutes of your speech or presentation, including:

- Arousing your audience's interest in your topic
- Establishing your credibility
- Preparing the audience for what will follow

For this reason, developing the introduction often requires utmost attention.

Arousing Interest

Some subjects are naturally more interesting than others. If you happen to have discussing a matter of profound significance that will personally affect the members of your audience, chances are they'll listen regardless of how you begin. All you really have to do is announce your topic ("Today I'd like to announce the reorganization of the company") the best approach to dealing with an uninterested audience is to appeal to human nature. Encourage people to take the subject personally. Show them how they'll be affected as individuals. For example, when addressing clerical employees about a pension program; you might want to start off like this:

If somebody offered to give you \$200,000 in exchange for \$5 per week, would you be interested? That's the amount you can expect to collect during your retirement years if you choose to contribute to the voluntary pension plan. During the first two weeks, you will have to decide whether you want to participate. Although, for most of you, retirement is many years away; this is an important financial decision. During the next 20 minutes, I hope to give you the information you need to make that decision intelligently.

Make sure your introduction matches the tone of your speech or presentation. If the occasion is supposed to be fun, you might begin with something light; but if you'll be talking business to a group of executives, don't waste their time with cute openings. Avoid jokes and personal anecdotes when you plan to discuss a serious problem. If you're developing a routine oral report, don't be overly dramatic.

Most of all, try to make your introduction natural. Nothing turns off the average audience faster than a trite, staged beginning.

Building Credibility

One of the chief drawbacks of overblown openings is that they damage the speaker's credibility, which is even more important than arousing interest. A speaker with high credibility is more persuasive than a speaker with low credibility.

When developing a speech, it's important to establish your credentials quickly; people will decide within a few minutes whether you're worth listening to. Establishing credibility is relatively easy if you'll be speaking to a familiar, open-minded audience.

The real difficulty comes when you must try to earn the confidence of strangers, especially those predisposed to be skeptical or antagonistic. One way to handle the problem is to let someone else introduce you. That person can present your credentials so that you won't appear boastful, but make sure the person introducing you doesn't exaggerate your qualifications. If you plan to introduce yourself, keep your comments simple. At the same time, don't be afraid to mention your accomplishments.

Your listeners will be curious about your qualifications, so plan to tell them briefly who you are and why you're there. Generally speaking, one or two aspects of your background are all you need to mention:

- Your position in an organization
- Your profession
- The name of your company

You Might Plan to Say Something Like This

I'm Karen Whitney, a market research analyst with Information Resources Corporation. For the past five years, I've specialized in studying high-technology markets. Your director of engineering, John Laborer, has asked me to brief you on recent trends in computer-aided designs so that you'll have a better idea of how to direct your research-and development efforts.

This speaker establishes credibility by tying her credentials to the purpose of her presentation. By mentioning her company's name, her position, and the name of the audience's boss, she lets her listeners know immediately that she's qualified to tell them something they need to know. She connects her background to their concerns.

Preview the Presentation

Giving your audience a preview what's ahead adds to your authority and, more importantly, helps people understand your message. In an oral presentation, however, the speaker provides the framework. Your introduction will summarize your main idea, identify the supporting points, and indicate the order in which you'll develop those points. Once you've established the framework, you can move into developing the body of your presentation, confident that your audience will understand how the individual facts and figures relate to the main idea.

LESSON 44

GIVING SPEECHES AND ORAL PRESENTATIONS II

Outline

- The body
 - Emphasizing structure
 - Holding the audience's attention
- The close
 - Restating the main points
 - Outlining the next steps
- The question and answer period
- The visual aids
 - Designing and presenting visual aids
 - Selecting the right medium
 - Overheads
 - Slides
 - Computers
 - Other visual aids
- Mastering the art of delivery
 - Memorizing
 - Reading
 - Impromptu speaking
 - Preparing for successful speaking
- Delivering the speech
- Handling questions

The Body

The bulk of your speech or presentation will be devoted to a discussion of the three or four main points in your outline. Use the same organizational patterns you'd use in a letter, memo, or report, but keep things simple. Your two goals are making sure the structure of your speech or presentation will be clear and making sure your organization will keep your audience's attention.

Emphasizing Structure

To show how ideas are related in oral presentations, you rely more on words. For the small links between sentences and paragraphs, one or two transitional words will be enough: therefore, because, in addition, etc. To link major sections of the speech or presentation, you'll need to complete sentences such as "Now that we've reviewed the problem, let's take a look at some solutions." Every time you shift topics, stress the connection between ideas. Summarize what's been said; preview what's to come. The longer the speech or presentation, the more important the transitions become. When you present many ideas, the audience has trouble absorbing them and seeing the relationship among them. Listeners need clear transitions to guide them to the most important points. They need transitions to pick up any ideas they may have missed. If you repeat key ideas in the transitions, you can compensate for lapses in the audience's attention.

You can also call attention to the transitions by using gestures, changing your tone of voice or introducing a visual aid.

Holding the Audience's Attention

To communicate your points effectively, you have to maintain the audience's attention. Here are a few helpful tips for creating memorable speeches:

- Relate your subject to the audience's needs.
- People are interested in things that affect them personally.
- Present every point in light of the audience's needs and values.
- Explain the relationship between your subject and familiar ideas. By showing how your subject related to ideas the audience already understands, you give people a way to categorize and remember your points.
- You can also hold the audience's interest by introducing variety into your speech or presentation.

The Close

The close of a speech or presentation is almost as important as the beginning because audience attention peaks at this point. Plan to devote about 10 percent of the total time to the ending. Begin your conclusion by telling listeners that you're about to finish so that they'll make one final effort to listen intently. Don't be afraid to sound obvious. Plan to say something like "in conclusion" or "to sum it all up" to let the people know you are in the home stretch.

Restating the Main Points

Once you have planned how to get everyone's attention, you will repeat your main idea. Be sure to emphasize what you want the audience to do or think. Then state the key motivating factor. Reinforce your theme by repeating the three or four main supporting points.....
A few sentences are generally enough to refresh people's memories.

Outlining the Next Steps

Some speeches and presentations require the audience to reach a decision or agree to take specific action. In such cases the close provides a clear wrap-up. If the audience has agreed on an issue covering the presentation, plan to review the consensus in a sentence or two. If not, make the lack of consensus clear by saying something like "We seem to have some fundamental disagreement on this question." Then you'll be ready to suggest a method of resolving the differences. If you expect any acting to occur, you must explain who is responsible for doing what.

One effective technique is to list the action items, with an estimated completion date and the name of the person responsible. Plan to present this list in a visual aid that can be seen by the entire audience, and ask each person on the list to agree to accomplish his or her assigned task by the target date. This public commitment to action is the best insurance that something will happen.

If the required action is likely to be difficult, make sure everyone understands the problems involved. You don't want people to leave the presentation thinking that their tasks will be easy, only to discover later that the jobs are quite demanding. If that happens, they may become

discouraged and fail to complete their assignments. You'll want everyone to have a realistic attitude and to be prepared to handle whatever arises. So use the close to alert people to potential difficulties while ending your presentation on a positive note.

Make your final remarks enthusiastic and memorable. Even if parts of your speech will be downbeat, try to develop your ending on a positive note. You might stress the benefits of action or express confidence in the listener's ability to accomplish the work ahead. An alternative is to end with a question or statement that will leave your audience thinking. Remember that your final words round out the presentation.

You will leave the audience with a satisfied feeling, a feeling of completeness. The close is not the place to introduce new ideas or later the mood of the presentation. Although you'll want to close on a positive note, avoid developing a staged finale (keep it natural).

The Question and Answer Period

Along with the introduction, body, and close, include in your speech or presentation an opportunity for questions and answers. If you aren't planning to interact with the audience, you're wasting the chief advantage of an oral format. The important thing to consider when you're developing your speech is the nature and timing of that audience interaction. Responding to questions and comments during the presentation can interrupt the flow of your argument and reduce your control of the situation. If you'll be addressing a large group, particularly a hostile or unknown group, questions can be dangerous.

Your best bet in such a case would be to ask people to hold their questions until after you have concluded your remarks. On the other hand, if you'll be working with a small group and will need to draw out their ideas, you'll want to encourage comments from the audience throughout the presentation.

The Visual Aids

Visual aids dramatically increase the audience's ability to absorb and remember information. From a purely practical standpoint, they're a convenience for the speaker who can use them as a tool for remembering the details of the message (no small feat in a lengthy presentation). Novice speakers also like visual aids because they draw audience attention away from the speaker.

Designing and Presenting Visual Aids

Two types of visual aids are used to supplement speeches and presentations.

Text visuals consist of words and help the audience follow the flow of ideas. Because text visuals are simplified outlines of your presentation, you can use them to summarize and preview the message and to signal major shifts in thought.

On the other hand, graphic visual aids illustrate the main points. They help the audience grasp numerical data and other information that would be hard to follow if presented orally. Simplicity is the key to effectiveness when designing both types of visual aids. Because people can't read and listen at the same time, the visual aids have to be simple enough that the audience can understand them within a moment or two. As a rule, text visuals are more effective when they

consist of no more than six lines, with a maximum of six words per line. Produce them in large, clear type, using uppercase and lowercase letters, with extra white space between lines of text.

Make sure the type is large enough to be seen from any place in the room. You should phrase list items in parallel grammatical form. Use telegraphic wording (for example “Compensation soars”) without being cryptic (“Compensation”). It is a good idea to include both a noun and a verb in each item. You can use any of the graphic visuals you might show in a formal report, like pie charts, bar charts, and flow charts, etc. The graphic visuals used in oral presentations are simplified versions of those that appear in written documents.

Eliminate anything that is not absolutely necessary to the message. To help the audience focus immediately on the point of each graphic visual, use headings that state the message in one clear phrase, like “Earnings have increased by 15 percent”. When you present visual aids, you’ll want people to have the chance to see what’s there, but you’ll also want them to listen to your explanation. Be sure all members of the audience can see the visual aids. Allow the audience time to read a visual aid before beginning your explanation.

Limit each visual aid to one idea. Illustrate only the main points, not the entire presentation. Use no visual aids that conflict with our verbal message. Paraphrase the text of your visual aid; don’t read it word for word. When you’ve finished discussing the point illustrated by the visual aid, remove it from the audience’s view.

Selecting the Right Medium

Visual aids for documents are usually limited to paper. For speeches and presentations, however, you have a variety of media to choose from:

Handouts

In a presentation, you may choose to distribute sheets of paper bearing an agenda, an abstract, supplementary data, etc.

Chalkboard and whiteboards

These are of value when you want to draw out ideas in a small group of people.

Flip charts

Large sheets of paper attached at the top like a tablet can be propped on an easel so that you can flip the pages as you speak.

Overheads

One of the most common visual aids in business is the overhead transparency which can be projected on a screen in full daylight. Transparencies are easy to make using a typed original on regular paper, a copying machine, and a page-size sheet of plastic.

Slides

The content of slides may be text, graphics, or pictures. If you’re trying to create a polished, professional atmosphere, you might find this approach worthwhile, particularly, if you’ll be addressing a crowd that doesn’t mind speaking in a darkened room. Remember that you may

need someone to operate the projector and that you'll need to coordinate the slides with your speech. Take a few minutes before your speech to verify that the equipment works correctly.

Computers

With a special projector, a personal computer can be turned into a large-screen “intelligent chalkboard” that allows you to create and modify your visual aids as the presentation unfolds. When the presentation is over, you can printout hard copies of the visual aid and distribute them to interested members of the audience. You can also use a computer-generated slide show which gives you the opportunity to make changes right up to the minute you start speaking.

Other Visual Aids

In technical or scientific presentations, a sample of a product or material allows the audience to experience your subject directly. **Models** built to scale are convenient representations of an object. **Filmstrips and movies** can capture the audience's attention with color and movement. **Television and videotapes** are good for showing demonstrations, interviews, and other events.

Mastering the Art of Delivery

When you've planned all the parts of your presentation, and have your visual aids in hand, you're ready to begin practicing your delivery. You have a variety of delivery methods to choose from; some of which are easier to handle than others.

Memorizing

Unless you're a trained actor, avoid memorizing an entire speech, particularly long one. You're likely to forget your lines. A memorized speech often sounds very stiff and stilted. On the other hand, memorizing a quotation, an opening paragraph, or a few concluding remarks can bolster your confidence and strengthen your delivery.

Reading

If you're delivering a technical or complex presentation, you may want to read it. Policy statements by government officials are sometimes read because the wording may be critical. If you choose to read your speech, practice long enough so that you can still maintain eye contact with the audience.

Making a presentation with the help of an outline, note cards, or visual aids is probably the most effective and easiest delivery mode. You have something to refer to and can still have eye contact and interaction with the audience. If your listeners look puzzled, you can expand on a point or put it in another way. Generally, note cards are preferable to sheets of paper; nervousness is more evident in shaking sheets of paper.

Impromptu Speaking

Avoid speaking unprepared unless you've spoken countless times on the same topic or you are an extremely good public speaker. When you are asked to speak “off the cuff”, take a moment to think through what you're going to say and avoid the temptation to ramble.

Mastering the Art of Delivery

Regardless of which delivery mode you use, be sure that you're thoroughly familiar with the subject. Knowing what you're talking about is the best way to build your self-confidence. It's also helpful to know that how you'll approach preparing for successful speaking, delivering the speech, and handling questions.

Preparing for Successful Speaking

You can build self-confidence by practicing, especially if you haven't had much experience with public speaking. Even if you practice in front of a mirror, try to visualize the room filled with listeners. Put your talk on tape to check the sound of your voice and your timing, phrasing, and emphasis. If possible, rehearse on videotape to see yourself as your audience will. Go over your visual aids and coordinate them with the talk. Whenever you can, check the location for your presentation in advance, and locate the light switches and dimmers. Check for any small but crucial items that you might need, like chalk and eraser.

If you're addressing an audience that doesn't speak your language, consider using an interpreter. Anytime you make a speech or presentation to people from other cultures, take into account cultural differences in appearance, mannerisms, and other customs, in addition to adapting the content of your speech.

Delivering the Speech

At the time to deliver the speech, you may feel a bit of stage fright. Most people do, even professional actors. A good way to overcome your fears is to rehearse until you're thoroughly familiar with your material. Communication professionals have suggested other tips, which we will now go over:

- Prepare more material than necessary. Extra knowledge, combined with a genuine interest in the topic, will boost your confidence.
- Think positively about your audience, yourself, and what you have to say.
- See yourself as polished and professional, and your audience will too.

Be realistic about stage fright. After all, even experienced speakers admit that they feel butterflies before they address an audience. Tell yourself you're ready. Use the few minutes while you're arranging your materials, before you actually begin speaking, to tell yourself you're on and you're ready.

Before you begin speaking, take a few deep breaths. It will help you calm down and improve your delivery. Have your first sentence memorized. Having your opening on the tip of your tongue helps you get started, and everything else starts falling into place. If your throat is dry, drink some water. Tension often causes your mouth to become dry. It is best to have a few sips of water before you begin.

Don't panic if at any time during the speech you feel like you're losing your audience. Try to pull them back by involving them in the action. Use your visual aids to maintain and revive audience interest. Visual aids, especially those involving color and movement, are much better at getting back the audience's attention than any words you may have for them. Keep going, things usually get better, and your audience will silently be wishing you success.

Handling Questions

The key to handling this segment effectively is preparation. Spend time, before your speech, thinking about the questions that might arise including abrasive or difficult questions, and prepare accordingly. Some experts recommend that you hold back some dramatic statistics as ammunition for the question-and-answer session. However, bear in mind that circumstances may require some changes in the answers you prepare. When someone poses a question, focus your attention on that individual. If the question is vague or confusing ask for clarification. Then give a simple, direct answer. Don't say more than you need to if you want to have enough time to cover all the questions.

If giving an adequate answer would take too long, simply say "I'm sorry that we don't have enough time to get into that issue right now, but if you'll see me after the presentation, I'll be happy to discuss it with you." If you don't know the answer, don't pretend that you do. Instead of pretending, say something like "I don't have those figures. I'll get them for you as quickly as possible." Don't allow one or two people to monopolize the question period. Try to give everyone a chance to participate; call on people from different parts of the room.

If the same person keeps angling for attention, say something like "Several other people have questions; I'll get back to you if time permits". If audience members try to turn a question into an opportunity to mount their own soapboxes, it's up to you to maintain control. You might admit that you and the questioner have a difference of opinion and offer to get back to the questioner after you've done more research.

Don't indulge in put-downs which may backfire and make the audience more sympathetic to the questioner. Prepare the audience for the close of session by saying "Our time is almost up, let's have one more question", even if more people want to talk. After your reply, summarize the main idea of the presentation and thank people for their attention. Conclude the same way you opened: by looking around the room and making eye contact. Then gather your notes and leave the podium, shoulders straight, head up.

LESSON 45

REVIEW WRITTEN COMMUNICATION

Outline

- Reading
- Modes of delivery
- Delivery guidelines

Reader Centered Writing

- Writing your resumes
 - Defining your objectives
 - Planning
 - Drafting
 - Evaluating
 - Revising
- Writing your letter of application
 - Defining your objectives
 - Planning
 - Drafting
 - Evaluating
 - Revising

Audience Analysis

- Target your audience by identifying audience type, characteristics and level of expertise.
- Determine your audience's needs by assessing their expertise and their purpose in reading the document.
- Determine document density.

Defining Objectives

- Defining objectives
- Document purpose
 - Implicit purpose
 - Explicit purpose
- Why do we need documents?

Identify the tasks you will help your readers perform while they read. Tell how you want to change the readers' attitudes. Learn your readers' important characteristics. Learn who your readers will be. Fill in a sample worksheet that should be kept in mind when defining objectives. Learn the importance of 'Appropriateness' in business and technical communication.

Fundamentals of Communication

The importance of appropriateness

- Accuracy
- Clarity
- Conciseness

- Coherence

The 7 Cs: Clarity

- Answer all questions; stated as well as implied questions of the questionnaire must be answered..
- Give extra information when desirable.
- Use one word in place of phrases; one sentence in place of two.
- Read out loud to listen for wordiness.
- Omit outdated trite expressions.
- Ask yourself: what material is really relevant?
- Look for unnecessary repetition: Does the same word or idea appear too often?
- See your material from reader's point of view. 'You' is more desirable than 'I' or 'we' in most instances.
- Readers like to see these benefits. Be sure benefits are a prominent part of the message.
- Consciously use positive words.
- Were you precise in using facts and figures whenever possible?
- Choose as precise or as concrete a word as possible.
- Did you use active voice more than passive?
- Is there action in verbs rather than in nouns?
- Did you try occasionally to use vivid, image building words? But in business writing use them sparingly.
- Select words that have high sense of appropriateness for the reader.
- Opt for familiar words, the ones that are not pretenses present.
- Limit the average sentence to 17 to 20 words.
- Insert no more than one main idea into a sentence.
- Arrange words so that the main idea occurs early in a sentence.

Planning Business Messages

- Describe the basic tasks in the composition process.
- Define both general and specific purposes of your business message.
- Test the purpose of your message.
- Develop an audience profile.
- Analyze the needs of your audience.
- Establish the main idea of your message.
- Select an appropriate channel or medium for transmitting a particular message to a particular audience.

Composing Business Messages

- Identify the characteristics of a well-organized message.
- Explain why organization is important to both the audience and the communicator.
- Break a main idea into subdivisions grouped under logical categories.
- Arrange ideas in direct or indirect order, depending on the audience possible reaction.
- Compose a message using a style and tone that are appropriate to your subject, purpose, audience and format.

- Use the 'you' article to interest the audience in your message.

Revising Business Messages

- Edit your messages for content and organizational style and readability.
- Choose the most correct and most effective words to make your point.
- Rewrite the sentences to clarify the relationships among the ideas and to make your writing interesting.
- Identify the elements of paragraph.
- Choose the best design for written documents.
- Rewrite paragraphs using the appropriate development techniques.
- Proofread your message for mechanics and format.

Memorandum

- Memoranda are brief, informal reports used to establish a record. They generalize the communication process by transmitting the message from one or more authors to one or more recipients.
- E-mail messages typically take the form of memoranda.

Letters

- Use letters to communicate outside your organization. Whereas the memorandum is the primary vehicle for communication within an organization, letters are often used to communicate to individuals outside it, especially in formal and semiformal contexts.
- Letters are an essential part of all business and technical communication because they are more formal and reliable than electronic mail and more precise and permanent than telephone or face-to-face conversations.

Letters of Inquiry

Format of a letter of inquiry

Components of a letter of inquiry:

- Head
- Body
- Footer
- Headings

Letters of Recommendation

- Format of a letter of recommendation
- Components of a letter of recommendation:
 - o Head
 - o Body
 - o Footer
 - o Headings
- Methods of obtaining letter of recommendation
- General guidelines for writing letter of recommendation

Writing Direct Requests

- Why you follow the customs of your audience when making requests across cultural boundaries.
- Clearly state the main idea of each direct request you write.
- Indicate/express your confidence that the request will be filled.
- Provide a sufficient detail for the reader to be able to comply with your request.
- Clarify complicated request with lists and tables.
- Close with a courteous request for specific action.

Writing Routine, Good-News and Goodwill Messages

- Decide when to write a routine, good-news, or goodwill message.
- Adjust the basic organizational pattern to fit the type of message you are writing.
- Add resale and sales promotion material when appropriate.
- Encourage your reader to take any desired action.
- Write credit approvals and recommendation letters.
- Use the correct form for such specialized messages as instructions, news releases, and goodwill letters.

Writing Bad News Messages

- Choose correctly between indirect and direct approaches to a bad-news.
- Establish the proper tone from the beginning of your message.
- Use neutral lead-ins to put your audience in an accepting mood.
- Present bad news in a reasonable and understandable way.
- Write message that motivate your audience to take constructive action.
- Close messages so that your audience is willing to continue a business relationship with your firm.

Writing Persuasive Messages

- Strengthen your persuasive messages with appropriate appeal.
- Gain credibility by supporting your persuasive message with relevant facts.
- Use attention, interest, desire, and action (the AIDA plan) to organize persuasive messages.
- Write a message persuading your audience to take action or grant you an adjustment.
- Design a sales letter around selling points and benefits.

Writing Short Reports

- Identify the qualities of good reports and proposals.
- Choose the proper length and format of your report.
- Decide when to use direct versus indirect order.
- Organize informational and analytical reports.
- Establish an appropriate degree of formality in the in a report.
- Use headings, lists, transitions, openings and summaries to guide readers through the report.

Planning Long Reports

- Define the problem to be solved by studying and outlining the issues to be analyzed.
- Identify and analyze the issues that have to be analyzed during your study.

- Prepare a work plan for conducting your investigation, planning the necessary steps, estimating their timing, and deciding on the sources of information required.
- Organize the research phase of the investigation, including the identification of secondary and primary sources of data.
- Draw sound conclusions and develop practical recommendations.
- Develop a final outline and visual aid plan for the report.

Writing Long Reports

- Describe how organizations produce formal reports and proposals.
- Prepare all necessary parts of a formal report.
- Select and prepare the visual aids to support the text of your report.
- Assemble all the parts of a formal report in the proper order and use an appropriate format. Prepare and assemble all the parts of a formal proposal.
- Critique formal reports prepared by someone else.

General Reports

- Varieties of report-writing situations
- How your readers want to use the information you provide
- The questions readers ask most often
- Sample outlines
- Planning guide
- Sample reports

General superstructure for reports

- Introduction
- Method of obtaining facts
- Facts
- Discussion
- Conclusions
- Recommendations

Empirical Research Report

- Typical writing situations
- The questions readers ask most often
- Superstructure for empirical research reports
- Introduction
- Objectives of research
- Method
- Discussion
- Superstructure for empirical research reports
- Conclusions
- Recommendations
- An important note about headings
- Planning guide

- Sample research report

Feasibility Reports

- Typical writing situation
- The questions readers ask most often
- Superstructure for feasibility reports
- Introduction
- Criteria
- Two ways of presenting criteria
- Importance of presenting criteria early
- Sources of your criteria
- Four common types of criteria
- Method of obtaining facts
- Overview of alternatives
- Evaluation
- Choose carefully between the alternating and divided patterns
- Dismiss obviously unsuitable alternatives
- Put your most important point first

Progress Reports

- Typical writing situations
- The readers' concern with the future
- The questions readers most often ask
- Superstructure for progress reports
- Introduction
- Facts and discussion
- Answering your readers' questions
- Providing the appropriate amount of information
- Organizing the discussion
- Emphasizing important findings and problems
- Conclusions
- Recommendations
- A note on the location of conclusions and recommendations
- Tone in progress reports
- Sample outlines
- Planning guide
- Sample progress report

Proposals

- The variety of proposals-writing situations
- Proposal readers are investors
- The questions readers ask most often
- Strategy of the conventional superstructure for proposals
- Superstructure of proposals

- Introduction
- Problem
- When readers define the problem for you
- When readers provide a general statement of purpose
- When you must define the problem yourself
- Objectives
- Product
- Method
- Resources
- Schedule
- Management
- Costs

Instructions

- The variety of instructions
- Three important points to remember
- Instructions shape attitudes
- Good visual design is essential
- Page design
- Visual aids
- Testing is often indispensable
- Conventional Superstructure for Instructions
- Introduction
- Subject
- Aim
- Intended Readers
- Scope
- Organization
- Usage
- Motivation
- Background

Using Visual Aids

Look for places where visual aids will help you achieve your communication objectives:

- Choose visual aids appropriate to your objectives
- Make your visual aids easy to understand and use
- Fully integrate your visual aids with your prose

Creating Twelve Types of Visual Aids

How to construct

- Tables
- Bar graphs
- Pictographs
- Line graphs

- Pie charts
- Photographs
- Drawings
- Diagrams
- Flow charts
- Organizational charts
- Schedule charts
- Budget statements

Writing Specifications and Analysis Reports

- Types of specifications common to the computer industry
- Importance and main features of analysis reports
- It will be noted that terms and conventions often differ from company to company, but the general framework is similar.

How to Avoid Common Problems

- Writer's block
- Lack of a well-defined purpose
- Poorly analyzed structure
- Lack of coincidence
- Organizational problems
- Punctuation problems
- Readability problems
- Writing style problems
- Organizational logic
- Mechanical development of the topic
- Writer's style
- Quality of the manuscript

Language Review-Paragraph

- Paragraph unity
- Topic sentences
- Paragraph coherence
- Transitional devices
- Transitional words and phrases
- Common transitional words and phrases
- Linking pronouns
- Repetition of key words
- Paragraph development
 - Exemplification
 - Narration
 - Process
 - Description
 - Comparison and contrast

- o Analogy
- o Cause and effect
- o Classification and division
- o Definition
- o Analysis
- o Enumeration

Language Review-Sentences

- Stacked modifiers and nouns
- Wordiness
- Passive voice and active voice
- Nominalizations
- Unnecessary repetition
- Unnecessary words and phrases
- Overloaded sentences
- Sentence Fragments
- Comma splice
- Fused sentences
- Stringy sentences
- Agreement
- Subject-verb agreement
- Two or more nouns
- Sentences beginning with there
- Indefinite pronouns
- Collective nouns
- Quantifiers
- Pronoun-antecedent agreement

Language Review-Sentence II

- Lack of parallelism
- Choppy sentences
- Misplaced modifiers
- Interrupted sentence structure
- Modifiers of nouns
- Adverb modifiers
- Dangling modifiers
- Double negatives
- Inappropriate shifts
 - o Tense
 - o Mood
 - o Person
 - o Voice
- Sequence of tenses
- Pronoun Reference
 - o Unclear pronoun reference

- Broad pronoun reference
- Pronoun case

Language Review-Words and Punctuation I

- Abstract and general language
- Vague language
- Ornate language
- Technical terms
- Biased language
 - Ageist language
 - Language biased against people with disabilities
 - Ethnically and racially biased language

Punctuation

- Periods
- Commas
 - Introductory elements
 - Coordinating conjunctions joining independent clauses
 - Elements in a series
 - Coordinate modifiers
 - Nonrestrictive modifiers
 - Parenthetical elements
 - Elliptical constructions
 - Specialized uses of commas
 - Superfluous commas
 - Placement of commas with other Punctuation
- Colons
- Semicolons
- Question marks
- Exclamation marks
- Apostrophes
- Quotation marks
- Hyphens
- Dashes
- Parentheses
- Brackets

Language Review-Mechanics

- Capitalization
- Italics
- Abbreviations
- Acronyms
- Numbers
- Enumeration
- Symbols

- Equations
- Spelling

Listening and Interviewing

- Apply the communication process to oral communication.
- Summarize the skills involved in being an effective listener.
- Identify nine common types of business interviews.

Planning Interviews and Conducting Meetings

- Define four types of interview questions and clarify when to use each type.
- Describe how groups make decisions. Discuss the preparations and duties necessary for productive meetings.

Giving Speeches and Oral Presentations

- Categorize speeches and presentations according to their purpose, analyze the audience for speeches and presentations, and discuss the steps required in planning a speech or presentation.
- Develop an introduction, a body, and a close for a long formal presentation.
- Select, design, and use visual aids that are appropriate for various types of speeches and presentations.
- Deliver your speech or presentation and handle audience questions effectively.