Technical Writing

Lumen Learning

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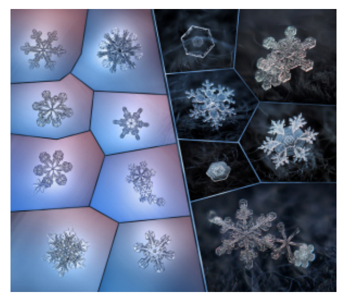
INTRODUCTION

THE MANY CONTEXTS OF COMMUNICATING TECHNICAL INFORMATION

Though you may already know a great deal about effective communication within an academic environment, technical communication is not limited to this area. You must know how to communicate effectively in many other settings such as a professional environment.

Technical Communication Can Take Many Forms



Many different types of documents are created and used every day by professionals. The most common and well known of these documents are memos and emails, which are used in every type of business. In addition to this, technical communicators also create instructions, product guides and documentation, graphs, charts, images, videos, and other forms of content. No matter what medium a technical communicator chooses to use, the main goal is always to be informative and clear.

Technical Communication Serves a Practical Purpose

Technical communication is employed in real world settings for practical purposes. Whether to instruct, inform, or to persuade, technical communication is used for a myriad of purposes beyond the sort of straightforward informative writing typical of educational or certain social settings. Beyond being inspiring or entertaining, technical writing must be useful to an audience trying to perform a task.

Technical Communication Addresses Complex Audiences

Academic papers are often addressed to a single individual or a small group of peers with very similar experiences and expectations. Technical writing, because of its practical and collaborative nature, must often be geared toward a complex audience. Technical communicators must be careful to be conscious of intended and unintended audiences, foreign and domestic readers, and individuals with vastly differing responsibilities, experiences, and expectations of a given document. The context in which a document is read will differ with each reader and it is important to keep documents concise and free of bias and excessive or unclear language to ensure that they are understood.

Technical Communication is Collaborative

Technical communication documents will often require input or additional work from several co-authors, depending on the complexity of the document and the nature of the task with which it is dealing. Paul Anderson's Technical Communication textbook relates an anecdote regarding the proposal to build the International Space Station which contained text and drawings from more than 300 engineers. This may be an extreme example, but even when writing a technical document alone, collaboration and consultation with coworkers or other members of the intended audience may form a part of an author's writing process.

Technical Communication is Shaped by Conventions and Culture

Much as with academic writing, organizational conventions as well as culture will shape the style used in technical documents. Organizations may conceive of themselves and formal and conservative or informal and innovative, and reflect this self-conception in their communication style. This reflection often extends to social dimensions within the workplace or the culture of the society in which the organization operates. A technical communicator's style will change depending on the social and organizational contexts that they are working within.

Technical Communication is a complex discipline because it can occur in so many contexts. It can be encountered in nearly any professional setting from a construction yard to a courtroom. It is present when you consult a user manual for your car, microwave, computer, or un-assembled bookshelf. Adaptivity to ever changing audiences as well as legal and ethical issues and a variety of social factors is one of the most important traits of a successful technical communicator.

BASIC ASSUMPTIONS AND POTENTIAL COMPLICATIONS

Before you begin to learn about a subject, it is natural to make assumptions about it. It is important not to act on these assumptions unless you can prove that they are correct.

Writing for Work vs. Writing for School

The main assumption that most people have about technical writing is that it's like writing for a class: You start with a thesis, perfect it, build structural sentences, eliminate first person viewpoint, add an intro, body, and conclusion, and so on. What isn't taught in schools is that writing memos, proposals, business letters, and instructions is different than writing an academic essay. When writing at work, you don't build up to your main point–you get to it immediately. Your boss isn't grading you on how well you wrote your business memo, they're looking for pertinent information without filler and 'fluff'.

In the academic setting, you may not get a chance to re-subnmit an assignment for a better grade; however, in the business setting, resubmission is common. Resubmission is important in business because business is always changing. However, when sending out your first draft of a memo, make sure it is as close to perfect as you can get it. Even if you redo this memo, people may still have already opened it, or my still open it to see the differences in changes. So, if you write a new memo saying the meeting will no longer take place on Tuesday, that is not necessarily a redo, but a whole new memo in itself. The new subject would be meeting canceled instead of meeting on Tuesday. But if you are redoing a memo on a progress report, your boss still may choose to read the first draft as well as your second. Also, be sure your second draft is better than your first. A lot of people think that if its a second draft it will obviously be better than the first but this is not always the case. Be sure to read and re read your memos.

Education vs. Practicality

When you are at school, your teachers expect you to show that you are learning. In order to best demonstrate that, you prepare reports, papers, projects and take exams. Few teachers will give you the benefit of the doubt that you know something without proving it. This is why writing in school serves an educational purpose. You are expected to write about everything you know, and if you leave something out, your teacher is going to assume that you don't know it.

However, writing something at work serves a completely different purpose. Your readers are coworkers and clientele who don't know as much as you do about the things you are writing about, and look to your writing as a guide. This is called writing for a practical purpose. Because your readers are trying to reach their own practical goals, they expect your writing to be clear, concise, and to the point. By including essential information only, you are helping your readers find out what they need without getting frustrated, bored, or overwhelmed.

Relationships Between People

Writing in school is often much more direct than writing for a business. When you write a paper, you only have one communicative relationship: The one between you and your professor. Since this is the only social situation you encounter with your assignment, you don't experience as much of a variety of relationships as you do with technical writing. When you look at your writing at work, you realize that you are connecting with many different people. There is the relationship between employee and employer, between supplier and customer, and between coworkers. You may often be competing with other people, or you may be working alongside them on a project.

Use of Graphics

Graphics in technical writing are not only encouraged, they are mandatory. A colorful graphic can be highly convincing when you're presenting something, especially if it gets the point across visually. Some examples of graphics are:

1. Tables
2. Charts
3. Photographs
4. Graphs

5. Drawings
6. Symbols

Not only are graphics visually appealing, but they also make a presentation easy to navigate. Usually, they are discouraged in school papers. In the business field, visuals can be the determining factor in getting a job, securing a deal, or impressing the boss. However, when using graphics, make sure they are appropriate and relate to the topic. It is very unprofessional to send inappropriate graphics to your work force, and it may cause confusion if the graphics do not relate to your topic. Graphics are used to enhance the document, not take away from it.

Teamwork

Many schools are starting to encourage writing in groups to get a sense of the teamwork that you will experience in the workplace. Collaboration at the office is common; even if you aren't part of a team, you might still consult coworkers and readers. You may also submit drafts that are constantly being revised.

Conventions and Culture

Another assumption you may have about technical writing is that it almost never changes. But if you look at the word "technical" as it relates to "technology," you may find that technology is always changing. That is why before you can become a successful technical writer, you must learn about your organization's style and about the social and political factors of your writing.

Your Company's Style

Technical writing is not a constant. Each company has its own way of promoting itself, from a liberal and casual style to a conservative and formal style. You will need to adjust your writing based on how the company wants you to represent it.

Cross-Cultural Communication

One of the major assumptions that many people who begin technical writing have is that the standard for their company in their city is the standard that should be in use all around the world. In fact, this is a huge mistake to make. Even if these assumptions are unconscious, they are still insulting. Geoff Hart speaks about this in his article, "Cross-Cultural Communication Requires Us to Test Our Assumptions."[1]. He mentions that there are many obvious traps that Americans miss when traveling, especially when they are in situations that they have experienced before, but with other American businessmen. Verbs can also pose problems, as do metaphors and phrases. Complex sentences are some of the largest problems–it is when we use big words and long sentences that we can most often be misinterpreted. Writing things that are short and sweet may not seem professional, but keep in mind that you are writing for a select audience who is looking for familiar words and doesn't have the patience to appreciate your grasp on the English language.

One of the most important things to keep in mind when writing for a different audience than you're used to is to **never assume anything.** If you reread something from another perspective and think, "Maybe my audience wouldn't get this," it's probably true. Technical writers should never think that their writing does not need to be edited. By learning to edit your own writing, you are conceding that it is not perfect. By doing this, you prove that you are trying to make the audience understand your message.

Potential Complications

If you choose to be a technical writer, you will face many complications (potentially). For the most part, they have to do with a changing world, changing beliefs, and changing cultures.

Technology

Technology is huge in technical writing because many writers are responsible for creating guides, instructions, policies and procedures, training materials, and so on. Since we have entered a digital age, we are becoming more dependent on machines to assist us and the variety of these machines changes every month. Since one of the main goals for tech writing is to anticipate any questions or problems that arise, it can be very difficult for a writer to adjust to shifting tastes.

Ethical Communication

Ethics are huge in technical writing. Usually, ethics codes are present at the workplace (even if they aren't always enforced, they exist). Ethics aren't in black and white and many people are apt to disagree with them, potentially complicating ensuing writing.

Working in Teams

I have included this section because many technical writers may find themselves working in many teams over the course of their careers and it's a good idea to know well in advance what you're in for.

You and your teammates may not always agree on the best way to approach a problem. You may think that you have the best ideas, but get angry when you find yourself doing all the work. However, working in a team to collaboratively edit writing is the best way to get your work done because you're not just listening to yourself–you're listening to your team members, which can help disperse subjectivity. Although you may feel that you work better alone, that won't always be the case. Whether you like it or not, you will usually be in teams for most of your working life, so get used to it soon.

Losing Focus of Your Goal

As you can see from this complex Wikibook, you need to remember a lot of things in order to become a successful technical writer. Remember, when it comes to technical writing, the more concise and understandable your text is, the better. You may tend to wander off topic if you've been working on a project for a long time, but this can severely damage your end result. Keep focused and remember to leave any shred of an opinion out of your work. Just take things one word at a time.

Notes

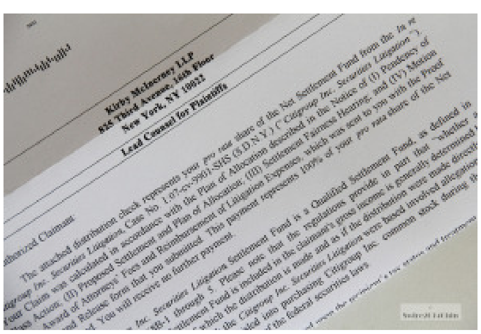
1. Jump up↑ Hart, Geoff. "Cross Cultural Communication Requires Us to Test Our Assumptions. STC-Montreal, September 30th, 2008

LEGAL ISSUES AND COMMUNICATION

In business, image is everything. Public opinion of a company affects a consumer's views on that company's products. This, in turn, affects the company's public profit, and essentially its standing. When a company is involved in a lawsuit or a recall, the company has to consider the consequences that these issues will have on their business and needs to consider the costs of repairing the company's reputation. These are among the reasons certain documents are carefully reviewed before being sent to their intended readers. To write ethically, you must also identify another group of people: the individuals who will gain or lose because of your message. Collectively, these people are called *stakeholders* because they have a stake in what you are writing. Only by learning who these stakeholders are can you assure that you are treating them in accordance with your own ethical values. When crafting your communication think about who will be affected by what you say and how you say it. You have to be sensitive to the following language in a professional document:

- Race and gender roles
- Political correctness
- Generalizations
- Cultural awareness
- Religious symbols

Under the law, most documents written by employees represent the position and commitments of the organization itself. There are always legal issues to consider when writing a professional document and they reflect in writing style. Professional documents can serve as evidence in disputes over contracts and in product liability lawsuits. A lawsuit is a civil action brought in court. Today, the average company is involved in 400 lawsuits at any given time. While most companies win their lawsuits, being caught in a lawsuit has many consequences. Lawsuits cost companies time and money. The money spent on lawyers and the time spent in court takes away resources a company could use for improving business and products. Lawsuits also have ramifications for a company's reputation. Recalls can be another legal problem for companies. A recall is when a product is removed from the market or a correction is made to the product because it is either defective or potentially harmful. In most cases, a recall results from an unintentional mistake by a company rather than from an intentional disregard for the law. Sometimes a company discovers a problem and recalls a product on its own. Other times a company recalls the product after concerns are made.



There are a number of reasons why a company may face a lawsuit or a recall. One of the main reasons a company gets involved in a lawsuit is because the directions to the company's product were not clear to the consumer. For this reason, the general guideline is that instructions should be understandable, clear and concise at the fourth to sixth grade reading level. Also, when in a lawsuit, a company has to remember that all documents may be subpoenaed. This means that any document from memos and emails to proposals and studies can be subject to revision by a court of law. Another reason a company gets into a lawsuit may be over a recall. An aspect of recalls are those dealing with safety concerns. Many products are recalled for potential safety concerns, even if no one was actually hurt. To avoid safety recalls, companies need to make sure they consider every possible danger involved with a product. Some dangers may seem to be common knowledge, but companies should be aware of those and label the product accordingly, regardless of assumptions about common knowledge.

Communication Constraints

Constraints are limits for documents set by the company or industry.As you gather the information that will form the basis for the way you craft your communication, you should also learn about any expectations, regulations, or other factors that may constrain what you can say and how you can say it. In the working world, expectations and regulations can affect any aspect of a communication. Aspects that affect communication are as follows:

- Tone of voice (how the message “sounds”)
- Use of abbreviations
- Tables
- Margins
- Length of document (as a maximum)

It is important to find out about these constraints and take them into account as you create your communication. Some of these constraints come directly from the employer. Your employer and your readers probably have expectations about the way you write a professional document. There are often, unspoken expectations about how the required elements will be prepared. You are cultivating a company’s desire for a particular corporate image, to protect its legal interests, and to preserve its competitive edge. A toy company like LEGO, would not want to be associated with a technical document that includes slang or words that could damage their reputation. They are legally protecting their business. Since all documents can be used against individuals and companies in court, all written documents with the company name should include only professional content that properly represents the company.

Other times, constraints are set by government regulations that determine how certain reports need to be written. Regulations are laws made by the government that affect what is in a document or how a document is written. Writing constraints can originate from outside the company. For example, from government regulations that specify how patent applications, environmental impact report, and many other types of documents are to be prepared. Similarly, scientific, technical, or other professional journals have strict rules about many aspects of the articles they publish. These regulations act as standards for crafting your communication effectively.

Style Constraints

Constraints may be set by style issues as well. There should be no clichés and idioms in documents because they may pose a problem with translating documents from one language to another. A cliché is a worn-out or overused expression that tends to sound trite and often doesn’t express what you truly mean to say. Examples include: the bottom line is, head over heels, or take it or leave it. Idioms are words or expressions that are specialized vocabulary used by a group of people also known as jargon. Look at the phrases that you use when you write and see if they make sense when translated literally. If they don’t, replace them with language that is clear and direct, and will not be misunderstood. Don’t use “compound” sentences (and, or, nor, but, however, yet).Opinions and jokes should also be avoided in business documents. Communicate, argue or persuade your readers through facts and data instead of opinions.

Many companies also like to form a “custom” way of writing. Companies like Microsoft want all their documents to be written in the same style and format. The only way to do this is to teach the writers the “correct” way to write in order to portray Microsoft. What many people may not know is that Microsoft does this to cover themselves in a legal trial. If every single document is written using the same format, they can make sure that the customers understand the entire document and do not run into trouble with inconsistencies.

How do you know if you are following the correct constraints? The easiest way to understand how to write in your specific field is to look at documents written by your company and other companies in the industry within the past few months. This will allow you to see their style and how they make their argument. Some companies even publish style guides for writing. By seeing your company’s regulations, you can begin to draft your argument. Make sure to follow your company’s guidebook (if they have one) to be sure that your style is correct with their recommendations.

Remember that in professional writing you are trying to persuade the reader using an ethical style. This means to avoiding content that will not stand up in court, especially since people file lawsuits for everything these days. Make sure that the documents you write for your company are persuasive while also preserving your company’s competitive edge.

APPRECIATING DIFFERENT CULTURES

Today, the majority of workplaces are multicultural. Employees in the workplace are more likely to come from different backgrounds including cultural environments and different parts of the world. The textbook *Technical Communication* by Paul V. Anderson makes a point to emphasize cultural differences. It is important to take into account who a document will be read by.

The following characteristics show differences between cultures and should be considered by effective writers:

- Amount of Detail Expected – High-context cultures such as Japan, China, and France provide little details in their writing. A high-context culture is based on fewer, deeper relations with people; there are many unspoken social rules and understandings within the culture. People in these cultures expect readers to have enough knowledge about the communication before they begin reading. In areas such as instructions, for example, it is assumed that readers have enough background knowledge or experience that there is no need to explain different tools used or walk the reader through any steps. People in low-context cultures such as the United States, Great Britain, and Germany assume readers know very little before they begin reading. Low-context cultures have a greater number of surface-level relations; rules are more explicitly defined so others know how to behave. People in low-context cultures expect detailed writing that explains the entire process. Writers should consider the cultural audience of their writing so that readers are not insulted by an excess or lack of information.

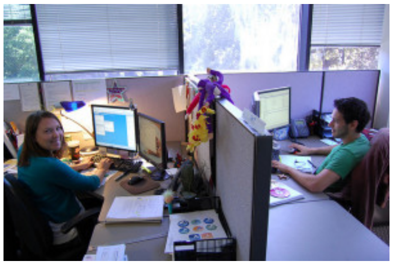
- Distance Between the Top and Bottom of Organizational Hierarchies – Many organizations in the United States and Western Europe have great distances with many layers between top-level management and low-level workers. When the distance is large, writing to employees above and below tends to be more formal. In cultures where companies are more flatly organized, communication between layers tends to be less formal.

- **Individual versus Group Orientation** – Many Asian and South American cultures are collectivist, meaning people pursue group goals and pay attention to the needs of the group. In individualistic cultures such as the United States and Northern Europe, people are more interested in personal achievement. Writers should know if they are writing to an audience that is “me-oriented” or one that is “we-oriented.”
- **In-person Business Communications** – There are several differences that one should be aware of when meeting a colleague with a different cultural background. For instance, some cultures stand very close to each other when talking and some prefer to have distance. Some cultures make eye contact with each other and some find it disrespectful. There are also certain cultures where an employee will not disagree or give feedback to their superior. It is seen as disrespectful. In these cultures, it is usually unacceptable to ask questions.
- **Preference for Direct or Indirect Statements** – People in the United States and Northern Europe prefer direct communications, while people in Japan and Korea typically prefer indirect communications. When denying a request in the U.S., a writer will typically apologize, but firmly state that request was denied. In Japan, that directness may seem rude. A Japanese writer may instead write that the decision has not yet been made, delaying the answer with the expectation that the requester will not ask again. In Japan, this is viewed as more polite than flatly denying someone; however, in the United States this may give false hope to the requester, and the requester may ask again.
- **Basis of Business Decisions** – In the United States and Europe, business decisions are typically made objectively with consideration given to cost, feasibility, timeliness, etc. In Arab cultures, business decisions are often made on the basis of personal relationships. Writers should know if a goal-oriented approach is best, or if a more personable communication would be preferred.
- **Interpretation of Images, Gestures, and Words** – Words, images, and gestures can mean different things in different cultures. Knowing how images will be interpreted in another culture is crucial before sending documents to unfamiliar audiences. For example, hand gestures are interpreted differently around the world, and graphics showing hands should generally be avoided. Also, religiously affiliated wording can cause offense by readers. “I’ve been blessed to work with you” and comments that lend themselves to religious references should be avoided in the business setting.

Gaining Knowledge about Intercultural Readers

It is often difficult to determine who will be reading your documents. It is important to distinguish your audience before writing. When writing to a wide variety of people, knowing their cultural biases, assumptions, and customs are essential. There are a variety of resources online that provide cultural information about countries around the world. Understanding differences reduces the amount of miscommunication when doing global business. As an example, in the United States many times the date is written Month, Day, Year, but in other countries they write a date Day, Month, Year. Knowing this can reduce the confusion of when things are sent, due, and timelines. Learning information about other nationalities helps you relate to your readers as well as prepare you for the future. Readers will appreciate your knowledge about their customs.

Other Sources



Coworkers are a great source of intercultural information. People familiar with you and the company provide the best information about the expectations of your audience. If coworkers have previously written to your audience, they may be able to offer insight as to how your writing will be interpreted.

Previous communications kept by your company can also be a useful tool for determining how to write to another culture. If the writing was well received, you will able to look for clues as to how to structure your writing. Writing that resulted in a new partnership or a completed sale may be the best indicator of how to structure your writing.

Unknown Readers

It is not always possible to know who your reading audience may be. Many emails or memos written to your intended audience may go through numerous people. Although you may be targeting one type of audience, it is important to not forget about the "phantom," "future," and "complex" readers.

Phantom readers– Real but unnamed readers are phantom readers. They are "behind the scenes" and their presence is usually unknown to a writer. Phantom readers are included in communications that require a decision. A clue to phantom readers presence is that the person written to is not high enough in organizational hierarchy to make a decision. It is important to meet the needs of the phantom readers because they may be the most important reader.

Future Readers– Written communications may still be used weeks, months or even years after being written. Every company document is considered a legal document, so lawyers and judges could be future readers. Future readers can also be employees who retrieve old communications for information or ideas. Writing communications with future readers in mind will save time and give documents an appeal that will please a wide range of readers.

Complex Audiences– Addressing a group of people who will be reading from many perspectives is a complex audience. Focusing on writing to complex audiences will allow you to relate to people from many different backgrounds. It is important to relate to each reader while not taking away from your overall communication.

Mindful Tips When Writing

- Never Use Racial Profiling: Racial slurs, profiling or any other form in a professional document are unacceptable in every instance. NO matter how comfortable you are with your audience. If the document were to come in the possession of unintended hands it could look highly negative upon you. The professional world on no level tolerates writing like this. Save it for your personal or individual writing.
- Never Use Profanity: Again, this is not accepted in the professional world on any level. Even writing between co-workers, this can offend and look negatively upon you.
- Be Mindful and Respectful of Religious Beliefs: Avoid words like *bless, god,*

covet, bible, or any other religious connotations. Avoid mentioning holiday names, for example; *"During the Christmas Season…"*, but rather *"During this holiday season…"*. This will ensure no one group feels excluded or discriminated against. Again, writing in this way is just professional courtesy.

- Avoid Slang: This is a general tip for all writing, but avoiding slang terms will ensure your words are not misconstrued and taken other than your intended meaning.
- Write As if the World is Reading: Once you have written your ideas on any medium; computer, email, paper, etc., everyone has access to it. Remember your writing is becoming public knowledge. You have no idea who will run across your document, so ensure there is no compromising information.

VIDEO: WHAT IS TECHNICAL COMMUNICATION?

Watch this video online: https://youtu.be/Fi5eZ2XLJc4

VIDEO: ACADEMIC AUDIENCE AND TECHNICAL AUDIENCE

Please open up the youtube website on your computer.

Then cut/paste this link into the youtube search bar to view the video:

Watch this video online: https://youtu.be/t4e-AGsu0Hs

VIDEO: CROSS-CULTURAL COMMUNICATION

Please click on the link to view the video:

Watch this video online: https://youtu.be/BrJTf97Ev8o

or you can simply cut and paste the web link into the youtube website:

Watch this video online: https://youtu.be/BrJTf97Ev8o

VIDEO: INTERNATIONAL BUSINESS CROSS-CULTURAL COMMUNICATION

Watch this video online: https://youtu.be/at7srdUiRfM

VIDEO: ETHICS AND WRITING

Please open up youtube on your computer, then cut and paste the following link in your youtube search bar to view the video:

Watch this video online: https://youtu.be/2-61hp5sx1Y

AUDIENCE-CENTERED COMMUNICATION

AUDIENCE-CENTERED COMMUNICATION OVERVIEW

Learning Objectives

Module Two: Knowing Your Audience.

- Learn about how to analyze your audience
- Learn why it is important to analyze your audience before you start writing
- Learn why technical writing is audience-centered

Audience matters

When you're in the process of writing a paper, it's easy to forget that you are actually writing to someone. Whether you've thought about it consciously or not, you always write to an audience: sometimes your audience is a very generalized group of readers, sometimes you know the individuals who compose the audience, and sometimes you write for yourself. Keeping your audience in mind while you write can help you make good decisions about what material to include, how to organize your ideas, and how best to support your argument.

To illustrate the impact of audience, imagine you're writing a letter to your grandmother to tell her about your first month of college. What details and stories might you include? What might you leave out? Now imagine that you're writing on the same topic but your audience is your boss. It's likely that your two letters would look quite different in terms of content, structure, and even tone.

In technical writing, audience analyze is especially important, since the writing itself is audience-centered. The main purpose of technical writing is to communicate a message that is specifically tailored to the audience's needs. Failure to do so can cost you sales, productivity, safety, or other issues that will impact your business.

Isn't my instructor or my boss my audience?

Yes, your instructor or employer is probably the actual audience for your paper. Your instructors read and grade your essays, and you want to keep their needs and perspectives in mind when you write. However, when you write an essay with only your instructor or employer in mind, you might not say as much as you should or say it as clearly as you should, because you assume that the person grading it or reading it knows more than you do and will fill in the gaps. This leaves it up to the reader to decide what you are really saying, and your reader might decide differently than you expect. For example, he/she might decide that those gaps show that you don't know and understand the situation at hand. It might show that you can't relate to your employees or you can't accurately describe important concepts to potential clients, suppliers or employees. It might also, for example, inadvertently show your supervisors that you aren't quite as knowledge about the organization as you thought you were and that would be a disaster!

Thinking about your audience differently can improve your writing, especially in terms of how clearly you express your argument. The clearer your points are, the more likely you are to have a strong piece of writing.

How do I identify my audience and what they want from me?

Before you even begin the process of writing, take some time to consider who your audience is and what they want from you. Use the following questions to help you identify your audience and what you can do to address their wants and needs.

- Who is your audience?
- Might you have more than one audience? If so, how many audiences do you have? List them.
- Does your writing task itself give any clues about your audience?
- What does your audience need?
- What do they want?
- What do they value?
- What is most important to them?
- What are they least likely to care about?
- What type of visuals does your audience need?
- What type of language and tone will you use?
- What is the background of your audience (education, social status, economical status, knowledge in the topic you are talking about, experience, etc.)
- What kind of organization would best help your audience understand and appreciate your? What do you have to say (or what are you doing in your research) that might surprise your audience?
- What do you want your audience to think, learn, do or assume about your message? What impression do you want your writing or your research to convey?

How much should I explain?

This is the hard part. As we said earlier, you want to show your instructor that you know the material. But different assignments call for varying degrees of information. Different fields also have different expectations. You may be writing to members of your organization or you could be writing for clients, customers, or prospective employees. You must analyze each audience to see what their needs are; what they need to know; what you want them to know; and what you want from them.

Once you have a draft, you may want to try your level of explanation out on a colleague before publishing or sending out your materials . Get the person to read your rough draft, and then ask him or her to talk to you about what he/she did and didn't understand. (Now is not the time to talk about proofreading, Your proofreader is looking at your materials for comprehension purposes only). You will likely get one of the following responses or a combination of them:

- If your listener/reader has tons of questions about what you are saying, then you probably need to explain more.
- If your reader seems confused, you probably need to explain more clearly.
- If your reader looks bored and can repeat back to you more details than he/she needs to know to get your point, you probably explained too much. Excessive detail can also be confusing, because it can bog the reader down and keep him/her from focusing on your main points.

Sometimes it's not the amount of explanation that matters, but the word choice and tone you adopt. Your word choice and tone need to match your audience's expectations. For example, if you are writing a report on a new product to member of your board of directors, the report will sound formal, you will not use slang or jargon, and you will explain how this new product works (and adds to profits). However, if the report is for potential customers, you may choose to write using informal expressions, using examples that highlight the benefit to the customer if they buy your product, and may even contain humor!

Generally, you want your reader to know enough material to understand the points you are making. If you are trying to persuade them, you want to give them key points that support your opinion. Lastly, if you want your readers to do something, you may have to outline steps or provide an explanation of a process. Your words, your format and design, and your tone all help get your message across to each unique audience.

APPRECIATING TECHNICAL COMMUNICATION AUDIENCES

Types of Audiences

When preparing documents, it is important to remember potential audiences for your work. Awareness of the differences between Intended and Unintended audiences may impact how an author presents or includes information in a document, and may make a difference in the event of a legal issue concerning the document. Also, awareness of a complex audience will ensure that an author's writing does not exclude any potential readers. You do not want to leave an important figure out if they need to be touched on.

Intended vs. Unintended Audience

Intended audiences are best thought of as the people you are initially writing to. It is the audience for which your document is intended. Unintended audiences may be anyone that comes across your writing at any point in time. In a professional setting, its important to be mindful of the unintended audience of any written work. This includes any email, memos or proposals produced in the course of business. In addition to being a good rule of thumb, it is in your best interest legally to remain professional in every document you produce as these documents may be used as evidence in court against either the author or the business from which they originated. Some organizations prefer to use their own, unique jargon; others prefer that inter-organization communication remain informal. You will need to view samples of materials produced in your workplace to get a feel for the tone and language used in your environment.

Complex Audience

Writing for a complex audience is different from academic writing. In academia, there is a specific audience for most pieces of writing, generally an instructor, teaching assistant, or a fairly small group of peers. In a professional setting, you will often write for a complex audience of people with different backgrounds, specialties, and expectations. With that in mind, avoid using terminology that is too technical so you don't unintentionally exclude portions of your audience. This can become increasingly difficult when writing for larger and more complex audiences.

Tailoring Employment Documents For a Specific Audience

When it comes to an employment document such as a **résumé** or a **cover letter** there is no such thing as "one size fits all". Each document should be individually tailored to catch the attention of the employer to which the document(s) are being submitted. To do this effectively, it helps to research the company and the position. Some different ways that this can be done are:

- *Looking at the job description* – The job description usually gives a set of skills that will be required for the position. The skills outline what the employer is looking for, and therefore, what should be added into a resume. (One should never lie about applicable skills, but highlight and prioritize these skills among others).
- *Looking at the company website* – Looking at the company's website can help with understanding the company environment and values that may not be listed in a job description. This can be most beneficial when writing a cover letter, in which it is important to acknowledge the potential employer.

In addition to looking at the job description and company website, it is helpful to evaluate the type of job that you are applying for. If you are applying to a job in a design field, you would want to tailor your résumé to be more creative and avoid using any sort of generic template.

Depending on your level of experience, it can be beneficial to create a list of skills and job experience in a Word document. As mentioned above, different jobs typically look for a specific set of skills. To make it easier to tailor a business document to a potential employer, it can be easy to have a Word document of skills and job experiences listed. After you determine the specific job you're applying for, copy and paste the appropriate skills into the document.

It is important to remember that in employment documents you are selling yourself. Each job will be slightly different, so it is crucial to tailor your résumé to the employer. Additionally, make sure it is not cluttered with information that the employer may find unnecessary.

What If I Don't Have a Specific Audience?

Sometimes you are writing to a broad audience that includes mixed demographics. In that case, the rule of thumb is to write for the lowest common denominator. This means you tailor your document so that the message is conveyed to most of the people in your audience which usually means simpler language, shorter sentences, and more of a reliance on visuals. Think of web articles on newspaper sites. The publishers of these materials know that people of different backgrounds, education levels, and reading levels will be reading their articles so the language is not overly complex, nor are the sentence structures.

RHETORICAL NATURE OF TECHNICAL AND PROFESSIONAL WRITING

Communication in the workplace is practiced and accomplished for many practical purposes. The goal is to effectively convey information to an audience, whether it be to co-workers or someone with greater responsibilities in the workplace. Workplace writing differs from written communication in other contexts, such as educational or social arenas. In the workplace, writing is considered a legal document and is frequently archived or retained for several years at a time. These writings can be referenced to in the future if legal complications arise. Workplace writing also varies from typical writing due to the fact that the audience is generally reading documents not for entertaining nor teaching themselves; it should contain important, relevant and needed information only, with no redundancy.

Reader-Centric Writing

Workplace writing should always focus on the audience; what does the reader need to know? Writing should effectively convey the precise information that the reader is seeking. If the writing is an attempt to persuade the reader, then the writer must consider what will persuade the reader most. For example, a work team may be writing a proposal to install new production machinery in a factory. Different readers in the company will want different information from this proposal. A well-written document will consider every potential reader and give the information that each reader is seeking.

Throughout all of your work, constantly think about your readers. As you make each writing decision, consider your readers' characteristics, goals, expectations, situation, and other factors that will shape their response to what you say. Concentrate on crafting a communication that will be persuasive and usable in your readers' eyes. These are two important qualities of successful work-related communications. Focus specifically on the ways your readers will respond, moment by moment, while they are reading your communication. This will be the only opportunity to influence your readers directly.

Effective Workplace Writing

Workplace writing must be persuasive and usable to all potential readers. For a document to be efficient, it must be easily understood by the intended audience. It is important to use simple sentences, words, and structure so that all that view the document can comprehend it. A document that is hard to understand is not usable or effective, since the audience will be unable to properly understand the document. Highly usable writing should help readers quickly locate, understand, and use the information to complete their task(s). It can be used as a reference, a how-to, or a means for them to see your progress on your own tasks and what still needs to be done.

Persuasive writing should convince readers that the information is accurate and should be followed. For example, a reader may be considering several different proposals. The chosen proposal is most likely to be the one that is most persuasive; however, if writing is not persuasive, then it is not likely to be followed. Thus, the entire writing effort will have been wasted. It is pertinent to understand, though, that being persuasive does NOT mean conducting unethical behavior. Do not write a document to simply to have yours preferred or chosen over others. Always be sure to use ethical practices.

Some ethical practice questions to ask yourself are the following:

- *Did I cite my sources? Did I use credible information?*
- *Did I "twist" any information?*
- *Am I using the correct language?*
- *Am I only telling the truth, no "bluffing"?*
- *Am I being realistic?*
- *Am I being timely?*
- *Am I being accurate?*

- *Am I giving a correct assessment and perception of what will be done?*

How Writers and Readers Interact

Writers and readers interact in unique ways. In all cases, writing is a one-way flow of information. Therefore, writers must consider and include all of their readers' needs. Every reader is different, but an effective writer must anticipate what will be most useful to the audience. Additionally, the world is extremely diverse. Some readers may be more relaxed or open-minded than others. For this reason, writers must learn to be conscientious in their writing to ensure they won't discourage or offend any of their readers. If a reader is offended, any decision made will likely not be made in the writer's favor. Effective writing eliminates unnecessary pieces of information and ensures a concise document. For example, constantly using the pronoun "he" or "she" may seem gender-biased and should be avoided. Using stereotypes of any nature is unacceptable and could even result in legal action. There is more on language sensitivity in Module 3.

Different readers may construe different meanings from the same words. The meaning may be shaped by a user's previous experience, culture, or even a user's state of mind. Each reader will construct a meaning based on the context of the writing and their previous experiences. This is why when writing a document you must start with who your audience is and what they need to know.

Readers react moment by moment when reading a document. Important information will usually have a greater impact if it is placed at the beginning of a document. This ensures that it will be read right away. Many readers will not finish a document, and so this "inverted pyramid" writing style is very effective. In addition, the average business professional says that he/she does not spend more than 30 seconds reading a resume, and no more than five minutes on a business proposal. It is prudent to place the most important information at the beginning of the document and least important at the end. Knowing what is most important depends on the reader, so in the case of a resume, you should research the job duties and responsibilities, as well as, the organization you are applying to in order to decide what should go first.

The writer should ensure stylistic continuity as well. A writer attempting humor in a long technical document may confuse the reader; while the same humor, if used while writing about a personal anecdote, may more easily amuse the reader. To reiterate, every reader will have a different reaction to a piece of writing, and these reactions will depend on everything from the context of the writing to the reader's cultural upbringing. For this reason, a wise technical writer always analyzes his or her audience FIRST before writing the document. Questions to help you analyze your audience are found by clicking this link.

VIDEO: AUDIENCE - THE IKON APPROACH

Please copy and paste the following link into the Youtube search bar to view the video:

Watch this video online: https://youtu.be/kf2E2Tzdaaw

VIDEO: DEFINITION RULES

Please copy/paste the following link in the youtube search bar to view the video:

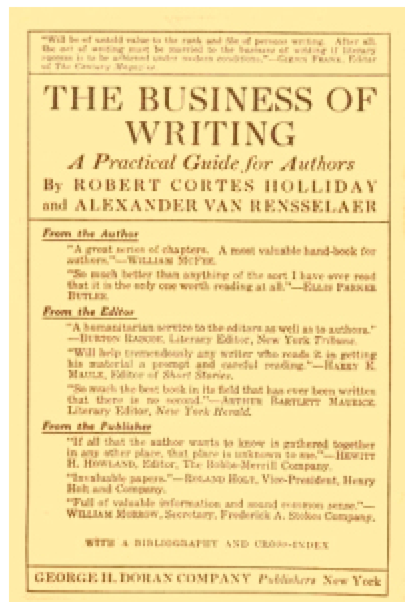
Watch this video online: https://youtu.be/bws5BMVPjY4

FORMAT

FORMAT OVERVIEW

This learning unit includes information on formats, headings, sub headings, markers, chunking, and white space.
Information in reports needs to be formatted in a hierarchical structure. The first heading is the title of the report.

After this first heading the structure is a coordinated into four sections, so each section of a report shows the same order of information. Headings identify the sections of information: Major Headings; Division of Major Headings; Sub Division of Major Headings; Sub-Sub Division of Major Headings.



THE BUSINESS OF WRITING

A Practical Guide for Authors

By ROBERT CORTES HOLLIDAY
and ALEXANDER VAN RENSSELAER

From the Author

"A great series of chapters. A most valuable hand-book for authors."—William McFee.

"So much better than anything of the sort I have ever read that it is the only one worth reading at all."—Ellis Parker Butler.

From the Editor

"A humanitarian service to the editors as well as to authors."—Burton Rascoe, Literary Editor, New York Tribune.

"Will help tremendously any writer who reads it in getting his material a prompt and careful reading."—Harry E. Maule, Editor of Short Stories.

"So much the best book in its field that has ever been written that there is no second."—Arthur Bartlett Maurice, Literary Editor, New York Herald.

From the Publisher

"If all that the author wants to know is gathered together in any other place, that place is unknown to me."—Hewitt H. Howland, Editor, The Bobbs-Merrill Company.

"Invaluable papers."—Roland Holt, Vice-President, Henry Holt and Company.

"Full of valuable information and sound common sense."—William Morrow, Secretary, Frederick A. Stokes Company.

WITH A BIBLIOGRAPHY AND CROSS-INDEX

GEORGE H. DORAN COMPANY *Publishers* New York

Not every report needs four headings. A report may have two sections, three sections, or four sections. However, a report cannot have more than four hierarchal sections. If your report needs more than four sections, you need to reorganize the information in the report.

Within each section, markers are used to identify specific points. Chunking and white space are used to make information more accessible. Markers can be bullets, numbers, underlining, bold font, italics, etc. Chunking is creating small sections of information, surrounded by white space. White space is empty space that separates sections of text.

When using bullets to mark several items, be sure to chunk items into groups. Lists of items that are continuously bulleted become solid text and the effect of marking information is lost.
See example:

Example – How to Use White Space in Technical Writing

GENERAL DESIGN CONCEPTS

Designing Reader-Centered Pages and Documents

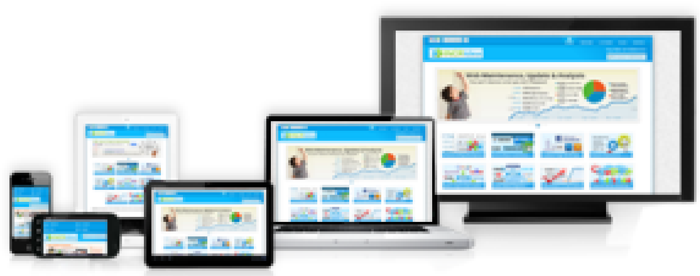
You build your communications out of *visual* elements: the dark marks of your words, sentences, and paragraphs against the light background of the page, as well as your drawings and graphs and tables. Your readers *see* the visual design of these elements before they read and understand your message. And what they see has a powerful effect on the success of your communications, on its usability and persuasiveness.

Here are ways that good design enhances usability.

- Good design helps readers understand your information.
- Good page design helps readers locate information quickly.
- Good design helps readers notice highly important content.

Here are some ways good design affects readers' attitudes, thereby increasing a communication's persuasiveness.

- Good design encourages readers to feel good about the communication itself.
- Good design encourages readers to feel good about the communication's subject matter.



A Reader-Centered Approach to Design

Because page design can have such a significant impact on your communication's usability and persuasiveness, you should approach design in the same reader-centered manner that you use when drafting text and graphics. Think continuously about your readers, including who they are, what they want from your communication, and the context in which they will be reading.

Design Elements of a Communication

It is helpful to think about the building blocks of a page design in the way that professional graphic designers do. When they look at a page, they see six basic elements.

- Text. Paragraphs and sentences.
- Headings and titles. Labels for sections of your communication.

- **Graphics.** Drawings, tables, photographs, and so on — including their captions.
- **White space.** Blank areas.
- **Headers and footers.** The items, such as page numbers, that occur at the top or bottom of each page in a multipage document.
- **Physical features.** These include paper, which may take many shapes and sizes, and bindings, which come in many forms.

CREATING GRAPHICS

Planning

1. Identify places where graphics will increase your communication's usability.
2. Identify places where graphics will increase your communication's persuasiveness.

Note: Make sure not to add graphics to areas that will alter the flow of the document/communication. Add graphics in places in between paragraphs or other logical breaks in the document.

Selecting

1. Select the types of graphics that will best support your readers' tasks.
2. Select the types of graphics that will effectively influence your readers' attitudes.
3. Select the types of graphics that will best support your case.

Designing

1. Design graphics that are easy to understand and use.
2. Design them to support your readers' tasks.
3. Design graphics that your readers will find persuasive.
4. Keep your graphics simple enough for easy use.
5. Label content clearly.
6. Provide your graphics with informative titles.
7. Address the graphics with a sort summary of results or caption about the graphic.

Using Color

1. Use colors to support your message.
2. Use color for emphasis, not decoration or too distracting from the body text.
3. Choose a color scheme, not just individual colors.
4. Provide high contrast between text and background.
5. Select colors with appropriate associations.
6. Limit the number of colors.

7. Use color to unify the overall communication.

Integrating with the Text

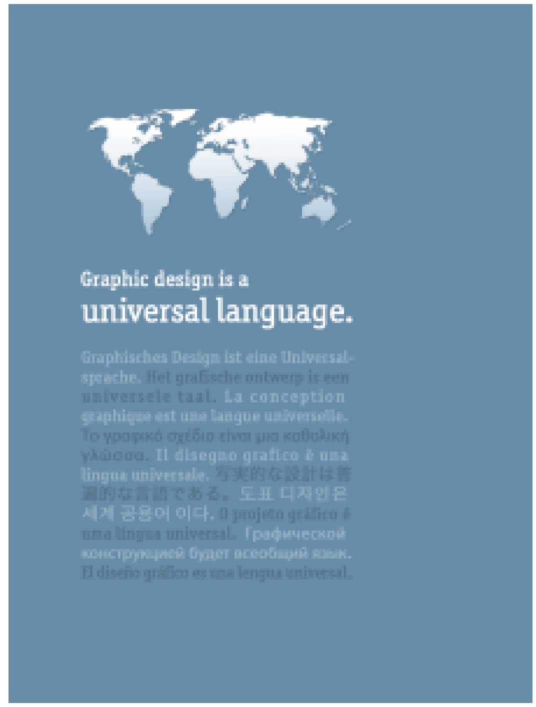
1. Introduce each graphic in the text first.
2. Tell your readers the conclusions you want them to draw from the graphic.
3. Provide all explanations your readers will need in order to understand and use each graphic.
4. Locate each graphic near its references.

Addressing an International Audience

1. Check your graphics with persons from other nations for clarity when possible.
2. Check your graphics with technology for problems when intra-converted between computer systems.

Using Graphics Ethically

1. Avoid elements that might mislead your readers.
2. Obtain permission from the copyright owner of each image that is not in the public domain.
3. Give credit to all involved in the development or research of the graphic.
4. Be sure the graphic will benefit the document overall and will not just add unnecessary clutter.



[1] From Paul V. Anderson's Technical Communication: A Reader-Centered Approach

ADDITIONAL SOURCES FOR FORMATTING

"Headings: How to Make Your Text Scannable"

https://www.prismnet.com/~hcexres/textbook/headings.html

"How to Use White Space in Technical Writing"

http://www.ehow.com/how_2122748_use-white-space-technical-writing.html

VIDEO: DOCUMENT DESIGN

Please cut/paste this link into your browser search bar to view:

Watch this video online: https://youtu.be/Q8gX5opvvHo

LANGUAGE AND TONE

AVOIDING CONFUSING TERMS AND WRITING

Language Conveys Respect and Understanding

Language is obviously very important in communication, but as a technical writer, you have to be especially careful with your word choices, word order and phrases. It is very easy for these elements to confuse the reader (thus, not respecting their time or capacities), insult the reader, or obscure the main message of your writing piece.

It is important that the technical writer is aware of language to avoid in order to communicate clearly, to provide easy access to information, and to show respect to the reader.

Types of Language to Avoid

Avoid jargon. Technical jargon is used only if the writer is communicating with readers who are in specific trades and will understand the message. However, using jargon when communicating with readers outside of the trade will result in the reader having no reference to what the message is saying.

> Example- *The substance has a high vitriolic base.*

The average readers probably will not understand this message without looking up the definition of *vitriolic.* They might guess at the meaning to avoid looking it up, or falsely believe they know the meaning. Regardless, the unclear communication will impact the reader's time and may have damaging effects.

Avoid double talk. Double talk is empty language. The writing is actually saying nothing. Double talk is used to fill space and is a clear indication the writer does not have a clear understanding of the issue or is trying to mislead the reader. Intentional double talk is not ethical communication.

> Example- *The redistricting will neither affect our client demographics nor our individual client portfolios. The impact of the restructuring at the present time, however, is still undetermined. We will let you know the impact as soon as it becomes apparent.*

Avoid sexist language. Sexist language is neither respectful nor politically correct. Using sexist language can alienate readers or result in lawsuits. Use gender-neutral terms or restructure sentences in order to avoid sexist pronouns, avoiding the use of the *he/she* combination pronoun.

> Example- *A driver needs at least 8 hours of sleep after he has driven for 8 hours.*

Avoid biased language– Do not indicate in any way a personal preference of one item, action, belief, position, etc. over another. To avoid biased language, use objective language when writing, and avoid using subjective terms.

Objective terms produce a concrete (tangible) image. Objective terms allow the reader to form his own opinion. For example- *The cost of car is $60,000.* The reader may think this is expensive or inexpensive.

Subjective terms produce an abstract (intangible) image. Subjective terms sway opinion. However, each reader interprets the term differently. Example- *The car is expensive.* Expensive to one reader may not be expensive to another reader. The writer is not giving the reader information that will let the reader make a decision.

Avoid a negative tone– A negative tone is just as apparent in written communication as it is in oral communication. Using words or phrases with negative connotations can alienate readers and can inadvertently result in disrupting successful interactions.

Examples – *Because you did not . . . .You were told . . . .I will not process the order . . . .*

Avoid colloquialisms– Colloquialisms are words or phrases specific to geographical regions.

Examples – *Please leave the package on the stoop.* *We need to replace the davenports.*

Avoid idioms– Idioms are words or phrases specify to a particular culture.

Examples – *We are working in the red.* *We are working to the bottom line.*

Be tactful– Being tactful usually encourages readers to consider the writer's position or request. Use a collegial tone. Using qualifying words such as *it seems, you may consider, perhaps* sends the message that the writer and the reader are equally important.

Use Repetition, Order, and Coordinate Structure– Using repetition, order, and coordinate structure is important in technical writing.

Repetition means that the writer uses the same word or phrase to refer to a particular idea, item, action, etc. throughout a report. The technical writer does not use synonyms. A reader has a limited amount of time to read a document, and does not have time to try to figure out if the synonym means the same as the word or phrase previously used or if another idea has been introduced.

Order means that the writer uses the same term to identifying similar concepts. For example, if the terms *size*, *weight, density* was used to describe one part of a mechanism, the same terms, *size*, *weight, density* are used to describe all parts of the same mechanism.

Coordinate structure refers to organization. All sections of a report must have the same structure. The major sections, subsections, sub points, etc. follow in the same order in all sections. Repetition, order, and coordinate structure provide readers with clear and easy access to information.

Many writers argue that the use of repetition, order, and coordinate structure is redundant. However, redundancy is entirely different.

An Effective Way to Use Language and Write Clearly: Use the Active Voice Instead of the Passive Voice

Most technical documents use the active voice since the active voice identifies the agent of the action (the person performing the action) as the subject of a sentence while the passive voice identifies the object of the action as the subject of a sentence. The passive voice may identify the agent the action as a preposition phrase at the end of a sentence or omit the agent of the action from a sentence.

It's important to write in the active voice because it moves the reader through the document easier and doesn't drag on. It is also a more dynamic and less confusing way of writing that most technical writers employ. Since you are putting the agent of action up first and most likely using active verbs rather than passive verbs, the sentence structure reads more vibrantly.

Examples: (Different parts of the sentence are identified when you click on the orange font so you can better understand the examples).

Active voice:

The supervisor [BL1] enforces the dress code policy. [BL2]

Passive Voice:

The dress code policy [BL3] will be enforced by the supervisor. [BL4]

The dress code policy [BL5] will be enforced. *[BL6]

Unless the object (what needs to be done) is more important the agent of the action (the person making the request,) technical writers will write in the active voice. Most of the time identifying the agent of the action the subject of a sentence carries more weight.

[BL1]Subject of the sentence. The agent of the action. The supervisor will enforce.

[BL2]Object of the sentence.

[BL3]Subject of the sentence. However, it is not performing the action.

[BL4]The agent of the action, However, it is a preposition phrase.

[BL5]Subject of the sentence. However, it is not performing the action.

[BL6]The sentence does not identify the agent of the action.

For more information on active and passive voice, please click on the orange font in this sentence.

There are other language techniques that will help you write crisply and effectively. using concrete , sensory language, eliminating wordiness, and being careful about your word order also help.

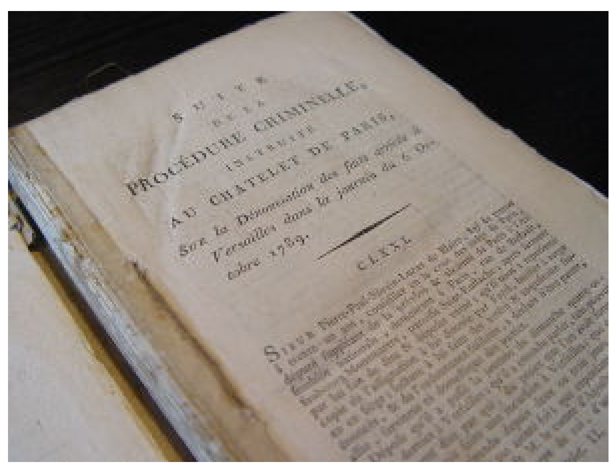
You will also need to consider the structure that will best work for your piece of writing and audience. We will discuss structure for each particular piece of writing in their respective chapters.

LEGAL ISSUES

Legal Issues and Communication

In business, image is everything. The public opinion of a company affects a consumer's views on that company's products This, in turn, affects the company's public profit, and essentially its standing. When a company is involved in a lawsuit or a recall, the company has to consider the consequences that these issues will have on their business and needs to consider the costs of repairing the company's reputation. These are among the reasons certain documents are carefully reviewed before being sent to their intended readers. To write ethically, you must also identify another group of people: the individuals who will gain or lose because of your message. Collectively, these people are called *stakeholders* because they have a stake in what you are writing. Only by learning who these stakeholders are can you assure that you are treating them in accordance with your own ethical values. When crafting your communication think about who will be affected by what you say and how you say it. You have to be sensitive to the following language in a professional document:

- Race and gender roles
- Political correctness
- Generalizations
- Cultural awareness
- Religious symbols



Under the law, most documents written by employees represent the position and commitments of the organization itself. There are always legal issues to consider when writing a professional document and they reflect in writing style. Professional documents can serve as evidence in disputes over contracts and in product liability lawsuits. A lawsuit is a civil action brought in court. Today, the average company is involved in 400 lawsuits at any given time. While most companies win their lawsuits, being caught in a lawsuit has many consequences. Lawsuits cost companies time and money. The money spent on lawyers and the time spent in court takes away resources a company could use for improving business and products. Lawsuits also have ramifications for a company's reputation. Recalls can be another legal problem for companies. A recall is when a product is removed from the market or a correction is made to the product because it is either defective or potentially harmful. In most cases, a recall results from an unintentional mistake by a company rather than from an intentional disregard for the law. Sometimes a company discovers a problem and recalls a product on its own. Other times a company recalls the product after concerns are made.

There are a number of reasons why a company may face a lawsuit or a recall. One of the main reasons a company gets involved in a lawsuit is because the directions to the company's product were not clear to the consumer. For this reason, the general guideline is that instructions should be understandable, clear and concise at the fourth to sixth grade reading level. Also, when in a lawsuit, a company has to remember that all documents may be subpoenaed. This means that any document from memos and emails to proposals and studies can be subject to revision by a court of law. Another reason a company gets into a lawsuit may be over a recall. An aspect of recalls are those dealing with safety concerns. Many products are recalled for potential safety concerns, even if no one was actually hurt. To avoid safety recalls, companies need to make sure they consider every possible danger involved with a product. Some dangers may seem to be common knowledge, but companies should be aware of those and label the product accordingly, regardless of assumptions about common knowledge.

Communication Constraints

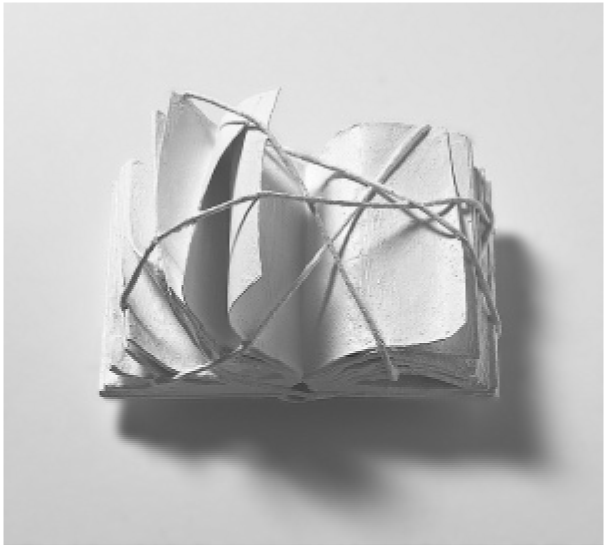
Constraints are limits for documents set by the company or industry.As you gather the information that will form the basis for the way you craft your communication, you should also learn about any expectations, regulations, or other factors that may constrain what you can say and how you can say it. In the working world, expectations and regulations can affect any aspect of a communication. Aspects that affect communication are as follows:

- Tone of voice
- Use of abbreviations
- Tables
- Margins
- Length of document (as a maximum)

It is important to find out about these constraints and take them into account as you create your communication. Some of these constraints come directly from the employer. Your employer and your readers probably have expectations about the way you write a professional document. There are often, unspoken expectations about how the required elements will be prepared. You are cultivating a company's desire for a particular corporate image, to protect its legal interests, and to preserve its competitive edge. A toy company like LEGO, would not want to be associated with a technical document that includes slang or words that could damage their reputation. They are legally protecting their business. Since all documents can be used against individuals and companies in court, all written documents with the company name should include only professional content that properly represents the company.

Other times, constraints are set by government regulations that determine how certain reports need to be written. Regulations are laws made by the government that affect what is in a document or how a document is written. Writing constraints can originate from outside the company. For example, from government regulations that specify how patent applications, environmental impact report, and many other types of documents are to be prepared. Similarly, scientific, technical, or other professional journals have strict rules about many aspects of the articles they publish. These regulations act as standards for crafting your communication effectively.

Style Constraints



Constraints may be set by style issues as well. There should be no clichés and idioms in documents because they may pose a problem with translating documents from one language to another. A cliché is a worn-out or overused expression that tends to sound trite and often doesn't express what you truly mean to say. Examples include: the bottom line is, head over heels, or take it or leave it. Idioms are words or expressions that are specialized vocabulary used by a group of people also known as jargon. Look at the phrases that you use when you write and see if they make sense when translated literally. If they don't, replace them with language that is clear and direct, and will not be misunderstood. Don't use "compound" sentences (and, or, nor, but, however, yet).Opinions and jokes should also be avoided in business documents. Communicate, argue or persuade your readers through facts and data instead of opinions.

Many companies also like to form a "custom" way of writing. Companies like Microsoft want all their documents to be written in the same style and format. The only way to do this is to teach the writers the "correct" way to write in order to portray Microsoft. What many people may not know is that Microsoft does this to cover themselves in a legal trial. If every single document is written using the same format, they can make sure that the customers understand the entire document and do not run into trouble with inconsistencies.

How do you know if you are following the correct constraints? The easiest way to understand how to write in your specific field is to look at documents written by your company and other companies in the industry within the past few months. This will allow you to see their style and how they make their argument. Some companies even publish style guides for writing. By seeing your company's regulations, you can begin to draft your argument. Make sure to follow your company's guidebook (if they have one) to be sure that your style is correct with their recommendations.

Remember that in professional writing you are trying to persuade the reader using an ethical style. This means to avoiding content that will not stand up in court, especially since people file lawsuits for everything these days. Make sure that the documents you write for your company are persuasive while also preserving your company's competitive edge.

USE LANGUAGE THAT IS SENSITIVE TO YOUR AUDIENCE

Language and it's Impact on the Audience

When writers use language that implies a biased or judgmental attitude, the audience may take offense and be less apt to listen to the writer's argument. Language that is insensitive to gender, ethnicity,disability, or age should be avoided.

Just as writers hope their audience will be willing to respect their point of view, they need to respect the diversity of a broad base of readers. Language that is inclusive and fair may contribute to the credibility of the writer and uphold the audience's sense of dignity and self-worth.

Language and tone also go hand-in-hand. You do not want to sound like you're talking down to your audience or using language that is not appropriate for their age, background, or educational level. Language can turn off your audience and block the true meaning of message you are trying to convey.

What revisions will help to promote sensitive, fair language?

- Use gender-inclusive language:
    - *he or she* instead of *he*
    - *humankind* instead of *mankind*
    - *garbage collector* instead of *garbage man*
    - *server* instead of *waitress*
- Use correct or accepted racial and ethnic terms:
    - *African American* instead of *colored* or *Negro*
    - *Asian* instead of *Oriental*
    - *American Indian* or *Native American* instead of *Indian*
    - *Native Alaskan* or *Inuit* instead of *Eskimo*
    - *Hispanic* instead of *Spanish*
    - *Latino* instead of *Mexican*
- Use language that respects people for who they are or recognizes a specific ailment:
    - *persons with disabilities* instead of *handicapped*, *challenged*, *disabled,* or *retarded*
    - *visually impaired* instead of *blind*
    - *persons with hearing loss* instead of *deaf individuals*
    - *mentally ill* instead of *crazy, moron,* or *loony*
    - *those with arthritis* instead of *arthritis sufferers*
    - *people with diabetes* instead of *diabetes patient*
    - young adults instead of kids
    - senior adults or mature adults instead of old people or people of a certain age

Your language choices will affect how receptive your audience will be to your message. Keep in mind that your language is also crucial in terms of legal issues that may arise. If your writing shows a sensitivity to your audience's background, you are less likely to have legal troubles.

You can also create a sense of goodwill through your use of language and the fact that you are considering your audience. For example, asking your audience to consider options is much better than TELLING them to consider options. Please see the example statements that follow:

For parents looking to buy a new car

AUDIENCE SENSITIVE: Before buying your next car, consider the gas mileage, safety features, and amenities it offers. (Shows a sensitivity to the audience's needs, but leaves the final decision up to them).

NOT SENSITIVE: You should buy our car because we have already compared the gas mileage, safety features, and amenities that other vehicles have and ours is clearly superior. (This assumes the audience doesn't have their opinion or can't make the comparisons themselves).

For a senior adult – using technology for the first time.

AUDIENCE SENSITIVE: Let's start by familiarizing ourselves with the basics and progress from there. (Begins with an inclusive statement and implies that we will be successful with the basics and continue on)

NOT SENSITIVE: Since you probably haven't used current technology or are unaware in the advances in science, let's start at the very beginning – how to log on to the system. (This is condescending and maybe even insulting).

Even though the above examples may seem exaggerated, this type of insensitive writing is out there. Believe me, this type of writing will earn you no profits or goodwill among your audiences.

HOW WILL YOUR READER RESPOND TO THIS TONE?

Why should tone and voice be considered?

Writers should consider the audience and purpose of each assignment and be cognizant of the tone and voice they use to communicate with their readers. Sensitivity to the audience's stance on a particular topic will affect their perception of the writer as the argument unfolds; a respectful tone is more likely to reach the audience than one that is condescending.

When the goal is to persuade an audience with an opposing view, empathetic writers think carefully about how their tone and voice will affect their readers.

Teenage readers, for example, do not want the message to sound like they are children. Senior adults do not like messages that sound condescending – especially when the message is about technology, new ideas, or aging. Both of these distinct audiences have experiences that they feel are valuable and should be respected. Your voice and tone should reflect that you value their opinions.

Consider these questions related to tone and voice:

- What is the writing's stance?
- Is the intent to inform or to persuade?
- What tone and voice is most appropriate for the target audience?
- Are the tone and voice respectful?
- How can the content be presented so it is informative and persuasive but not condescending?
- What words demonstrate sensitivity to the audience's views and feelings?
- Have any insensitive words or examples been presented that are likely to cause offense to the readers?

For additional information about tone:

- Please video the video on "Your Attitude"

USE CONCRETE, SENSORY LANGUAGE

The Difference between Abstract and Concrete Terms

Abstract terms are those words or phrases that refer to idea or group of ideas that do not have a physical presence; concrete terms refer to those words and phrases that refer to something of substance or a physical entity. Both types of terms have their purposes. Abstract terms, for example, may invite readers to make interpretations and form their own opinions. Concrete terms generally have one specific meaning and are generally more specific.

Why should abstract terms be replaced with concrete, sensory terms?

The goal of a writer is to communicate ideas clearly. Since language that refers to intangible or immeasurable qualities can obscure meaning, abstract terms should be replaced with concrete terms. Language that connects with tangible and sensory (taste, smell, touch, sight, and sound) is easier for readers to understand and relate to.

How can a sentence be revised to include more concrete language?

- Replace abstract terms with words that have clear, direct, and precise meaning.
  - **Abstract**: The case sought to establish *equality* for people of all sexual orientations.
    - *Equality* can mean a variety of things to different people: What does *equality* mean in this instance?
  - **Concrete**: The case sought to legalize gay marriage.
- Use language that appeals to the senses.
  - **Abstract**: The waiting room was *unpleasant*.
    - What makes this setting *unpleasant*? Replace this term with specific descriptive language.
  - **Concrete**: The waiting room was cold, antiseptic-smelling, and crowded with sick people who were coughing, groaning, or crying.

Imagery in writing is very effective because it appeals to your five senses (you should be familiar with some, if not all of them). It can help you convey your message while giving your readers a point of reference (something they can experience for themselves).

Please view the following video on Imagery (Miss C's Imagery Video)

USE THE ACTIVE VOICE

Why is it important to use the active voice?*

When writers use the active voice, their words are direct; they use concrete verbs and clearly state the action being performed by the subject. In contrast, the passive voice is indirect; writers may use weak "to be" verbs (*is, am, was, were, being, been*) or present progressives (e. g., *is working, is laughing*), and the actor in the sentence is absent or disguised.

Watch this video online: https://youtu.be/WekIFyO5OLI

How can passive writing be revised to make use of the active voice?

- Find the subject of the sentence; the subject should be the one performing the action, not receiving the action.
- **Passive**: He was questioned by me.
    -
        - The subject of this sentence is *he*, and *he* is being questioned. *He* is not performing an action but is receiving the action.
        - This sentence can be revised to make the subject represent the person or thing that is performing the action.
    - **Active**: I questioned him.
        - The subject of the sentence is **I**, and is followed by a concrete action verb. The subject is doing the questioning instead of being questioned.
- Check each sentence for passive voice; revise the sentence construction to make use of the active voice. This process is facilitated when "to be" verbs are eliminated and present progressives are replaced with action verbs when possible.

Watch this video online: https://youtu.be/_koZ_3Wh87k

For additional resources on active voice, see also:

- Use the Active Voice
- Eliminate unnecessary "to be" verbs

READ YOUR PAPER ALOUD TO CHECK COHESIVENESS

Why is it valuable for writers to read their own work aloud?

Reading their own work aloud gives writers the opportunity to take on the role of the reader. When “writers as readers” add hearing to seeing, another of the five senses is put to work in the critical evaluation process. Words and ideas that seemed to flow smoothly and connect logically inside the writer’s head often do not reflect the same sense of cohesiveness when heard in spoken form. Writers who hear their work read aloud are better equipped to evaluate the paper’s flow of ideas at the global level and to discover grammatical, punctuation, and word choice errors at the surface level.

What should writers be listening for when they read their work aloud?

- At the global level:
  - Does the paper make sense?
  - Does the paper’s content flow logically?
  - Do the paper’s ideas support the thesis?
- At the paragraph level:
  - Have appropriate transitions been made between paragraphs?
  - Have appropriate segues been made among the sentences?
  - Do the paragraph’s ideas flow logically and sound unified?
- At the sentence level:
  - What grammatical and usage errors need to be corrected?
  - What punctuation errors are affecting the rhythm of the paper?
  - What word choice issues need to be addressed?

What steps can be taken to read aloud effectively?

1. Save a copy of your paper as a new document under a modified file name.
2. Increase the font size to 14 or 16 pt. (or larger), and print a copy of your paper.
3. Find a reasonably quiet, private space to work, if possible.
4. Begin by reading your paper aloud slowly from beginning to end; underline or circle problem areas as you find them.
5. Go back and reread each paragraph aloud a second time; mark up your draft with notes in the margins and corrections of grammatical and word choice errors between the lines.
6. Revise the paper on a word processor based on the critical evaluation you made, and then repeat the read-aloud process to support further revision, editing, and proofreading.
7. Consider asking a friend, relative, or classmate to read the paper aloud to you, also.

USE PARALLEL STRUCTURE

What is parallel structure?

Parallel structure is established when words within a sentence are united by consistent use of grammatical forms. This stylistic element is also referred to as parallelism or parallel construction.

Why is it important to use parallel structure?

Lack of parallel structure can disrupt the rhythm of a sentence, leaving it grammatically unbalanced. Proper parallel structure helps to establish balance and flow in a well-constructed sentence; the alignment of related ideas supports readability and clarity.

Let's look at an example:

- **Not Parallel**: The President traveled to several cities meeting voters, to give speeches, and ask for campaign funds.
- **Parallel**: The President traveled to several cities meeting voters, giving speeches, and asking for campaign funds.

How can a sentence be revised to reflect parallel structure?

1.***Find a list within a sentence***: Look for words or phrases of equal importance that are separated by commas and joined by a conjunction

Not parallel: Dr. Kall challenged his students to initiate their own learning, be creative problem-solvers, and think independently. (In this sentence, Dr. Kall wants his students to do or be three things, but the items in this list are not parallel in structure.)

2. ***Evaluate the word forms within the list.***

1. Do the verbs appear as infinitives (*to + verb*), or gerunds (*-ing words*)? As present tense or past tense? (Choose the voice and tense of the verb that is consistent with surrounding sentences.)
2. Do the nouns or pronouns and their modifiers appear in consistent form?

3.***Alter the words in the list to create proper parallel structure***.

Parallel: Dr. Kall challenged his students to become self-motivated learners, creative problem-solvers, and independent thinkers. (In this sentence, Dr. Kall wants his students to be three things instead of a combination of being and doing. Additionally, the list follows a pattern since the nouns and adjectives all appear in parallel form.)

REPHRASE AWKWARD WORD ORDER

Why is it important to rephrase awkward word order?

Since the goal of academic writing is to communicate with clarity, writers should build sentences with words and phrases that flow smoothly. Words that are missing, misplaced, or out of order can make the writing sound disjointed or send an unintended message. Reread each sentence carefully or read the paper aloud to check for awkward wording. Please click on the orange font to learn about reading out loud to help your editing.

How can awkward wording be corrected?

- Look for missing words or phrases: A missing word or phrase can obscure meaning and cause confusion. Insert missing words or phrases to complete the intended thought.
- Look at word order after revising: Minor revision of a portion of a sentence can cause a major problem with word order. Reread each sentence after it has been revised to ensure that it still makes sense.
- Look for misplaced or dangling modifiers: If a modifier is misplaced or is modifying a subject not mentioned in the sentence, the message could be misleading or confusing to the reader. Place modifiers as close as possible to the object being modified.

- Look at subject-verb order: The English language usually follows the pattern *subject-verb-object*(SVO), but other languages may follow different patterns. Non-native English speakers may need to check their sentences for appropriate syntactical construction.
    - **Example of SVO**: The scholarly article explains theories on global warming. Subject = *article*; Verb = *explains*; Object = *theories*
    - **Example of OSV**: Theories on global warming the scholarly article explains. (awkward)
- Look at subject-verb agreement. Make sure if you have a plural subject that your verb is also plural
    - Example: Incorrect: One of many students looks to tutorial services for help. (note that the subject is One which is singular so the verb needs to be singualr)
    - Example: Correct: One of many students look to tutorial services for help.

For more help on subject/verb agreement, dangling modifiers, or misplaced modifers, click on the orange font.

ELIMINATE UNNECESSARY LANGUAGE

Why should unnecessary words and phrases be eliminated?

Unnecessary words and phrases result in redundancy. A writer can achieve efficiency in writing by using concise words and phrases that denote clear meaning. Each word should contribute to the argument and purpose of an assignment; if a word or phrase can be removed from a sentence without affecting its meaning, it should be eliminated.

How can unnecessary words or phrases be eliminated?

- Revise redundant phrases, synonymous terms, and unnecessary word pairs.
    - Quickly speeding (s*peeding* implies quickness)
    - Young teenage mothers (*young* and *teenage* are synonyms)
    - Financial cost (*financial* and *cost* both imply money)

- Revise redundant terms in order to be more efficient.
    - **Redundant**: Young adults should *self-assess* their situation before making a *big*, *life-changing*decision.
    - **Revised**: Young adults should *assess* their situation before making a *major* decision.

- Remove redundant adjectives and adverbs; use only those that contribute to the intended message.
    - **Overuse of adjectives**: The *large, angry, noisy crowd* stormed the Capital building.
    - **Revised**: The *mob* stormed the Capital building.
    - **Overuse of adverbs**: She *carefully* and *quietly* walked through the room.
    - **Revised**: She *crept* through the room.

- Remove redundant modifiers; overuse clutters the writing and distracts the reader.
    - **Overuse of modifiers**: The business capitalists, who focus on domestic interests, only really invest in American groups.
    - **Revised**: The business capitalists rarely invest in international groups.

For additional information on eliminating unnecessary words, see also (click on orange font): Editing for Economy

VIDEO: "YOU ATTITUDE" TUTORIAL

Watch this video online: https://youtu.be/DQaE5fFWDd0

VISUALS

VISUALS OVERVIEW

Visuals are used to complement text in documents. Visuals are classified according to Tables or Figures.

A table is used to organize data in volumes and rows using numbers and words. Tables present a logical representation of data. Tables are usually used to show comparison data.

Figures, on the other hand, illustrate all other types of data. Figures include such visuals as pie charts, line graphs, bar graphs, layouts, photographs, drawings and photographs:

- Pie Charts show segments that compare percentages of a whole.
- Line graphs show the relationship between two or more variables.
- Horizontal Bar Graphs show comparisons of similar units.
- Vertical Bar Graphs illustrate timelines.
- Layouts show detailed space.
- Flow Charts show time sequences or hierarchal structures
- Drawings eliminate unnecessary details to more effectively show how items relate to other items.
- Photographs are exact representations of items. (Riordan, 2005)

Note that although visuals and text complement each other, either can stand alone. Both include and express the same information in different formats.

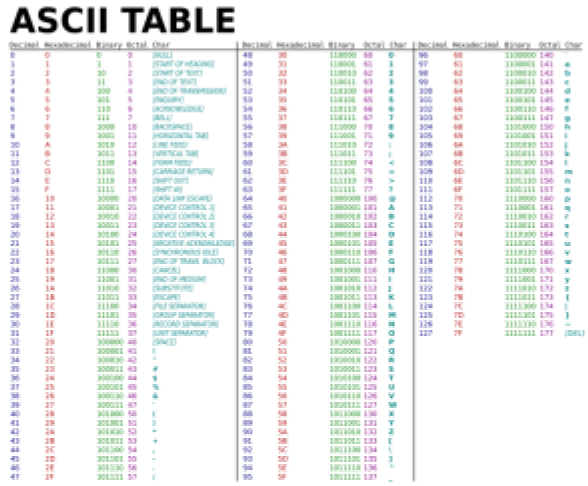
References: Riordan, D.G. (2005). *Technical report writing today*. Boston: Houghton Mifflin Company.

See the following examples of Tables and Figures:

Tables

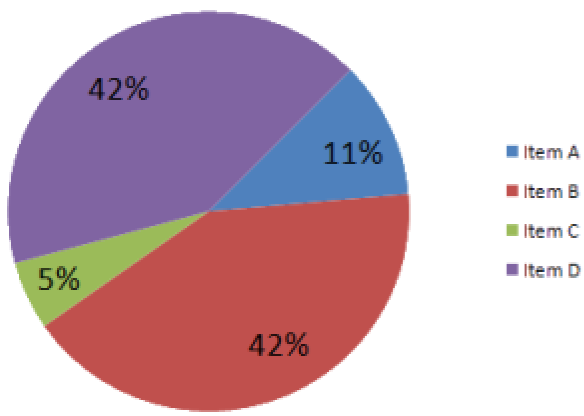
Model	Purchase Price
Accord Sedan	$20,360
Accord Hybrid	$31,090
Pilot SUV	$27,595
CR-V SUV	$20,700
Element SUV	$18,980
Odyssey Minivan	$25,645

Two-Column Simple Table

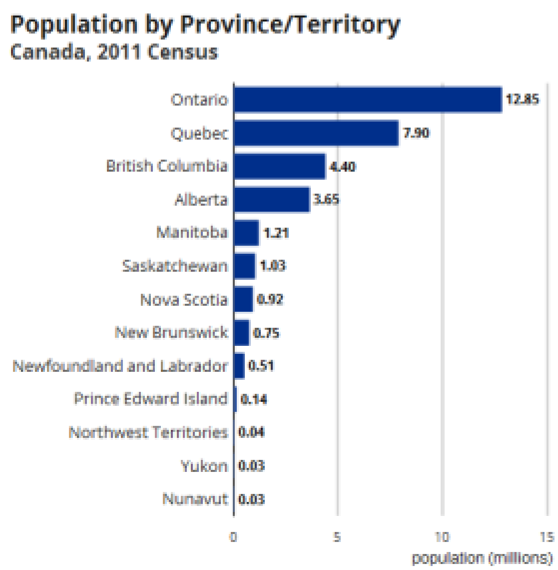


Five-Column Table

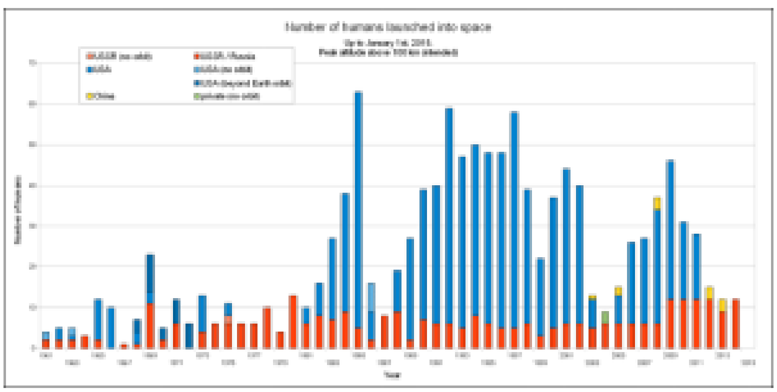
Figures



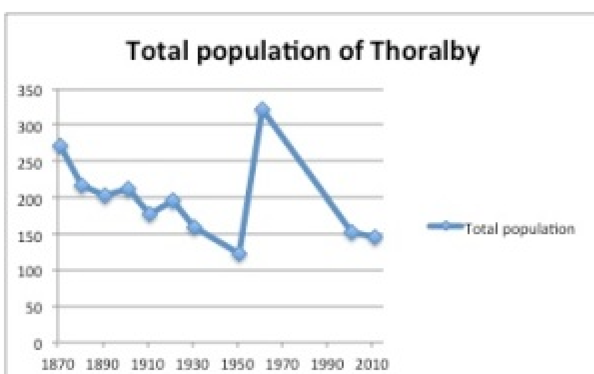
Pie Chart



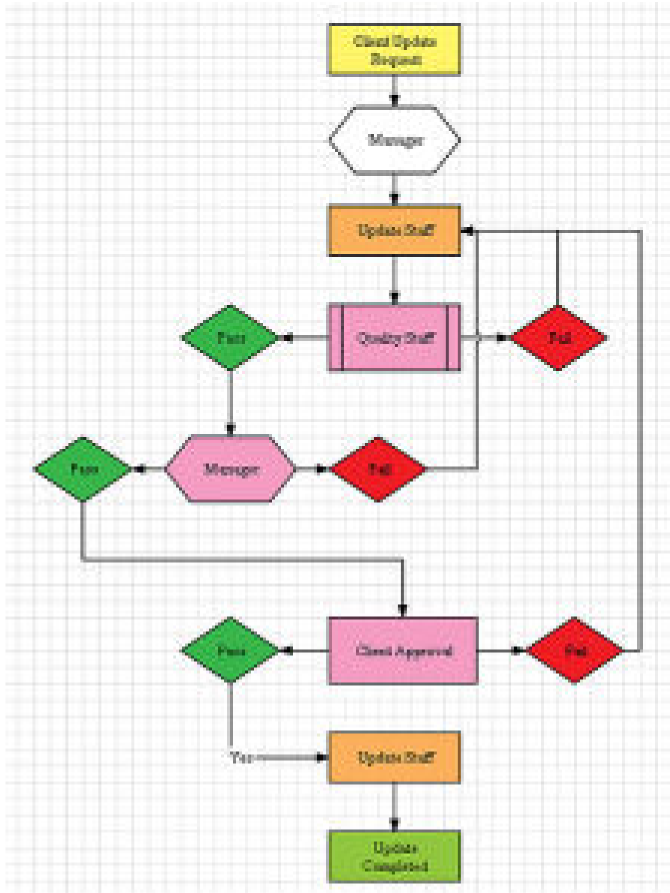
Horizontal Bar Graph



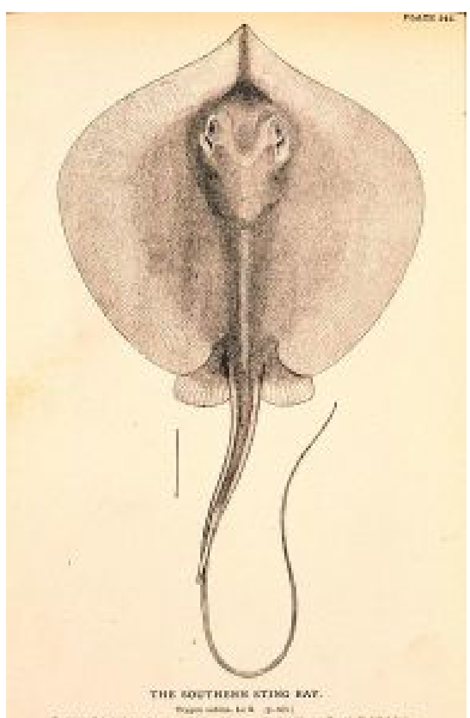
Vertical Bar Graph



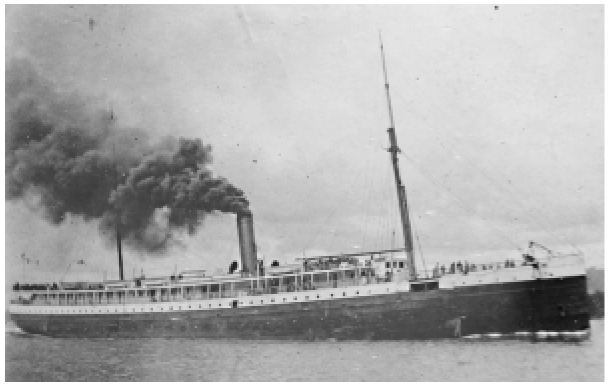
Line Graph



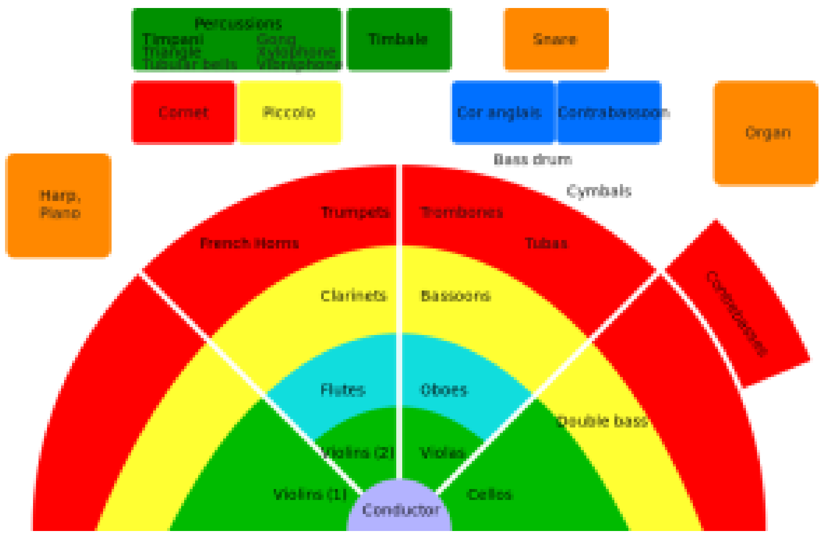
Flow Chart



Drawing



Photograph



Layout

NASA: TECHNICAL REPORT WRITING

Data Presentation

Because most technical reports rely on figures and tables for the presentation of data, the form and quality of the figures and tables are important in establishing the style and readability of the report. Good judgment should be used in selecting both the data to be presented and the method of presentation. Use only figures and tables that add to the value of your report. Present the data as simply and straightforwardly as possible so that your readers can easily grasp the significant points. Present data in the text, or in a figure, or in a table—but never in more than one way.

Before beginning to write the report, carefully select the data to include. Most carefully prepared programs yield more data than are needed to support the conclusions. Including all your data in the report is unnecessary. Use only data that are directly pertinent to your conclusions, and do not try to impress readers with how much data you have collected. Quantity is no substitute for quality in presenting technical results.

Once you have selected the data to be included in your report, decide how they can best be presented. Should they be tabulated or plotted? To answer this question, consider your readers' needs. Do they need to know exact values? If so, tabulate your results. If relative trends are more important, use graphs. Both the figures and tables should be as self-explanatory as possible and arranged logically to tell the main points of your story without reference to the text.

Figures

The figures used in technical reports generally are of three types— . . . graphs, drawings, and photographs. Figures are numbered with Arabic numerals in the order of their mention, unless the mention is clearly incidental. In the final report they are either inserted in the text near (preferably following) their first mention or grouped together at the back. Sketches are lettered consecutively ((a), (b), (c), etc.) if they are referred to more than once. Under no circumstances should the arrangement of black and white figures or the parts of one figure be out of sequence. Figures arranged in a group are in sequence from top to bottom or from left to right. Exceptions are sometimes made for color figures to reduce the number of pages printed in color.

Prepare figures with consideration for their appearance in the final printed document. The size of the printed figure including the legend (title) cannot exceed the dimensions of the report image area (7 1/8 by 9 1/8 in. in NASA reports). Within these limits various sizes, proportions, and arrangements of figures are possible. (A large, complex figure may be reproduced on facing pages.)

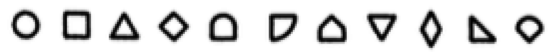
All figures must have legends; if a figure has parts ((a), (b), (c), etc.), it must have corresponding sub legends. Use similar wording in the legends of related figures. After you have assembled the rough draft of the report, thumb through the figures and tables, reading merely the title of each to make certain that the format and the nomenclature are consistent. Conditions applying to the entire figure or to a part are normally stated as part of the legend or sub legend. But when the same conditions apply, for example, to every graph in a report, they are best stated once in the text.

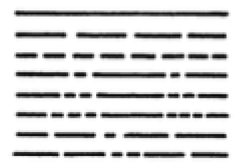
Graphs

Graphs should be clear and simple with as few data curves as possible. It is usually best to have no more than six types of lines or data points on a graph—four is better. Try to avoid interlaced or unrelated curves. As few words (labels) as possible should be inserted directly on the figure. Equations should be placed in the text, lengthy tabular material should be presented in a separate numbered table, and explanations and conditions should be added to the legends or placed in the text.

Choose coordinates that will give your readers a physical feel for the variables being presented. Clearly label what is plotted and the units used. Whenever possible plot all parts of any one figure or related figures on scales with the same increments. Label main and auxiliary scales with a word description of the concept or quantity, its symbol, and its unit. For example, “Axial distance, *x*, cm” is more immediately descriptive than “*x*, cm.” Add auxiliary scales at the left and bottom of the figure if there are four or fewer scales. Place additional scales at the right or top. For ease in interpolation divide scales into logical, consistent increments. For example, when both U.S. customary and SI units are used, each scale must stand alone. Do not simply convert the values on one scale into the other system of units. Such a scale is useless to the reader.

Use the same data symbols and lines to represent the same conditions consistently throughout the graphs of your report. The following data symbols and types of lines are commonly used:





Do not use the symbols + and x on figures with grid, and avoid solid or partly solid symbols if symbols overlap. The curves and data points may be identified by keys or labels. Keys are preferred when several curves must be distinguished or when several conditions are associated with each curve. Keys generally follow the format for tabular material and should be consistent throughout a set of figures.

Drawings.–

When you use drawings or sketches to illustrate test equipment, try to keep them simple. Include only those features of the equipment that are essential to your readers' understanding, and avoid unnecessary detail. …

Photographs.–

. . . . Photographs of similar objects should be sized for compatibility. Glossy prints taken with black-and-white film reproduce best. Prints that have already been screened are not usable. The use of color in printing is discouraged because it greatly increases publishing costs.

Do not include a photograph of equipment which is so elementary that a sentence would describe it. Label the most important features being shown. Remember, equipment that seems simple to you may be complex to readers who are not familiar with it. Limit the labeling and the field of view to the main items discussed to avoid confusing readers with extraneous items. Mark up a copy of the photograph rather than the glossy print.

If your photographs are Polaroid prints, have negatives and additional prints made before submitting them for use in a report, for slides, etc. You are then protected in case of damage or loss, and prints are readily available for additional uses.

Include some object or scale in the photograph to help your readers judge the size of the objects shown. …

Tables

Tables are often included in technical reports to present data in an exact, highly concentrated form. But because tabulated data are so concentrated, many readers have difficulty grasping their significance. Tables are therefore the least preferred method of transmitting results to readers and should be used only when absolutely necessary. When you use tables, make them as brief and simple as possible. Otherwise your readers may not bother studying the detailed columns of figures, and you will have wasted your time in presenting the data. “Whenever a table, or columns within a table, can readily be put into words, do it” (ref. 2).

Tables are numbered in the order of their mention, in Roman numerals except when a report contains 20 or more tables. Then Arabic numerals are used. Similar data at different conditions are organized into parts ((a), (b), (c), etc.) of the same table with subtitles. Numbered tables must have titles.

Present tabulated material in an organized manner. Like elements should read *down* not across. Variables are usually given in columns topped by boxheads, with the constants given in the first, or stub, column. Boxheads should be brief; if necessary, they may be amplified by footnotes. Boxheads usually contain a word description of a concept or quantity, its symbol, and its unit, separated by commas; symbols must be defined when they are used. Arrange tabulated data in a logical order that your readers can easily recognize. Usually this arrangement is an ascending or descending order of value for the prime parameter. The order is necessary to clarify trends. You can also help your readers see relations and comparisons of data by carefully wording the boxheads and the stub column. Put items to be compared in adjacent columns. Generally numbers in columns are more easily compared than numbers in rows. Another type of table is the leaderwork table, in which dissimilar data are listed in rows with leader dots connecting each parameter with the corresponding value.

Give conditions that apply to an entire table in a headnote. Indicate footnote citations by lower-case letters (superscripts) ordered across the table from left to right and top to bottom.

THE VALUE OF VISUAL INSTRUCTIONS

Visual instructions may or may not include text. Generally, it is good to have both being that there are different learning styles. However, it can often vary depending on the intended use of the instructions. Visual instructions serve to clarify a concept that is difficult to explain using only words. Graphics may be used to show how something looks, how something should look once the step has been completed, how something is done or constructed, show trends or relationships, add liveliness to the project or simply organize information. Graphics are useful since almost everyone (including children and others of a different language) can understand visual instructions. It also eliminates the cost of having to translate and print text instructions in multiple languages. Graphics are useful in instructions because people can see exactly what they need to complete.

Business and Marketing:

- Minimize language barriers.
- Speeds up the learning curves.
- Minimize human variability.
- Increase instruction use rate and comprehension
- Reduce product returns.
- Decrease assembly time- increase customer satisfaction
- Ease technical support.
- Visualize and generalize data into understandable trends
- Increase integrity of reports and memos
- Promote professionalism
- Ensure universal understanding

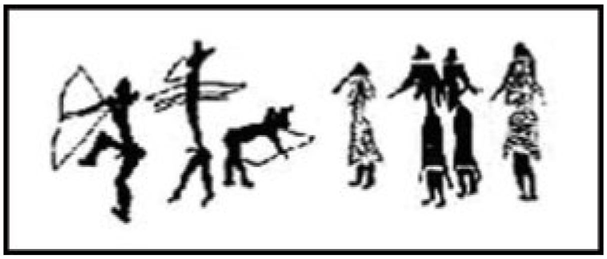
Academia:

- Make abstract ideas visible and concrete.
- Connect prior knowledge and new concepts.
- Provide structure for thinking, writing, discussing, analyzing, planning, and reporting.

- Focus thoughts and ideas, leading to understanding and interpretation.
- Help students to clarify thoughts, organize and analyze information, integrate new knowledge, and think critically.

History

Graphics have been used for communicating a message or story long before written text. Graphics have a deeper impact across cultures due to their ability to create their own meaning from the picture not words. Although words may be a part of the Graphic, the images themselves produce the desired response or understanding in the intended audience. Cave paintings and maps are some of the oldest that we know of and anyone that looks upon them can see what the graphic means and what it is for. A map from today would naturally look different from one in the 18th century, but the message would still be the same. The sea routes from England to Africa or the Caribbean would consist of different names, boundaries, and possessions but the audience would still find the same meaning.



Common Problems with Visual Instructions

While there are a number of benefits of visual instructions, there are also some drawbacks. When there are no words included people may interpret graphics differently. Some graphics can be unclear, and this can confuse the intended audience if the process is very detailed and requires pieces that look identical. When the pictures include a lot of different peices it is also necessary to zoom in on difficult parts in order to see them better. Also, if each peice is not drawn to scale, then a circle could represent the top of a table or a washer. There are also certain graphics that not everyone understands. If you work in a field that employs specialized graphics, use these graphics only when communicating with readers in your field who will understand and expect them. If you are using the graphics for a wide audience (such as a board game that may be used for young children to senior citizens), make sure that the graphics you choose can be understood by all.

PHOTOS AND ILLUSTRATIONS

Photos are used in professional documents as tools for communicating a message that a writer feels can be strengthened through the use of proper imagery. Photographs can do many things to enhance a message, some examples can be seen here:

Illustration Checklist

Planning

- What kinds of illustrations are your audience familiar with?
- Do you have information that could be more easily or quickly communicated to your audience visually or in a combination of words and graphics?
- Do you have definitions that could be displayed visually in whole or in part?
- Do you have any processes or procedures that could be depicted in a flowchart?
- Do you have information on trends or relationships that could be displayed in tables and graphics?
- Do you have masses of statistics that could be summarized in tables?
- Do you need to depict objects? If so, what do you need to display about the objects? Do you need to focus attention on specific aspects of the objects? Do you require the realism of photographs?
- What are the design conventions of your illustrations?
- Are there suitable illustrations you could borrow or adapt? Or will you need to create them yourself?

Revising

- Are you illustrations suited to your purpose and audience?
- Do your illustrations communicate information ethically?
- Are your illustrations effectively located and easy to find?
- Are your illustrations numbered and labeled?
- Do your verbal and visual elements reinforce each other?
- Are your illustrations genuinely informative instead of simply decorative?
- When necessary, have you helped your readers to interpret your illustrations with commentary or annotations?
- Have you acknowledged the sources for borrowed or adapted tables and figures?

How To Perform an Action

Pictures are an effective tool for giving visual representation of how to do something. They can can stand alone or work in conjunction with the given text, and they can enhance a message if used properly.

If you are using pictures in conjunction with text: As in a set of instructions, the imagery increases understanding of the task, in addition to decreasing confusion that may arise from text that stands alone. When using a picture to help portray how to perform a task, it is your responsibility to make sure the picture matches up with the text. You must explain the picture using text, and vice versa, explain the text using a picture. Also, the viewer will accomplish the task more often when the picture looks how it would if they were watching the task, not necessarily if they were experiencing it.

An example would be: if your task was doing a cartwheel, you wouldn't want the pictures at an angle where the person is looking through the eyes of the one doing the cartwheel. You would want the pictures to be from someone watching the event, so that the viewer isn't confused by what they can't see (such as where their feet are when they're looking at their hands). It's the simple things that make or break a document when using pictures. Think and re-think the pictures you are using and how someone seeing them for the first time will react to them.

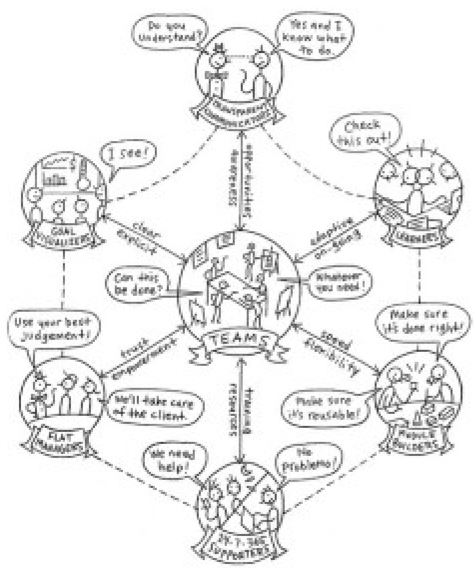
How a Finished Product Should Look

When textual information does not capture the essence of what your trying to describe, try putting an actual photo of what your trying to describe in the document. This type of picture enables you to come as close to reality as possible. Make sure your pictures are in color and of high quality. Black and white photos tend to blur easily on paper and lack the detail needed to fully understand a photo. Images cut down on excessive use of describing words. "A picture is worth a thousand words" relates to this situation.

Be sure to use the text wrap abilities of most word processors. A well placed picture with clean text wrapping can make an otherwise overwhelming block of text seem reasonably approachable. Looking at 25 pages of block, justified alignment, plain black text is one of the most boring ways to see a report. A picture can liven up a report, make it more memorable, and help clarify the report all in one motion.

Map Out an Object, Place, or Process

An example of these types of pictures can be found in an automotive manual or a science textbook. This can be anything from a picture of a machine to an example of how photosynthesis works. Arrows and labels can be used in order to show where everything is and how the process takes place. The picture should include a big enough background so that the reader can locate the area in relation to things around it.



Photographs can also play a major role in connecting with the audience. They are useful in multi-cultural situations when a shared written language may not exist. Pictures can speak louder than words, and usually portray the message quicker. It is very important to keep the first initial reaction in mind when choosing the image you will place within your document. Be sure to avoid photos that may have several meanings, or the true meaning may be unclear. In order to avoid this type of situation, put yourself in the audience that you are writing for and try to be unbiased when you view the image. Better yet, test the image on someone who does not know much about your photo's topic and ask them what message the photo sends to them. Clarity is essential in conveying your message.

Do not rely too heavily on pictures though. Pictures and text should be used simultaneously in order to give the audience the most accurate direction. Pictures can make a great break in words, but are not always as useful to get a point across as words are.

Software Can Tremendously Increase Photograph Effectiveness

There are a great deal of photo editing programs for computers that can be utilized to bring out the right angle, zoom, view, and color of a photo. Some of the most popular photo editing software includes Photoshop, Corel, and Image Smart. Many computers now come with basic image editing software, which allows one to adjust color, brightness, crop, and other basic edits.

Cropping is an essential key feature that allows you to enlarge the area of the photo you want the reader to see, while omitting the background and obsolete area of the background. Cropping is equivalent to looking at an image under a microscope where you can focus on the areas you want the readers to see the clearest. However, this can decrease image quality and make the image hard to see. When possible, it is best to use images that need little to no editing.

When using imagery make sure it is of high image resolution (300 dpi for print, 72 dpi for screen) and the proper format to be inserting into your document. Typically, sticking with images from original sources, such as a camera or other .jpg or .tif file are best.

If you find your photograph is not using the right coloring, computer programs such as Photoshop, Corel, etc. will allow you to adjust the color balance and light in many different variations. This is an important feature, especially when the photograph was not professionally taken or lacks the appropriate lighting for the setting. Be careful not to over or under expose the photography.

Labeling is also another feature you can do in a computer program. You can insert boxes with text and arrows into a photograph in order to label key details. Labeling your photographs keeps the information you are trying to convey to the reader clear.

These computer programs may take some time to become familiar with how they work. It might be necessary to take a course or tutorial on how to use them to their full advantages, but it's worth it for all the features these programs have. There are some free tutorials available on the internet or through the actual program.

Using Graphics From the Artists, Internet, and Other Misc. Sources

Graphics can be found for just about any topic relatively easily if you know how to search for them and cite the artist properly. Like any written material, pictures are also property of the original artist in many cases. It is important to use good ethics and cite artists when necessary. The internet and your computer's clip art file have countless pictures and graphics as well. Knowing how to use these techniques and tools will make finding and using images easier.

Citing Images

In order to use or manipulate an image or graphic not your own, from either the Internet or any other source, you must obtain permission from whoever created or has rights to that image. Usually some type of arrangement between you and this person or organization will have to be negotiated. This could be anything from paying for the rights to use the image, or citing the image in the way that is expressed by the owner. Sometimes graphics will be considered public domain. Studying the copyright information of an image is one way to determine whether or not it is public domain. Images belonging to a government agency or even to your employer would typically be considered public domain. Even so, these images should still be cited. A quick guide to citing images from books and internet can be found at, [[1]]

Finding Images on the Internet

If you are looking for a high resolution image from the internet, you can select in the Google header bar that you want it only to search for "large images, or extra large images". If you are not finding what you are looking for, there are many stock photography sites out there that allow you to have the image, royalty free for very little of your own money. Some sites to consider would be: Stock.XCHNG (this is a free site, with some restrictions), Stock Xpert, Corbis, Getty, or others, just type in stock photography in the search bar.

Clip Art/Illustrations

An example of Clip Art

Illustrations are a great way to convey information easily and effectively to an audience of all ages. However, when using illustrations be sure that there is relevance from the illustration to the topic your discussing. Illustrations can serve as tangents if they have no relevance to the topic being discussed. Illustrations must be chosen to highlight the topic you are discussing and not to distract readers from it.

Graphics can portray ideas more easily than a picture. They give a different type of quality than text in the document. However, when presenting the ideas to well-educated and technologically savvy professionals, clip art may not present the information efficiently. Illustrations that have a low image resolution can take away from the details you are trying to portray to your audience.If this is the case then photos may be a better choice because they are more clear and may get you point across better.

Headline text

Headline text is used to introduce or even explain graphics. It is expected that you label all of your graphics in one way or another so that when you reference them in you document the reader knows which graphic you are talking about. Headline text can be as simple as a title for a graph or as complex as a short paragraph below a photo explaining the origin and context of the image. Your images and text may seem to go together logically without headlines to you, but your readers will not have your same familiarity.

SLIDESHARE: AN INTRODUCTION TO VISUAL THINKING

Visit this page in your course online to use this slide deck.
An Introduction to Visual Thinking from Ryan Coleman

WEB SITES

WEB SITES OVERVIEW

Learning Objectives

This section will help you develop your web pages. Since online communication is more common and more popular than ever, you will be asked to compose written materials for this medium.

- Write text that is very concise, but also informative
- Develop pages that are visually stimulating
- Develop web pages for a wide audience (since most are available publicly)
- Get the most out of this medium for your message.

Written communication is a significant and an important aspect of technical writing. It is your responsibility as a technical writer to know the accepted structure and format of various types of methods of written communication in order to provide readers with clear and easy access to information.

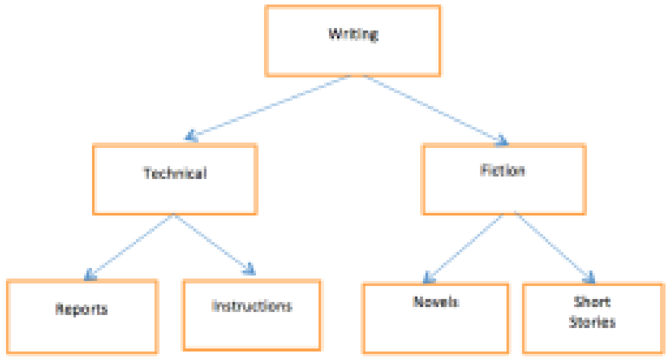
This module focuses on designing websites, affording easy access to information and respecting cross-cultural audiences.

Remember that audiences that view web pages generally want the equivalent of a sound byte in print; that is, they want the information quickly and they want the point of the article up front. Websites rely heavily on visual cues (images, white space, bulleted items, text boxes, color and attractive fonts) for to get the messages across, but the language and structure of the writing must also be simple, brief, and crisp to keep the readers' attention.

CONSIDERATIONS FOR WEB SITE WRITING

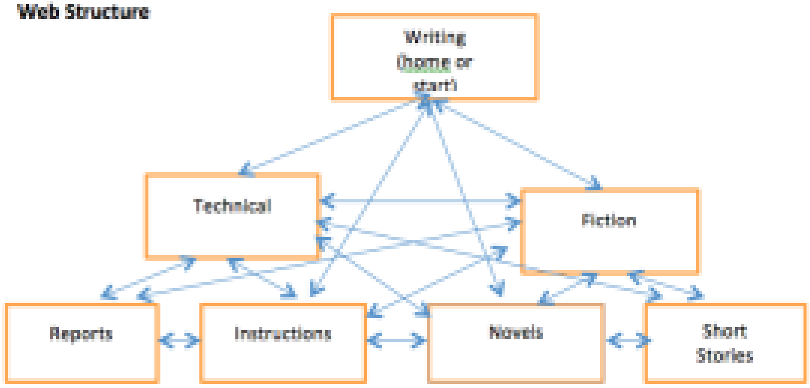
Daniel Riordan, in *Technical Report Writing Today*, reports that "[t]he web is one of the primary means of communication today (2005, p. 322). Riordan adds that "[m]illions of people use it every day to find information, to purchase items, and to entertain themselves (2005, p. 322). A single web site can be information that is organized on one page or a single web site can be information that is organized over several pages (Riordan, 2005). Regardless of the amount information on a web site, the web design needs to give the reader clear and essay access to information just as with any document. As Riordan emphasis, unlike traditional documents in which a reader progresses through following a structured path from the beginning to the end, after reaching a Website's home page, a reader can navigate the site in may different directions (2005). Therefore, special attention needs to be given to layout since each web mode does not have the traditional sub categories (Riordan, 2005):

Traditional Hierarchical Structure



(Riordan, 2005, pp. 323).

Web Structure



(Riordan, 2005, pp. 324).

In addition, more than the design of any other document, a web design needs to pay careful attention to addressing a cross-cultural audience since a website is not limited to specific space. Therefore, make sure to avoid using idioms and pronouns. It is almost impossible for other cultures to translate idioms; referencing pronouns to their intended nouns is especially difficult for non-English speakers. In addition, a major consideration for effective cross-cultural communication is the referencing of time formats, dates, weights and measurements, telephone number formats, address formats, currency, and paper size (Riordan, 2005).

When writing items for the web, you need to keep your sentences short and relatively simple since you are writing to a wide audience (and you may have non-English speakers or people that consider English as their second language). As referenced above, idioms, slang, and even acronyms should be avoided. Your main point should be made in the beginning of the document or article and preferably highlighted in some way so that you audience finds what they need almost immediately.

WEBSITE DESIGN

Goals

Before designing a website it is important to set goals. What purpose is the website serving? Not all sites serve the same purpose. For example, a retail site will have very different goals than a nonprofit site.

Some common website goals are:

- Sales
- Marketing
- Update information
- Generate leads
- Distribute information

Goals, in any setting, are important to business success. By setting goals for one aspect of the business, in this case, the website, it will help in accomplishing other goals of the business, such as:

- Expanding the audience
- Increasing sales
- Connecting other businesses or other parts of the company
- General communication

Design Message

The design message is the image the organization wants to portray to the reader. This can also be called the brand. When creating the look of the website you must consider logos, colors, fonts, and images. These must all support the personality of the organization.

Communicating the brand is something that is becoming more prevalent in the workplace. Consistency is needed everywhere within a business so that the company can portray a unified front–and believe in it. Giving web pages a consistent look will help define it as a cohesive website and will make it easier to navigate. Since companies are building their workplaces around the "theme" or the "brand", there is no reason that the website should not be done in the same manner. In fact, it is necessary for brand identification, therefore helping the company advance and succeed. A consistent brand and image also build trust and value for a company.

Some important items to consider when communicating the brand are:

- The brand, whether communicated through the website or the customer service, must be consistent
- The brand should be found everywhere–there are no limits to exposure of brands
- Short and simple is always the best route

- You are the brand and the brand is you. If your brand does not reflect the values and beliefs of the company, it most certainly should not be on your website.

Recognizing Your Audience

Knowing your audience will help you to make better decisions when it comes to deciding which browsers to support and which new technologies to endorse. Before designing a new website, it would be helpful to look into the likely browsers, computer user knowledge, and connection speeds of the audience you are addressing. In redesigning a website that already exists, you can review the past site usage information so that you are providing improvements to the site where it is needed most.

There are several different guidelines that should be used when designing websites. Here are common site types:

- academic and scientific sites should have additional focus on how the site functions in graphics-free browsing environments
- consumer audience websites should pay special attention to site performance and presentation
- a controlled environment where a specific browser is being used, as in a corporate environment, is where it is best to use all that the website has to offer. Employees usually attend training to learn how to use these sites and the designer can use the browsers full potential.
- gaming websites is where you can assume that the users will have the latest plug-ins and browsers and are quite technologically savvy

You can also take a balanced approach to web design. This type of design integrates the latest web technologies, but implements them in a way that is still functional to those that have older browsers.

Examining the Site's Purpose

Figuring out how the site will be used in another important step in website design. Those who use the internet usually fall into two categories:

- those who seek information
- those who search the internet for entertainment

For the informational sites, you may want to consider the technology of the client or use more general approach in design. For the sites of those seeking entertainment, more cutting-edge technology can be used to better the experience of the user when they are accessing your site.

There are options for those who want to use the latest technology for their websites, but want to make it available to everyone. For this situation, you can use a browser detector to serve alternate version depending on the type of browser the user has. This allows you to use the latest technology and still recognize users that have older browsers.

Testing Your Site

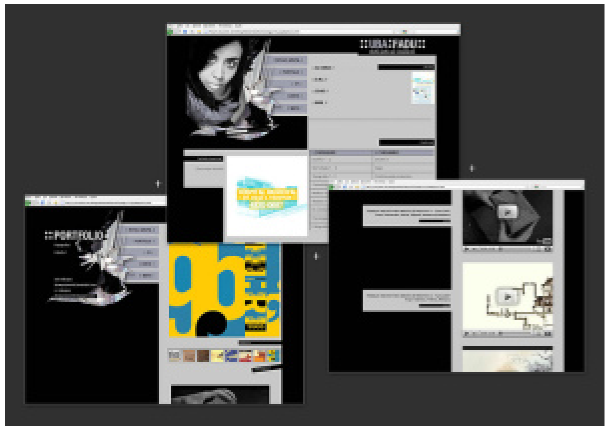
Test your website on many different browsers and browser versions. Doing this before going live will help off-set problems you may encounter before it is available to the public. Professional web design firms run their sites through an intense quality assurance phase. If this is not a feasible task, you can make your site available on a private test site. You can then run your own quality assurance test throughout the following browsers:

- Acquaintances' browser
- Corporate office browser
- Different ISPs

Website pages will appear different depending on the environment it is viewed on. The overall idea of this testing phase is to make sure that the information is being presented clearly and there are not any overt problems.

Content

Content is one of the most important reasons for even creating a website in the first place. If you think about it, a website with no content has no purpose. A website with no purpose is wasted space on the internet.



When considering content for your website, be sure to think of the following items:

- What is the goal of the website?
- Who is the website trying to reach?
- How much time to people have to spend reading information on the website?
- How did individuals reach this website?
- What is the most important information to the reader?
- What questions do the readers have?
- What action is the reader supposed to take after reading the website content?

Another aspect to consider about website content is how it will be searched within different search engines. Key words are needed throughout your website to make sure that the website is found by people who are looking for specific information. It is important to be specific with words, and use them multiple times, so that search engine robots find the word and place it high on the results list.

Content must also be age and audience appropriate. Age appropriate is hard to determine on the internet since it is something that can be accessed by everyone who knows how to use a computer. Content on websites, however, still must be age appropriate so that the right audience is reading the right material. Age appropriateness also falls under appropriateness in general of making sure that private information does not become public on the internet. Audience appropriate means that the content of the website is serving the people with the right information at the correct level of reading to which the intended readers will understand.

With companies becoming more interested in the usability of their websites, positions are being created specifically for content writing. A website content writer is someone who specifically writes information for websites. This is written in a different voice than academic writing so that a web surfer will stay interested in the website, and therefore the information.

Creating a Home Page

Your home page will be the most visited page on your website. Your home page may not always have what your viewers are looking for, so if you have something that will draw them in to make them *want* look further for their information. You will have ten seconds to draw your customers into your site, or else they will hit the “back” button and will begin to look elsewhere. Your home page should be able to load quickly. The ten seconds you have to draw the customers into your site begins when they click on the link to your site. If it takes five seconds for your site to load, you only have a few seconds left to draw customers further. Here are some tips to help your site download quicker:

- Keep media images small
    - limit images to no more than 5 to 10KB

- pages should not be more than 30KB total per page
- Avoid using ads from external websites on your home page that may slow down the loading time. You cannot control how fast another server will serve its content.
- Write your HTML in sections so that when the bottom of the page is still loading, your customers can read the top sections of your home page.

Another important point about home pages it to **never stop modifying it.** Reviewing your log files once your website is up and working can help you make your home page more user friendly. Updating the links or the colors may improve the appeal or ease of use to your site. Remember that everything can be changed, and you don't have to settle with something if it's working.

Compatibility

Features do not always display the same way in different Web browsers. It can be useful to check a created page using more than just one browser, to ensure that the page displays correctly for a wider audience. Completed HTML code can be validated by visiting validator.w3.org. Saved HTML code can be uploaded and checked for accuracy. Any issues with the syntax of the HTML will be listed, as well as suggestions for changing the errors. This eliminates the need for a person to search their own code for errors after attempting to display it in a browser.

Design Considerations

Usability

Usability is defined as the ease of using the website. This could be for the intended audience of the website (see Audience), or it could be determined by the industry or business standards needed for websites. Usability of websites has gone through different definition changes with the evolution of the internet. In its early years, many people did not know how to navigate through websites or read the information provided. This made the website unusable. Now, people look for the easiest possible access to whatever information is needed.

Usability means Communication

Websites are a form of visual communication, serving multiple purposes. Websites can be informative, persuasive, long-term, advertising, or entertaining. Usability is determined based on the goals of the website.

If the website accomplishes its goals and communicates the necessary messages, it can therefore be considered usable.

Developing Usability

Starting to test a site before it is built will help avoid some problems before a lot of effort is put into the site. Plan on doing usability testing in focus groups to help you prepare for a better, more user friendly site. If you do not have access to a focus group, you can print out your ideas and share them with family and friends and ask for their insight. Some points to keep in mind when beginning your site are:

- Find out what people expect from your site. Customers may want something different than what you were preparing to build.
- Wording that you use will be important in how effective your site will be. If you begin testing early, you can find out what words relay your message better with your audience.
- Customers will provide you with good ideas. Testing with customers will give you ideas that you may not have thought of.
- Use descriptive headings, bold words, and bullet lists for easy reading
- Incorporate links and resources for more information
- Add pictures, charts, and graphs to enhance communication
- Avoid adding unnecessary information, pictures, sounds, or colors that are more distracting than helpful

- Test the website with audiences to determine usefulness

Testing is key to building a website. You must be willing to listen to the input of others, friends or potential customers, so you'll have a better site from the start.

Appearance

Appearance should be aesthetically pleasing. One that is easy to look at and maneuver. Tasks (what the user has come to this page looking for, such as an email address or information about an event) that are most important and or most commonly sought should be the main **focal points** of a web page. Whether it be certain colors driving that importance, or size, or placement on the page, even directional line guiding you to that point, the important tasks must not become secondary. *In other words*, they should stand out more, not become secondary to an image or a background. Everything on your site should have a purpose, a reason for being where it is and looking the way it does.

Pictures and colors are important and interesting, but far less important than the **content**. This is true for any web page. The user must not get confused upon entrance to a site. They should know where they need to click (and understand what will come from that click) and not be distracted by images. Unless it's intended, images should be minimal and only help PUSH the contents importance, not overwhelm the page. As such, it is the web designers job to make sure that doesn't happen. Be it by **Layout** (see layout) or by visual distractions, forced eye movement using line or color, or by any other means deemed worthy by the designer, the content should be seen first, images second or third.

Visability

Visibility could be considered the most important aspect of website design. People must first find the website before they can view it. Most often people find websites through search engines.

Here are some tips to increase visibility:

- Add text to pictures
- Check the html code for errors
- Use relevant title tags
- Use navigation that all internet users are able to view
- Get rid of duplicate content
- Do not use hidden text

Layout

The layout of a website should be as simple as possible. Extra fluff will only distract the user and cause confusion. You want your site to be visually pleasing, but first and foremost, understandable. The user is at your site for a reason, if the layout isn't successful, the user will most likely leave the page and look for their information elsewhere.

Things to keep in mind while creating your layout:

- Start with a wireframe; use simple boxes and lines to organize your page. Pictures should be an afterthought.
- Think of what you want the user to see first and what is the most important. Make those the biggest, the boldest, the most colorful, anything you can think of to draw attention (but be careful not to overwhelm your users)
- Always remember, as accustomed, most cultures read from left to right, up then down
    - Put your logo in the **UPPER LEFT-HAND CORNER** to draw the user into the rest of your page
    - Put your least important info (contacts, outside links, site map, related info, etc.) in the bottom left hand corner. People wont miss it, but they will have gone through the rest of the page before wandering into that corner. This prevents the viewer from seeing things they may not be looking for

- Try to draw your viewer through your page at a downward diagonal from the upper left hand corner to the bottom right hand corner. If this is the way you design your information, your viewer will see that the things in that diagonal first. Then they will proceed to see any other information you have placed strategically throughout your page
- If you're new to wed design, I'd advise sticking to a custom layout with **title** in the upper left, **tabs** across the top left (leave space under the logo before you insert your tabs, logo's need room to prosper), **scroll bar** down the right side, **buttons** are semi 3D (afford clicking, let the user know "hey, I'm clickable, I have more information about this on another page." People scan for things that stand out, if something doesn't look clickable, no one will try to click on it)

These are just some basics. There are far more things to think about before achieving a successful web page, but this is a starting point.

Be Search Engine Friendly

Title Tags

The title tag plays an important role in any web page. The text that is placed inside the title tag becomes the name of the page, which can be seen in the browser toolbar. For example, if you are looking at Google's website, the title of the page will simple be "Google." Titles are helpful because they allow the user to easily see what websites they have open by simple looking at the tabs in their web browser. The title tag also provides a title for the page when it is added to favorites and displays a title for the page in search-engine results.

In HTML, the title tag lives inside the head tag. Similar to all other HTML tags, it is opened with <title> and closed with </title>. Between the two tags, the creator of the HTML document can place whatever text they think best identifies the web page they are creating. For example, the Google title would be written as <title>Google</title>.

Body Tags

The body tag defines the body of an HTML document. This is where all of the content of an HTML document is placed. This includes text, links, images, tables, lists, and anything else that the page needs. Everything that can be seen when looking at a web page is inside of the body tag.

While the body tag is written in the same manner as all other HTML tags, it almost always is more than one line. For example:

```
<body>

Document content

</body>
```

Each line in the body is usually a single element. For example, one line might be a link and the next line is a picture. Splitting the body in to multiple lines in this way makes writing and editing the HTML much easier because it makes everything easier to see individually. In addition, lines can be indented to make the document even easier to read and edit. For example:

```
<body>
    <h1>Heading</h1>

</body>
```

This also helps the creator of the HTML document easily see if all the tags are properly opened and closed. While splitting the HTML into different lines and indenting accordingly is recommended, it is not required.

ALT Tags

META Tags

The <meta> tag provides metadata, or information, about the HTML page. Some things commonly found in the <meta> tag are the page description, keywords, author, date created, and any other data that the author wishes to be included with the document. While it is never visible on the web page itself, it can be seen and used by computers and search engines. The <meta> tag is always placed in the <head> element of an HTML document.

Unlike many other tags in HTML, the <meta> tag has no end tag. That is, all of the information included in the tag is placed within the brackets. For example:

```
<meta name="keywords" content="HTML, CSS" />
```

In this example, the <meta> tag is telling the browser that the keywords for the HTML document are HTML and CSS. The name and content fields can be any information that the author wants to include. If the author wished to include the date the document was created, he or she could write

```
<meta name="created" content="3/28/2012" />
```

This makes the <meta> tag very valuable when one is creating and organizing multiple HTML documents.

The <meta> tag can also tell browsers to perform certain tasks, such as reload the page. To do this, one would simply write:

```
<meta http-equiv="refresh" content="30" />
```

This tells the browser to reload the page every 30 seconds. In addition to this, the <meta> tag can also tell the browser how to handle cookies and specify the text direction, and many other things.

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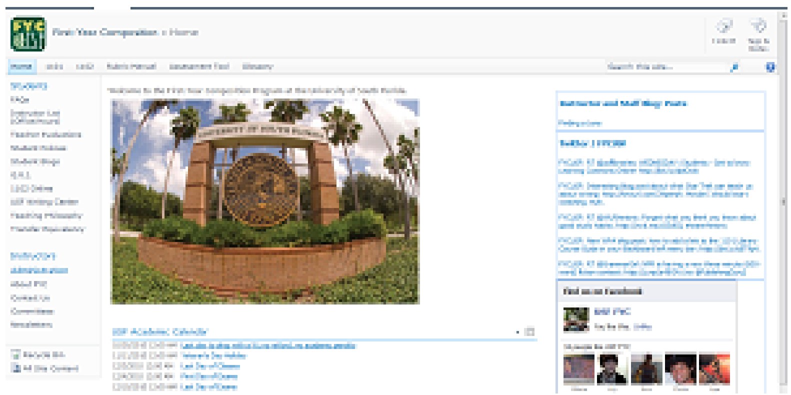
PAGE DESIGN

Design pages to facilitate scanning by using headings, subheadings, columns; learn special page design considerations for the Web.



You can enhance readability by giving some thought to the design of your documents. By using headers, lists, bullets, and other design elements, you can reveal your organization to the reader and emphasize key points. Below are page design guidelines you should consider when writing print or online documents. Your design can underscore your message. Be sure to consider these guidelines in the context of design principles.

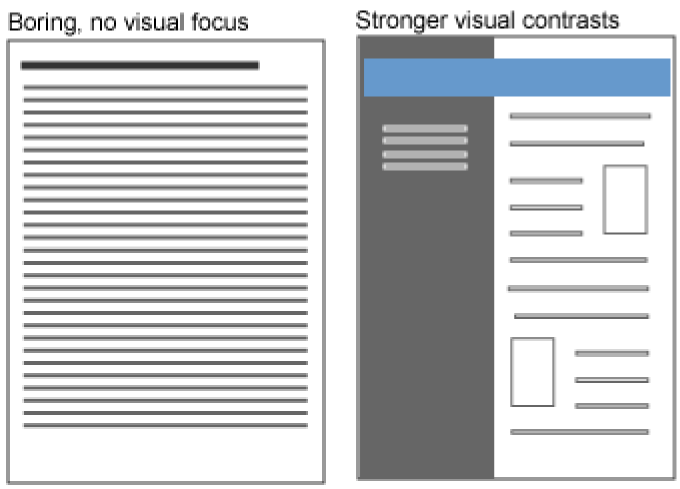
Design Pages to Facilitate Scanning

According to usability research conducted by Sun Microsystems, “Seventy-nine percent of Web users scan pages; they do not read word-by-word.” [more]. This finding suggests that you should design documents so they can be scanned by your readers.
You can create more scannable documents by:

1. Following a deductive organization (i.e., putting purpose, significance, and results in your introduction).
2. Using page-design principles to emphasize the message and organization (e.g., using bullets, lists, and illustrations to highlight key points).

Use Design Elements to Highlight Your Message

In the example below, notice how your eye is drawn to the blue header and the boxed elements. In these spaces, you can highlight the important part of your message.



Headings

For some genres of documents, headings would be considered too impersonal or too technical. For example, you certainly don't want to see headings and bullets used in a suspense novel. Increasingly, however, headings are used to help readers scan documents.

Even vague headings like Introduction, Results, and Discussion can be useful: They give readers a sense of what is covered within the section. Better yet, descriptive titles cue your readers about your stance on the content of sections. For example, rather than Introduction, Results, and Discussion, you could write "Why Are Headings Important."

As previously discussed, highly skilled readers tend to scan through documents on first reading, noting the content of your headings. This gives them a sense of your overall message. An additional advantage of headings is that they create additional white space.

Word processing programs enable you to highlight text and then define text as a level 1 heading, level 2 heading, and so on. Using style tags you can change the size or color of the heading. The advantage of using style tags is that you can change all level 1 headings with ease rather than going through and changing every level 1 heading. In other words, if you tagged text 15 times as an H1, and then you edited the look of that heading, your changes would ripple through the text, changing all 15 headers. Additionally, Microsoft Word and Corel Word Perfect can use the style tags as hyperlinks.

Results from readability research indicate that readers have difficulties with more than three levels of headings. When you use more than three levels of headings, readers become confused. Also ensure that all of your headings are equal grammatically. For example, headings can all be questions, verb phrases, or noun phrases, yet you cannot mix together questions, verb phrases, and noun phrases.

Level 1 Heading

Level 2 Heading

Level 3 Heading

- Bullets

Many readers and writers love bullets. Some people even claim they think in bullets. Bullets create emphasis. They focus the reader's eye on the bulleted material and they break up textual space.

Using a word processor, you can easily adjust the look and feel of bullets, making them ornate or simple. Again, it's best to use the bullet style tag so that you transform the look and feel of your bullets with a single key stroke as opposed to needing to reformat each bullet separately.

Below is a humorous translation from *Moby Dick* to illustrate the "get to the point" technical style of the Web to literary discourse:

"Whenever I find myself growing grim about the mouth; whenever it is a damp, drizzly November in my soul; whenever I find myself involuntarily pausing before coffin warehouses, and bringing up the rear of every funeral I meet; and especially whenever my hypos get such an upper hand of me, that it requires a strong moral principle to prevent me from deliberately stepping into the street, and methodically knocking people's hats off — then, I account it high time to get to sea as soon as I can."	I go to sea when I: • Feel depressed or melancholy • Stop in front of coffin warehouses • Follow funerals • Have a powerful urge to knock people's hats off
Source: Moby Dick by Herman Melville	Source: This example is adapted from Kathy Henning's *Writing for Readers Who Scan*

Lists

Lists share all of the positive attributes of bullets: They create the white space readers love, placing emphasis by drawing the reader's eye to what you want to highlight. Yet lists are appropriate when a series of steps is being presented. Unlike bullets, lists imply you complete item 1 before moving on to item 2.

Using lists and numbering sections of documents is very common in legal and technical genres where more than one person is writing the document or where litigation may follow.Once again, use the style tag for lists in order to have control over your document.

Special Page Design Considerations for the Web

Have you ever wondered why many books and magazines have narrow text columns? Alternatively, why are so many Web pages short, about screen length?

Readability research has found that impatient readers don't want to turn their heads back and forth to read. They want to scan the document, reading straight down the page without any head nodding! Impatient readers don't want to use scroll bars, either.

Of course, readers' interactions with texts are in a state of flux. Some readers may actually prefer long documents because they can be easily printed. However, as a general rule, researchers in the field of usability analysis and interface design suggest that you limit your content to properly fill the screen page of a monitor set to

- Maximum width = 640 pixels
- Maximum height = 480 pixels

Of course, modern monitors, powered by computers with video boards, may be set to display many more pixels on a page. The standard, in fact, is probably moving to

- Maximum width = 1024 pixels
- Maximum height = 768 pixels

PICTURES AND PHOTOGRAPHS

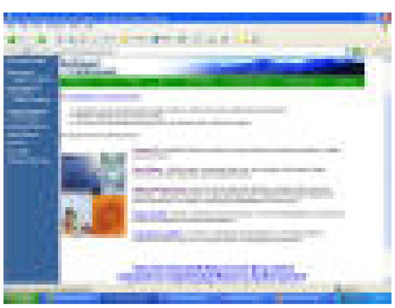
Use pictures and photographs to catch the eye of your audience.

The expression "a picture is worth a thousand words" is more than a truism. Images can convey powerful emotion. Images can illustrate a process or capture a moment with precision (such as a tight end catching the football on the goal line).

People who shun principles of design, who argue words alone should be sufficient, are really not in touch with the expectations of today's readers. Perhaps because today's readers are bombarded with information, they tend to be especially receptive to pictures and photographs.

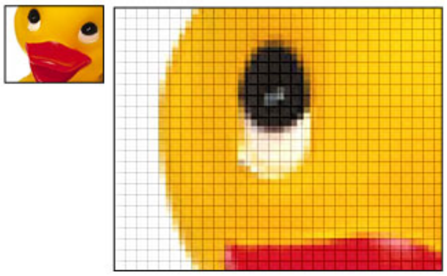
Select appropriate images

Images are not inherently good. In fact, images can be detracting. You don't want to pour images into a document that are unrelated to your subject. Because readers' focus will be drawn to the images, be sure they are appropriate to your audience and purpose. Consider below two excellent examples of images.

	Environmental Web sites, such as The Nature Conservancy or The Sierra Club, use beautiful images from nature to help stimluate action. Consider, for example, the EPA's Draft Report on the Environment. Take a minute to click through this report, while noting how the top banner image changes to provide a visual representation of the topic under discussion (land, water, air, etc.)
	It is interesting to note that the U.S. Census Bureau has set the main graphic to change every minute on its default page, Population Estimates, perhaps trying to "humanize" the population explosion.

The following summarizes common graphic formats, distinguishing bitmap images from vector images.

What are bitmap images?



GIFs (Graphics Interchange Format) and **JPEGs** (Joint Photographic Experts Group) are bitmaps; they use pixels to display colors. In other words, bitmaps use a grid of squares, and each square, each pixel, can represent a color.

Different computer monitors have different numbers of bits they can display for each pixel. A bit is the smallest amount of information stored by a computer. For example, a 2-bit monitor can display two colors for each pixel–either black or white. An 8-bit monitor can dedicate 8 bits of memory to each pixel to represent a color, whereas 24-bit images use 24 bits of memory for each pixel to represent a color. While monitors differ, you can typically count on a monitor having between 72 to 100 pixels per inch. As technology evolves, the quality of monitors will expand, and so, too, will the quality of graphics.

When you plan to represent an image on a page that will be printed, you need it saved in at least 300 dpi (dots per inch).

Number of Bits/Pixels	Colors Displayed
8-bit image	256 colors
16-bit image	65+ thousand
24-bit image	16+ million colors

When users make a bitmap image larger, the computer guesses where to put new pixels between the old pixels, resulting in a blurry image.

GIF (Graphics Interchange Format)

Developed by Compuserve Information Service in the 1980s, GIFs are the most common format of Web graphics on the Internet. GIFs can present 8 bits or 256 colors, using the Internet color palette. Because they do not display millions of colors, GIFs can download fairly quickly. Conventional GIFs download one pixel at a time, while interlaced GIFs display the overall image fairly early in the download, giving the reader a blurry image of the graphic, and then move from blurry to sharp as the image downloads.

JPEG (Joint Photographic Experts Group)

JPEGs provide a superior image to GIFs because they can display 24-bit, true-color images. While GIFs have 8 bits of memory dedicated to displaying a color for each pixel, JPEGs have 24 bits of memory dedicated to displaying a color for each pixel. Thus, photographs and drawings can be rendered more accurately by JPEGs.

JPEG files are larger than GIF files, yet you can typically choose different compression file sizes in graphic applications. For example, you can make JPEG file sizes 100 times smaller than the original file size. Each time you compress an image, you erase information, so you need to be careful that you do not so overly compress an image that it becomes worthless. JPEG compression tends to degrade computer-generated graphics.

PNG (Portable Network Graphic)

According to Web Graphics and Presentations, PNGs were designed for the Internet to have all of the benefits of GIFs, yet to

- Provide superior compression and interlacing. GIFs can display the outlines of an image once it receives 50% of the information from the file. In contrast, a PNG image is recognizable once 25% of the image is available.
- Create smaller files. PNG files are 5 to 25% smaller than equivalent GIF files.
- Allow users more than one color for a transparent background.
- Compensate for differences in gamma–that is, the level of contrast in an image. PNGs can be displayed equivalently on Macintosh and PC platforms.

At this point, however, PNG files cannot display animated images.

What are vector images?

Vector images use geometrically defined shapes such as lines, arcs, or polygons, which are used to represent images as opposed to pixels. When vector images are enlarged, they do not degrade. The computer doesn't need to guess about where to add additional pixels. Instead, the geometric shapes are simply scaled in larger or smaller formats, without blurriness.

Vector images are useful to display graphs, charts, and diagrams. They allow users to focus in on a part of the diagram, to magnify some part of the image. Vector images are generated by spreadsheet programs, 3D applications like AutoCAD.

What are image maps?

An image map is a map that has embedded links. In other words, as you move your mouse over an image, you can access links. The following is an image map.

Learn NC: An image map of North Carolina, this map is linked to a database on NC educational resources

Note: Just a quick reminder – too many images or too many animated visuals can distract and confuse the reader; likewise, too many colors, or sizes of headings are also distracting. Make sure you test your web design (with visual included) with test readers or classmates to make sure you didn't overdo your visual components (which is easy to do!).

TYPOGRAPHY

Font selection matters

Even the font you display your documents in can have powerful consequences. Some fonts can distract readers from your message while others draw in the reader's eye, bringing the reader's focus to your text.

1. What are the Font Families?
2. What is the Difference between Serif and Sans Serif Fonts?
3. How Should You Mix Different Font Families?
4. Strategies

What are the Font Families?

"Fontophiles" tend to have different names for font families. Below are some of the more commonly defined "font families" (see left column) and a discussion of their uses.

Font Families	Examples of Font Families
Classical (or Old Style) • Based on hand lettering of scribes • Appropriate for text-heavy documents	• Palatino • Times • Garamond
Modern • Based on Oldstyle • Modern fonts are intended to appear sophisticated • Fonts have thick/thin curves • Use Modern fonts for headings and subheadings • Great for computers	• Modern • Modern #20
Slab serif • Designed by advertisers • Based on Modern • Fonts have thick/thin contrast	• New Century Schoolbook
Computer Fonts • Designed for use on computers • Tend to be large	• Verdana • Georgia
Script • Fonts look as though they were written with a calligraphy pen • Dramatically presents information in headers • Can offer a child-like style • Avoid all caps	• Calligraphy • Giselle • Comic Sans MS
Decorative • Fonts that are extremely dramatic • Artistic fonts	• Almanac MT: • Magneto • ♦♓■♑♎♓♑⬧

What is the Difference Between Serif and Sans Serif Fonts?

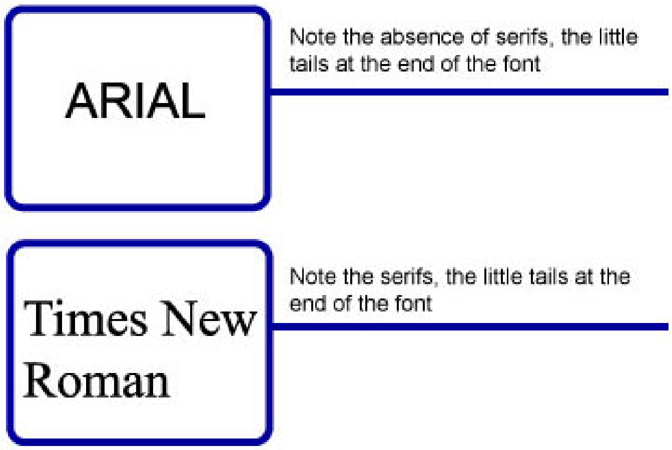
Serif Fonts

Serif fonts have little tails (serifs) at the ends of each letter. Serif fonts include Times New Roman, Courier New, New York, New Century Schoolbook, and Palatino.

Serif fonts provide a more traditional, conservative appearance. Readers prefer Serif fonts when large text blocks are displayed. Times New Roman is one of the most popular Serif fonts because it is very legible on the computer screen and prints very well.

Sans Serif

In French, "sans" means without. Sans Serif fonts lack little tails at the ends of each letter. Sans Serif fonts include Arial, Geneva, Helvetica, and Comic Sans MS.



Readers find Sans Serif fonts to be less readable than Serif fonts, so writers seldom use them to set long blocks of texts. Used in contrast to Serif fonts, Sans Serif fonts can catch a reader's eye. Knowing this, advertisers use Sans Serif fonts to set headlines and call out text.

How Should You Mix Different Font Families?

Mixing font families can be tricky. If you include too many disparate fonts, the page will appear to lack focus (see example below). Readers may tell you your document reads like a puzzle. It's giving mixed messages:

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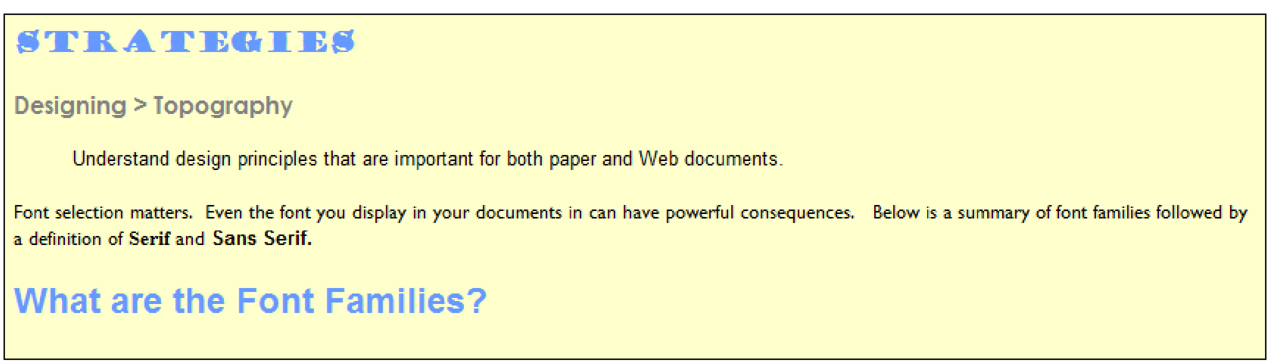
Mixing font families can be tricky. If you include too many disparate fonts, the page will appear to lack focus (see example below). Readers may tell you your document reads like a puzzle. It's giving mixed messages:



Designers typically advise that you should use no more than *one Serif* and not more than one *Sans Serif* font for each page. Even when you limit yourself to two fonts, you can create considerable variation by bold face, underlining, italicizing, or adjusting the size of a font.

VIDEO FOR YOUR WEBSITES

Add video to enrich or supplant printed texts.

New communication technologies enable authors to incorporate streaming multimedia into their webs.

Writers may provide video to:

1. Underscore the content of the print text, illustrating key concepts. For example, an agency hoping to secure funds for hungry people could show video of their living conditions.
2. Illustrate the content of the printed text. A researcher could provide video of people he or she interviewed. A technical writer could provide a screen-movie to show users how to complete instructions.
3. Inform or persuade people who respond more positively to an engaging speaker than printed texts.

Watch this video online: https://youtu.be/0gNR7mAlrb8

Video Formats

Currently, three "players" are available for free that can play digital movies on your computer:

1. Windows Media Player. This player is a Microsoft tool so it prefers the Microsoft format (.avi), yet it will play movies in a variety of formats, including Quicktime.
2. Real Player. When you got to Real.Com's site, you may need to hunt around for a while before finding the free Real Player.
3. Quicktime Player. Although Quicktime was originally designed to play Macintosh-platform movies, it now plays Windows-oriented movies as well.

Examples Online Video

As computers begin to become more entertainment devices, users will increasingly look for good video from their computers. Eventually, video will become more integrated into writing spaces. Below are some videos used for pedagogical purposes.

1. Taylor's Student Projects. Includes many student-produced documentaries.
2. Writing Instruction Videos. Watch practices and listen to experts in the field of teaching writing.
3. House Hippo Movie. Created by Concerned Children's Advertisers, this movie is designed to teach students to be critical of TV advertising and Web sources.
4. Health Video. See videos on hundreds of health issues.
5. Microsoft Screen Movies. Screen movies show users how to use software.

As with any other design element, too many videos can be distracting so make sure you test your videos (including placement, length, and speed of loading) with your test audience. Also, make sure you check periodically to make sure your videos are still available.

If you are including your own videos, the "shaky" approach isn't great so use a tripod to keep your camera steady. Double check the audio as some video cameras are better than others. Make sure to avoid quick shifts of the camera as they make the audience dizzy and they may click out of your video. Lastly, periodically update your videos to keep your pages fresh. There are many free online websites that can help you edit your videos. Search with your web browser to find them and test them before using them on your material.

VIDEO: DESIGNING EFFECTIVE MARKETING MATERIALS FOR PRINT AND WEB SITES

Watch this video online: https://youtu.be/2Hru8ikmSZw

VIDEO: DESIGNING AND PLANNING WEB PAGES

Watch this video online: https://youtu.be/58OxQLnkbOw

VIDEO: 3 KEY FACTORS WHEN DESIGNING A WEBSITE

Please double click on the hyperlink to view video:

ttp://youtu.be/ONvkpC2khGY

VIDEO: 5 TIPS TO IMPLEMENT WHEN DESIGNING YOUR WEBSITE

Watch this video online: https://youtu.be/BsElNMLm75w

VIDEO: DESIGNING WEBSITES - INTRO

Watch this video online: https://youtu.be/YmrFNCIbO78

VIDEO: FORMATTING AND LAYOUT INTRODUCTION

Watch this video online: https://youtu.be/y59xha5Z8mU

MEMOS

MEMOS OVERVIEW

Learning Objectives

Module 4: Memos

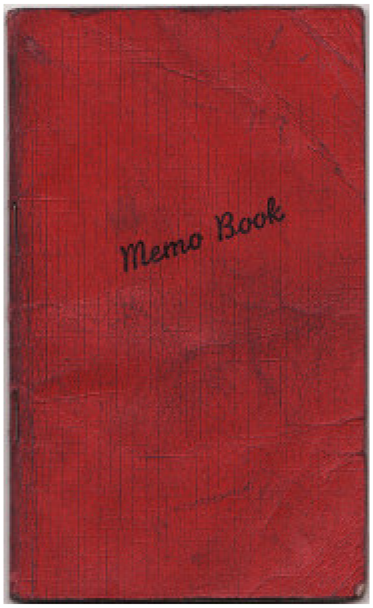
- Learn the purpose of memos
- Learn the format of memos
- Learn the types of memos
- Learn to write memos

In this unit we will discuss types of memos and memo format.

Memos are a common method of communication within a specific business, company, or institution. The successful operation of a company depends on memos for communication between the employees of the company. Types of memos include: inquires, recommendations, problem-solution, status updates, and generally short messages geared at keeping members of the organization up-to-speed on current information..

A memo's format provides employees with clear and easy access to information. The message is direct. Unless directly related to the message, references to company structure and operation are eliminated in a memo. However, a memo follows a specific format for easy access to information. A memo includes a heading block that identifies the recipient, the sender, the date, and the subject of the message. The order of the parts of the memo heading block and location of specific part of the block varies, according to different companies' expectations.

However, the message has three parts, each of which is identified by a specific heading. The three parts are the introduction, the body, and the conclusion. The introduction references background information and informs the



purpose of the message. The body is the message. The body can be one simple paragraph or multiple paragraphs. The conclusion expresses what you expect the recipient to do. The conclusion could be one paragraph or several paragraphs, or the conclusion could be a simple sentence that asks for the recipient to contact the sender if there are questions.

Consider the following scenario: You are a consultant for a construction company. The project manager of the company has charged you with following the progress of a job that the company has contracted. To keep the project manager informed of the progress of the job, you may send him/her one of 3 types of memos: A **Projection Analysis Timeline Memo**, which is sent before the job begins and details the expected beginning and ending dates of the job; a **Progress Memo**, which is sent during the progression of the job and details the progress of the job, and a **Period Report Memo**, which is sent after the completion of the job and details the completion dates of all phases of the job.

Examples of all 3 types of memos can be viewed in the following attachments.

Projected Analysis Timeline Memo: https://s3-us-west-2.amazonaws.com/oerfiles/technical+writing/Example+Memo+Projection+Analysis+Timeline+with+Gantt+Chart.doc

Progress Memo: https://s3-us-west-2.amazonaws.com/oerfiles/technical+writing/Example+Memo+Progress.docx

Periodic Memo: https://s3-us-west-2.amazonaws.com/oerfiles/technical+writing/Example+Memo+Periodic.doc

Other sections of this module will discuss memo formats for different situations and audiences.

MEMOS: STYLE FOR STUDENTS

In many courses, you are asked to submit your writing in memo form, and in some cases your assignments are given to you as memos. This not only gives you practice in writing a professional document, it invites you to see your writing as purposeful and aimed at a particular audience. A detailed instructional memo about memo writing—a "metamemo," if you will—follows.

MYTHIC UNIVERSITY ONLINE
memo

DATE : August 9, 2008
TO : Users of *Style for Students Online*
FROM : Joe Schall
SUBJECT : Writing Memos for your Classes

This memo provides you with tips on writing memos for your classes, with special attention to a memo's audience, format, organization, content, tone, and style. Because my advice comes in the form of a memo, you can use this document as a model for writing your own memos.

The Audience for a Memo

It is useful to begin by considering that a memo is essentially a one-on-one communication between writer and reader. Although a memo may be written to a group of people or with various audiences in mind, usually it is a highly goal-oriented communication between two people who need to share information. When you write a memo to a professor in the classroom setting, you are much like the employee who has been assigned to investigate a problem and report back to a supervisor. Therefore, you are expected to provide concrete information, even information that the supervisor might already know, in a form that clarifies ideas and puts them into context. Finally, a memo enjoys a broader context than an essay; hence, you might refer to other related memos as you write, or you might respond to specific requests made by the audience in your text, in effect, carrying on a professional conversation.

Typical Memo Format

The overall format of a memo can be broken down into the heading, the body, and the closing notations. What follows is a brief description of each component.

The Heading

The heading has two parts: part one includes two centered lines at the top of page 1, identifying the name of the company or institution on the first line, with the word “memorandum” on the second line; part two includes the “DATE,” “TO,” “FROM,” and “SUBJECT” lines at the left margin, filled in appropriately.

The Body

The body of the memo follows the Introduction, and it is usually presented in single-spaced paragraphs with a line skipped between each paragraph. The first lines of new paragraphs can appear at the left margin or they can be indented five spaces.

The Closing Notations

The closing notations, used to identify such things as attachments, appear at the left margin two lines below the text of the final paragraph. By simply typing the word “Attachment” as a closing notation, you automatically refer the reader to any attachment, such as a map, a set of calculations, spreadsheets, or a References page.

How Memos are Organized

The general organization of a memo mirrors that of an essay: an introduction, followed by body paragraphs, followed by a conclusion. However, the first paragraph of a memo is typically used as a forecasting device. Note how the opening paragraph of this memo defines the memo’s function and reflects its organization. It is sensible to open memos for your classes in the same way, first directly stating the memo’s purpose, then setting forth the organization and noting how the memo can be used.

Organization in the body of a memo is typically characterized by the use of section headings and short paragraphs. Paragraphs should not be too bulky—five or six per page is usually ideal. On the sentence level, you should take full advantage of the same organizational tools that you employ when you write an essay: meaningful topic sentences; carefully selected transition words; focused section headings; indented blocks of cited text; a bulleted series of examples; powerful punctuation marks such as the colon, semicolon, and dash.

Selection and Citation of Content

A memo’s content, of course, is guided by the assignment and the research required. It is important to remember as you present the content that selectivity and relevance matter greatly. Your job is to select and present the most pertinent, most current information available to you. Do not hesitate, of course, to let your memo’s content be heavily informed by your research, but also provide your own interpretation and organization of this research.

As in any essay, you must document the sources of your information so that your reader could find the original source of the information if desired. If your memo uses sources, provide the bibliographic information related to your sources on a References page as an attachment at the end of the memo—just as I have in this memo.

A Memo’s Tone and Style

Memos for your classes require a highly informative and straightforward tone, but allow for a slightly informal style compared to essays. As in this memo, “I” and “you” are handy because they provide a straightforward way of communicating, but you must be careful not to overuse these terms. Stylish prose is key to good memo writing, and you should not hesitate to use active, interpretive adverbs and verbs and concrete, carefully chosen adjectives and nouns.

A memo need not be written in a dry, dull fashion; rather, it should emulate the same stylistic standards that good prose has always embraced. These standards are summed up neatly in the popular style guide, The Elements Of Style, as follows:

A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts (Strunk and White 1979).

As this quote suggests, good prose can achieve elegance by its clarity, efficiency, and sense of purpose.

Conclusion

The conclusion of a memo should not simply provide a summary of the memo's entire contents, but it should be a true conclusion—that is, an articulated conviction arrived at on the basis of the evidence presented. The closing paragraph is the place to spell out the bottom line to the reader. Therefore, I close with my bottom line about writing memos for your classes:

- Study and use standard memo format to present your text;
- Use internal organizational tools such as section headings, topic sentences, transition words, and powerful punctuation marks to enhance the flow of ideas;
- Write with the same clarity, grace, and efficiency expected of you in any essay.

Attachment

ATTACHMENT

References

Strunk, William Jr and White, E.B., 1979: *The Elements of Style.* Macmillan Publishing Company, Inc., New York, 92 pp.

MEMOS: FORMAT/DIRECT & INDIRECT AUDIENCES

Memos*

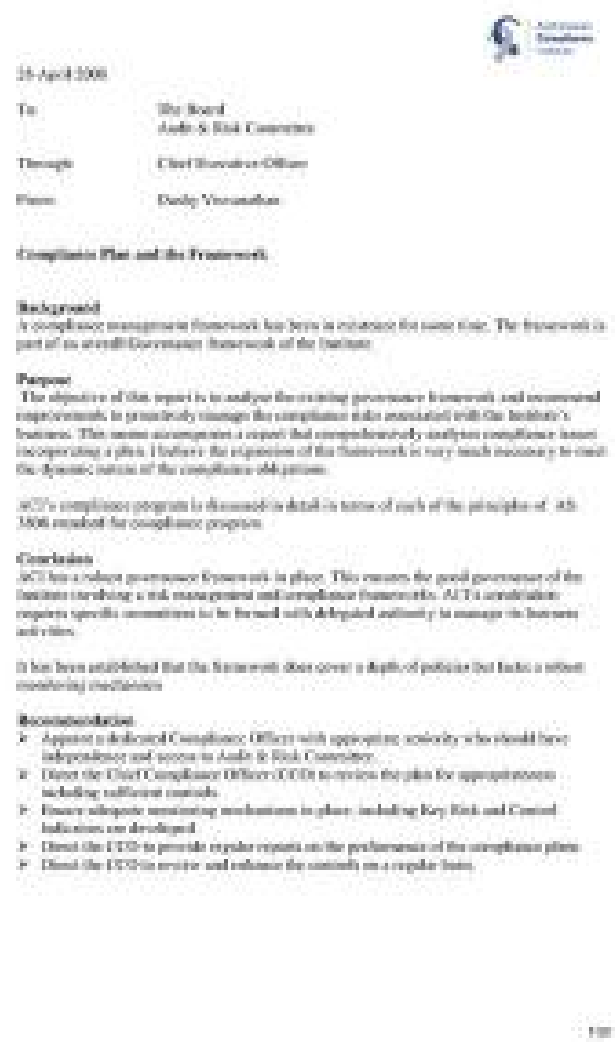
"Memos" was written by Lee Ann Hodges, Tri-County Community College

Memos

Functions and Audience

Short for "memorandum," a memo is a type of document used to communicate with others in the same organization. Memos (or memoranda) are typically used for fairly short messages of one page or less, but informal reports of several pages may also employ memo format.

Format



Memos are distinguished by a header that includes DATE, TO, FROM, and SUBJECT lines. Other lines, such as CC or BCC, may be added as needed. An RE (“Reference”) line may be used instead of SUBJECT, but this use is becoming rarer as “RE” is often mistaken as “Reply” because of its use in email.

- DATE: List the date on which the memo is distributed.
- TO: List the names of the recipients of the memo. If there are several recipients, it’s acceptable to use a group name, such as “All Employees” or “Personnel Committee Members.”
- FROM: List the name and job title of the writer(s).
- SUBJECT: Think of the SUBJECT line as the title for the memo. Make it specific so that readers can immediately identify the topic.

These headings may be double- or single-spaced, and the SUBJECT line is often in all capital letters. Furthermore, the order of the items can vary. Many organizations have their own style preferences on these issues. If not, the order listed above, double-spaced, is the most common.

The text of memos typically uses block format, with single-spaced lines, an extra space between paragraphs, and no indentions for new paragraphs. However, if a report using memo format stretches to a few pages in length, double spacing may be used to improve its readability.

Organization

Professional communication forms are organized according to one of two strategies: Direct and indirect.

- The *direct* organization strategy presents the purpose of the document in the first paragraph (sometimes the first sentence) and provides supporting details in the body.
- The*indirect* organization strategy opens with relevant, attention-getting details that do not directly state the purpose of the document. The purpose is revealed in the body of the message, usually sandwiched between supporting details.

The direct approach is used for good news or routine communication; the indirect approach is used for persuasive, sales, or bad news messages.

A directly stated purpose is welcome in good news or routine messages, but could be viewed as abrupt or insensitive in a bad news or persuasive message. When the audience is not receptive to the message, it is best to lead up to the purpose gradually.

In both types of organization, action information (such as deadlines or contact information) or a courteous closing statement is placed in the last paragraph.

Organization Strategy	Definition	Type of Document	Content		
			Introduction	***Body***	***Conclusion***
Direct	Writer arrives at purpose quickly, sometimes in the first sentence.	Used for good news or routine communication (audience is receptive or neutral)	Purpose	Details	Action information or courteous close
Indirect	Writer gradually builds up to the purpose, which is stated in the body.	Used for negative, persuasive, or sales messages (audience is not receptive)	Relevant, attention-getting statements	Purpose statement is sandwiched by details.	Action information or courteous close

Sample Direct Memo

Memorandum

DATE: March 18, 2013

TO: Department Managers

FROM: Safiyya Dev, Store Manager

SUBJECT: Customer Service Excellence Nominations

Please submit your nominations for the quarterly Customer Service Excellence Award by April 8. Help us identify great employees!

Direct and concise opening states the purpose of the memo.

Do you have an employee whom you feel fortunate to have in your department? Does this employee show a positive and professional attitude when helping customers? Do you get frequent comments about this person's friendliness and helpfulness? Now, you have an opportunity to give this employee the recognition he or she deserves!

According to nominating criteria, nominees must . . .

Body paragraphs provide criteria that will enable the department managers to follow through on the request.

- demonstrate excellent customer service consistent with Variety Craft Supplies' policies;
- have worked at Variety Craft Supplies for at least six months;
- work 20 or more hours per week;
- not have received the Customer Service Excellence Award within the last year;
- have a record clear of oral and written warnings for the last six months; and
- have no work absences within the last six months.

The winner of the award will receive a framed certificate and a $100 check.

A nominating form is attached. Please complete and return it to me by Monday, April 8. Thank you for your help in identifying and rewarding excellent customer service representatives.

Conclusion provides action information, deadline, and a courteous close.

Sample Indirect Memo

Memorandum

DATE: February 25, 2013

TO: All employees

FROM: Kirk James, Call Center Supervisor

SUBJECT: Change in Operating Hours

Our call center has been experimenting with a half-day Friday work schedule over the last year, and we've recently conducted an evaluation to determine how well the program is working.

The introduction is relevant to the subject, but doesn't directly state the bad news—that the popular early weekend schedule is ending.

When a client calls to order their diabetic supplies on Friday afternoon, our messaging system directs them to complete their order on our company website. While many customers are willing and able to do this, many do not have Internet access (hence the reason for their call in the first place). Their only other option is to wait until Monday to place the order, and if a customer is already low on supplies, this may be untenable. Customers who are calling with questions or to resolve issues with an order must also wait for Monday.

Listing the reasons for the change mentally prepares the reader for it.

We have received positive comments, especially from our West Coast customers, about the extended hours we are open in the evening. We have determined that to continue to offer top-notch customer service, we must also re-institute Friday afternoon hours. However, that does not mean that we cannot continue to offer employees some scheduling perks. In fact, the addition of later hours Monday through Thursday provides us with more leeway in scheduling employees.

Bad news is clearly stated but sandwiched between two positive statements.

We will have a staff meeting on Monday, March 4, at 8:00 a.m. to discuss new scheduling procedures. To the extent possible, we wish to accommodate employees' preferences in scheduling, so it is important to attend this meeting to have your voice heard.

Memo ends with action information and a forward-looking statement.

Style and Tone

While memo reports and policy memos are examples of documents that have a more formal tone, most memos will have a conversational style—slightly informal but still professional. The audience of memos are those with whom the writer works, so the writing style usually assumes a relationship with them (and therefore a certain lack of formality); just keep in mind that the relationship is a professional one, so the writing should reflect that. Furthermore, as with all workplace documents, the audience may contain a variety of readers, and the style and tone should be appropriate for all of their technical and authority levels.

Too Informal	Too Formal, Stuffy-Sounding, Wordy	Appropriate Balance

Hi, everyone. Hope you had a great weekend. You know those awards we give out every so often? It's time for those again!	Variety Craft Supplies' mission is to provide customers with affordable, quality supplies with superb customer service. Excellent customer service includes being knowledgeable about the supplies, but it also goes beyond that. It's about having the right attitude about helping customers. It's time to reward employees who have a customer-oriented outlook.	Direct and concise opening states the purpose of the memo. Please submit your nominations for the quarterly Customer Service Excellence Award by April 8. Help us identify great employees!

Common Memo Writing Situations

Memos are used in a variety of workplace communication situations, from documentation of procedures and policies to simple announcements. Below are some common types of memos:

- Policies (changes and new)
- Instructions
- Procedures
- Announcements
- Trip reports

Distribution Medium

Memos may be distributed manually through print medium in organizations in which not all employees have access to email. Organizations with access to email may distribute memos as attachments to email.

In organizations in which email reaches every employee (or every employee in the memo's audience), writers must determine whether to send a memo or an email message to convey their information. In cases such as this, writers should consider three factors: the nature of the message, the depth/number of its details, and its likelihood of being printed for easier reference. These types of messages should be written up in memo format and attached to an email message for fast (and environmentally friendly) distribution:

- Messages that have an official aura, such as new policies or revisions of policies.
- Messages containing much detail (such as instructions on how to calibrate a complicated piece of machinery).
- Messages requiring reference away from a computer (necessitating a print copy). Print copies of emails generally use a small type that is difficult to read.

*Some articles are used across multiple genres and disciplines.

MEMOS: PURPOSE AND FORMAT

Memos

A memo (or memorandum, meaning "reminder") is normally used for communicating policies, procedures, or related official business within an organization. It is often written from a one-to-all perspective (like mass communication), broadcasting a message to an audience, rather than a one-on-one, interpersonal communication. It may also be used to update a team on activities for a given project, or to inform a specific group within a company of an event, action, or observance.

Memo Purpose

A memo's purpose is often to inform, but it occasionally includes an element of persuasion or a call to action. All organizations have informal and formal communication networks. Informal communication networks can be as casual as conversations in the lunch or break room or instant messaging between employees. The subject of this informal communication may include business matters, but is usually interspersed with conversations about personal life, sports and other matters unrelated to business (sometimes even theories or reactions about business practices or decisions).

One effective way to address informal, unofficial speculation is to spell out clearly for all employees what is going on with a particular issue. If budget cuts are a concern, then it may be wise to send a memo explaining the changes that are imminent. If a company wants employees to take action, they may also issue a memorandum. For example, on February 13, 2009, upper management at the Panasonic Corporation issued a declaration that all employees should buy at least $1,600 worth of Panasonic products. The company president noted that if everyone supported the company with purchases, it would benefit all (((Note: Lewis, 2009).))

While memos do not normally include a call to action that requires personal spending, they often represent the business or organization's interests. They may also include statements that align business and employee interest, and underscore common ground and benefit.

Memo Format

A memo has a header that clearly indicates who sent it and who the intended recipients are. Pay particular attention to the title of the individual(s) in this section. Date and subject lines are also present, followed by a message that contains a declaration, a discussion, and a summary.

In a standard writing format, we might expect to see an introduction, a body, and a conclusion. All these are present in a memo, and each part has a clear purpose. The declaration in the opening uses a declarative sentence to announce the main topic. The discussion elaborates or lists major points associated with the topic, and the conclusion serves as a summary.

Let's examine a sample memo.

Figure 9.3

To: All Employees
From: Maya James, President, Provincial University
Date: September 21, 2012
Subject: Future Expenditure Guidelines

After careful deliberation, I have determined it is necessary to begin the initial steps of a financial stewardship program that carries Provincial University through what appears to be a two-year cycle of a severe provincial shortfall in revenue and subsequent necessary legislative budget reductions.

Beginning September 24, 2012, the following actions are being implemented for the General Fund, Auxiliary Fund, and Capital Fund in order to address the projected reductions in our provincial aid for the remainder of this year 2012–2013 and for the next year 2013-2014.

1. Only purchases needed to operate the university should be made so that we can begin saving to reduce the impact of the 2013–2014 budget reductions.

2. Requests for out-of-province travel will require approval from the Executive Committee to ensure that only necessary institutional travel occurs.

3. Purchases, including in-province travel and budget transfers, will require the appropriate vice president's approval.

Please understand that we are taking these prudent steps to create savings that will allow ProvU to reduce the impact of projected cuts in expected 2013–2014 legislative reductions. Thank you for your cooperation, and please direct any questions to my office.

Five Tips for Effective Business Memos

Audience Orientation

Always consider the audience and their needs when preparing a memo. An acronym or abbreviation that is known to management may not be known by all the employees of the organization, and if the memo is to be posted and distributed within the organization, the goal is clear and concise communication at all levels with no ambiguity.

Professional, Formal Tone

Memos are often announcements, and the person sending the memo speaks for a part or all of the organization. While it may contain a request for feedback, the announcement itself is linear, from the organization to the employees. The memo may have legal standing as it often reflects policies or procedures, and may reference an existing or new policy in the employee manual, for example. Because memos may find themselves in a legal arena, it's a good idea to keep professional, formal tone and use professional language.

Subject Emphasis

The subject is normally declared in the subject line and should be clear and concise. If the memo is announcing the observance of a holiday, for example, the specific holiday should be named in the subject line—for example, use “Thanksgiving weekend schedule” rather than “holiday observance”.

Direct Format

Some written business communication allows for a choice between direct and indirect formats, but memorandums are almost always direct. The purpose is clearly announced.

Objectivity

Memos are a place for just the facts, and should have an objective tone without personal bias, preference, or interest on display. Avoid subjectivity.

Reference:

Lewis, L. (2009, February 13). *Panasonic orders staff to buy £1,000 in products.* Retrieved from http://business.timesonline.co.uk/tol/business/markets/japan/article5723942.ece

VIDEO: BASIC MEMO

Cut and paste the following link into your web browser to view:

Watch this video online: https://youtu.be/n5Zyn9y_MDs

VIDEO: BUSINESS COMMUNICATION - MEMOS

Please cut and paste the following link into your web browser or within the youtube site to view the video:

Watch this video online: https://youtu.be/PMBMWcpzfFc

VIDEO: HOW TO CREATE A BASIC GANTT CHART IN EXCEL

Watch this video online: https://youtu.be/sA67g6zaKOE

VIDEO: MAKING A GANTT CHART WITH EXCEL

Watch this video online: https://youtu.be/CW_wGSFavTc

LETTERS

LETTERS OVERVIEW

Learning Objectives

Module 5: Letters

- Learn about the different types and purposes of letters
- Learn about the direct and indirect approaches to write letters
- Learn about the formats used in typical business letters
- Learn to write business letters

Regardless of the more popular methods of communication, such as e-mail and other social media exchanges, letters remain the most formal and legal type of written business communication. Five types of business letters are thank you letters, claim letters, adjustment letters, inquiry letters, and transmittal letters. These letters can be written in a direct approach or an indirect approach. Most claim letters, inquiry letters, and transmittal letters are written in a direct approach, where the writer refers to background, stating his/her purpose for writing in the opening sentences of the first paragraph.

The indirect approach is used for letters that have negative messages. These types of letters are letters that deny requests, such as adjustment letters that deny claims or letters that deny employment applications. After referring to background, the writer using the indirect approach adds a disclaimer that is intended to intended to soften a negative decision. The second paragraph states and explains the purpose of the decision. This arrangement is a respectful, professional way to deliver a negative message.

Types of Letters

The following charts show the common formats and purposes of different types of business letters:

Transmittal Letter:	

First paragraph: Purpose (main point).	Refer to background information and the reason for the correspondence.
Second paragraph: Explanation.	Briefly explain the contents of the related documents/actions that will follow the transmittal letter.
Third paragraph: Closing.	1. Tell the time/dates of the related documents/actions can be expected. 2. Give your contact information, with a professional statement to contact you with questions or further concerns. 2. Add a simple: Thank you. (The Thank you could be added as an abbreviated paragraph).

Inquiry Letter:	
First paragraph: Purpose (main point).	Refer to background information and the reason for the correspondence.
Second paragraph: Explanation.	Request the specific information you need.
Third paragraph: Closing.	1. Tell the time/dates you expect the requested information. 2. Give your contact information, with a professional statement to contact you with questions or further concerns. 3. Add a simple: Thank you. (The Thank you could be added as an abbreviated paragraph).

Claim Letter:	
First paragraph: Purpose (main point).	Refer to background information and your claim.
Second paragraph: Explanation.	Explain how you expect the problem to be resolved.
Third paragraph: Closing.	1. Tell the time/dates you expect a response, informing you of a decision. 2. Give your contact information, with a professional statement to contact you if there are further questions or concerns. 3. Add a simple: Thank you. (The Thank you could be added as an abbreviated paragraph).

Adjustment Letter (Positive):	
First paragraph: Purpose (main point).	Refer to background information and tell your decision to honor the claim.
Second paragraph: Explanation.	Explain how you will honor the claim.
Third paragraph: Closing.	1. Tell the time/dates the adjustment can be expected. 2. Give your contact information, with a professional statement to contact you if there are further questions or concerns. 3. Add a simple: Thank you. (The Thank you could be added as an abbreviated paragraph).

Adjustment Letter (Negative):	
First paragraph: Background/Disclaimer	Refer to background information and briefly make a disclaimer to soften the negative decision.
Second paragraph: Purpose/Explanation.	Tell the decision not to honor the claim and explain the decision.
Third paragraph: Closing.	1. Give your contact information, with a professional statement to contact you if there are further questions or concerns. 2. Add a simple statement of apology.

Thank You Letter:	
First paragraph: Purpose (main point).	The first sentence expresses a simple thank you. This is followed by one or two statements that tell how the gift will benefit its recipients.
Second paragraph: Closing.	Confirm your appreciation.

Formats for Letters

Two popular formats for writing letters are the Block Format or the Modified Block Format. In a Block Format, the entire letter is written on the left margin. See this file as an example:

https://s3-us-west-2.amazonaws.com/oerfiles/technical+writing/Example+Letter+Block+Format.docx

In Modified Block Format, the body of the letter is written on the left margin, but the date, closing, and the signature line are just a little to the left of the center. See this file as an example:

https://s3-us-west-2.amazonaws.com/oerfiles/technical+writing/Example+Letter+Modified+Block+Format.docx

Note that neither letter is right margin justified. The right edges of both letters show a ragged edge.

EXAMPLES OF BUSINESS LETTERS

Thank You Letter

Safelife Shelter

123 XXX Street · Lincoln, NB 55555

Telephone 555-555-5555

May 10, 2013

Salvador Fuller

2330 XXXX Ave.

Norfolk, VA 55555

Mr. Fuller:

Thank for your donation to Safelife Shelter. Safelife Shelter provides a safe place for women to stay while they make arrangements to relocate. Your generous donation will benefit many of our guests.

Again, we appreciate your thoughtful gift.

Sincerely,

Lisa Fox, Director

Transmittal Letter

Magnum Consulting Firm Inc.

2112 Caxton Ave.

Virginia Beach, VA. 55555-555

April 29, 2013

Jeff Newell

Teldon Facilities Corp.

207 Wigmar Drive

Norfolk, VA 23451

Dear Mr. Newell:

Enclosed is the feasibility report, completed April 24, 2013, regarding the theft and drug use concerns at your company. This report includes the research, alternative solutions and recommendations following the problem analysis dated April 2, 2013.

The facility inspection and interviews conducted on all personnel presently employed at your company were beneficial to our research. The hiring of an off-site security team at the behalf of our firm's request was significant in determining the extent of the problem. Through research conducted by the security team and me, it was discovered that the stealing of company property was a major concern. The drug screen test conducted by the security team identified the personnel possibly involved in the theft. Internal research and external research showed that an extensive background check on prospective employees and an installed security system will greatly reduce possible theft within the company. In addition, a random drug screen at each quarter can be a deterrent for further drug use by employees.

If you have any questions or concerns, please contact me at 555-555-5555.

Sincerely,

Salvador Fuller

Senior Consultant

Enclosure: Feasibility Report

Inquiry Letter

THE FOX PAPER AND PRINTING COMPANY

5555 EAST BOUND LANDING

LANDING MA 55555-5555

(555) 555-5555

May 13, 2013

Mr. Salvador Fuller

Shady Pine Construction Company

555 Shady Pine Lane

Richfield, Virginia 55555-5555

Dear Mr. Fuller:

Thank you for your recent order, dated May 9, 2013, for 100 boxes of business cards. Although you attached company information to be printed on the cards, we need additional information on each employee in order fill your order.

Please send us the following information on each employee:

- full name,
- position with the company,
- business telephone number,
- fax number,
- e-mail address.

We would appreciate your sending this information by May 21, 2013. We will print your business cards as soon as we receive this information. If you have any question or concerns, please contact me.

Thank you.

Sincerely,

Elisa D. Fox

Director of Purchasing

Edf/bml

Claim Letter

1234 XXXX Road

Chesapeake VA 55555

May 15, 2013

Mr. Charles Darwin

Bass Pro Shops

4321 XXXX Road

Chesapeake VA 55555

DEFECTIVE GRILL

Dear Mr. Darwin:

I purchased a grill from Bass Pro Shops on May 2, 2013. Your employee XXXX XXXX assisted me and told me it was the best one on the market. I bought the grill on his word and tried it out on our family camping trip on May 5, 2013. From the beginning I knew something was wrong. The installed starter would not light the grill. I had to light a match and drop it in to light the grill. While grilling the hamburger, I realized the grill was not producing enough heat to cook the meat thoroughly. It seemed that the grill was only producing enough gas in to keep a flame but not enough to produce the heat needed to cook the meat.

When I bought the grill, I was told that it had a one year warranty on it. I would just like to exchange the grill for one that works properly. If it is not a problem I would like to pick up my new grill next weekend.

I have enclosed copies of my receipts. Please contact me and let me know when I can return the defected grill and pick up a new one. My phone number is 757-555-5555.

Thank you.

Sincerely,

XXX XXXX

Enclosed: Copies of receipts

Adjustment Letter – Positive

Computers "R" Us

123 XXX Street · Lincoln, NB 55555

Telephone 555-555-5555

April 3, 2013

Lisa Fox

2330 XXXX Ave.

Norfolk, VA 55555

IMPROPERLY ASSEMBLED COMPUTER

Dear Ms. Fox:

Our records indicate that you spoke with one of our Technical Representatives on March 26, 2013 concerning an improperly assembled AA computer which caused the computer, you purchased from us on March 20, 2013, not to operate. We have received the pictures that you e-mailed us. From these pictures and the troubleshooting done by our technical representative, it was determined that some parts will need to be replaced.

We have ordered new parts to correct the problem. As soon as we receive the replacement parts, one of our service technicians will contact you to make arrangements to come to your residence and make the necessary repairs.

We apologize for any inconvenience that this has caused you. You are a valued customer, Miss Fox, and we appreciate your business. Enclosed is a voucher for a 10 percent discount on your next purchase of computer supplies.

Please contact us with any further concerns.

Sincerely,

Salvador Fuller, Manager

Enclosed: Discount voucher

Adjustment Letter – Negative

Computers "R" Us

123 XXX Street · Lincoln, NB 55555

Telephone 555-555-5555

April 3, 2013

Lisa Fox

2330 XXXX Ave.

Norfolk, VA 55555

IMPROPERLY ASSEMBLED COMPUTER

Dear Ms. Fox:

Our records indicate that you spoke with one of our Technical Representatives on March 26, 2013 concerning an improperly assembled AA computer which caused the computer, you purchased from us on March 20, 2013, not to operate properly. We appreciate your business and we apologize for the problem you are having with the computer.

Although the pictures that you e-mailed us and the troubleshooting done by our technical representative show that some parts will need to be replaced, we regret that we cannot replace the parts free of charge. It appears that you purchased the AA computer on sale, without a warranty.

Again, we apologize for any inconvenience that this has caused you. Please contact us with any further concerns.

Sincerely,

Salvador Fuller, Manager

PROFESSIONAL LETTERS

Beyond the cover letter, you will undoubtedly be faced with the need to write other professional correspondence, be it by e-mail or envelope. These letters are just as important in that they can also become part of a file devoted to all of your correspondence with a company or individual. Professional letters you write are likely to be kept in a file along with your resume as part of your permanent record. Letters are also your opportunity to show professional courtesy, impress companies with your knowledge of and interest in them, and allow readers to know you as a person. Good letters humanize you. And employers tend to choose people they feel they know—not strangers.

In addition to the cover letter, the other types of professional correspondence you are most likely to write include:

- A Query Letter, making a specific request for information.
- A Thank You Letter, expressing thanks for an interview or invited visit.
- An Acknowledgment Letter, acknowledging the receipt of a job offer or some materials.
- A Letter of Decline or Letter of Acceptance, declining or accepting a job offer.

While writing a letter for any of these circumstances, follow the same basic guidelines for tone, appearance, mechanics, and format as you do for cover letters. However, keep these letters brief—just a few short paragraphs—so they can be read in one-minute's time. Using a gracious, professional tone, fill your letter with specifics particular to the circumstances, for example:

- The date of your previous correspondence or interview.
- The names of any other individuals relevant to the correspondence.
- Details about what action, if any, you want your audience to take.
- Clarifications of any points worth repeating or open to potential misunderstanding.

- Carefully worded, warm, personal remarks, especially if you have had repeated contact with the same person, and especially if you are asking for a favor.

Follow these guidelines carefully and you can be assured that your letter will inspire your reader to take appropriate action, whether that is simply to place your letter into a file respectfully or perform a more involved task that you requested professionally.

MORE ABOUT LETTERS

Letters

Letters are brief messages sent to recipients that are often outside the organization. They are often printed on letterhead paper, and represent the business or organization in one or two pages. Shorter messages may include e-mails or memos, either hard copy or electronic, while reports tend to be three or more pages in length.

While e-mail and text messages may be used more frequently today, the effective business letter remains a common form of written communication. It can serve to introduce you to a potential employer, announce a product or service, or even serve to communicate feelings and emotions. We'll examine the basic outline of a letter and then focus on specific products or writing assignments.

All writing assignments have expectations in terms of language and format. The audience or reader may have their own idea of what constitutes a specific type of letter, and your organization may have its own format and requirements. This chapter outlines common elements across letters, and attention should be directed to the expectations associated with your particular writing assignment. There are many types of letters, and many adaptations in terms of form and content, but in this chapter, we discuss the fifteen elements of a traditional block-style letter.

Letters may serve to introduce your skills and qualifications to prospective employers, deliver important or specific information, or serve as documentation of an event or decision. Regardless of the type of letter you need to write, it can contain up to fifteen elements in five areas. While you may not use all the elements in every case or context, they are listed in Table 9.1 "Elements of a Business Letter".

Table 9.1 Elements of a Business Letter

Content	Guidelines
1. Return Address	This is your address where someone could send a reply. If your letter includes a letterhead with this information, either in the header (across the top of the page) or the footer (along the bottom of the page), you do not need to include it before the date.
2. Date	The date should be placed at the top, right or left justified, five lines from the top of the page or letterhead logo.
3. Reference (Re:)	Like a subject line in an e-mail, this is where you indicate what the letter is in reference to, the subject or purpose of the document.

Content	Guidelines
4. Delivery (Optional)	Sometimes you want to indicate on the letter itself how it was delivered. This can make it clear to a third party that the letter was delivered via a specific method, such as certified mail (a legal requirement for some types of documents).
5. Recipient Note (Optional)	This is where you can indicate if the letter is personal or confidential.
6. Salutation	A common salutation may be “Dear Mr. (full name).” But if you are unsure about titles (i.e., Mrs., Ms., Dr.), you may simply write the recipient’s name (e.g., “Dear Cameron Rai”) followed by a colon. A comma after the salutation is correct for personal letters, but a colon should be used in business. The salutation “To whom it may concern” is appropriate for letters of recommendation or other letters that are intended to be read by any and all individuals. If this is not the case with your letter, but you are unsure of how to address your recipient, make every effort to find out to whom the letter should be specifically addressed. For many, there is no sweeter sound than that of their name, and to spell it incorrectly runs the risk of alienating the reader before your letter has even been read. Avoid the use of impersonal salutations like “Dear Prospective Customer,” as the lack of personalization can alienate a future client.
7. Introduction	This is your opening paragraph, and may include an attention statement, a reference to the purpose of the document, or an introduction of the person or topic depending on the type of letter. An emphatic opening involves using the most significant or important element of the letter in the introduction. Readers tend to pay attention to openings, and it makes sense to outline the expectations for the reader up front. Just as you would preview your topic in a speech, the clear opening in your introductions establishes context and facilitates comprehension.
8. Body	If you have a list of points, a series of facts, or a number of questions, they belong in the body of your letter. You may choose organizational devices to draw attention, such as a bullet list, or simply number them. Readers may skip over information in the body of your letter, so make sure you emphasize the key points clearly. This is your core content, where you can outline and support several key points. Brevity is important, but so is clear support for main point(s). Specific, meaningful information needs to be clear, concise, and accurate.
9. Conclusion	An emphatic closing mirrors your introduction with the added element of tying the main points together, clearly demonstrating their relationship. The conclusion can serve to remind the reader, but should not introduce new information. A clear summary sentence will strengthen your writing and enhance your effectiveness. If your letter requests or implies action, the conclusion needs to make clear what you expect to happen. It is usually courteous to conclude by thanking the recipient for his or her attention, and to invite them to contact you if you can be of help or if they have questions. This paragraph reiterates the main points and their relationship to each other, reinforcing the main point or purpose.
10. Close	“Sincerely” or “Cordially” are standard business closing statements. (“Love,” “Yours Truly,” and “BFF” are closing statements suitable for personal correspondence, but not for business.) Closing statements are normally placed one or two lines under the conclusion and include a hanging comma, as in Sincerely,
11. Signature	Five lines after the close, you should type your name (required) and, on the line below it, your title (optional).
12. Preparation Line	If the letter was prepared, or word-processed, by someone other than the signatory (you), then inclusion of initials is common, as in MJD or abc.

Content	Guidelines
13. Enclosures/ Attachments	Just like an e-mail with an attachment, the letter sometimes has additional documents that are delivered with it. This line indicates what the reader can look for in terms of documents included with the letter, such as brochures, reports, or related business documents.
14. Courtesy Copies or "CC"	The abbreviation "CC" once stood for carbon copies but now refers to courtesy copies. Just like a "CC" option in an e-mail, it indicates the relevant parties that will also receive a copy of the document.
15. Logo/ Contact Information	A formal business letter normally includes a logo or contact information for the organization in the header (top of page) or footer (bottom of page).

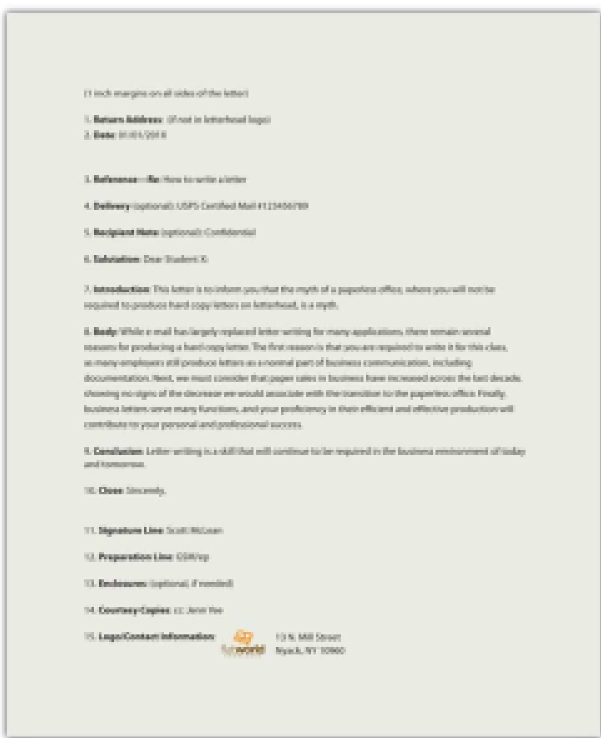
Strategies for Effective Letters

Remember that a letter has five main areas:

1. The heading, which establishes the sender, often including address and date
2. The introduction, which establishes the purpose
3. The body, which articulates the message
4. The conclusion, which restates the main point and may include a call to action
5. The signature line, which sometimes includes the contact information

A sample letter is shown in Figure 9.5 "Sample Business Letter".

Figure 9.5 Sample Business Letter



(1 inch margins on all sides of the letter)

1. **Return Address:** (if not in letterhead logo)
2. **Date:** 01/01/2018

3. **Reference – Re:** How to write a letter

4. **Delivery** (optional): USPS Certified Mail #123456789

5. **Recipient Note** (optional): Confidential

6. **Salutation:** Dear Student X:

7. **Introduction:** This letter is to inform you that the myth of a paperless office, where you will not be required to produce hard copy letters on letterhead, is a myth.

8. **Body:** While e-mail has largely replaced letter writing for many applications, there remain several reasons for producing a hard copy letter. The first reason is that you are required to write it for this class, as many employers still produce letters as a normal part of business communication, including documentation. Next, we must consider that paper sales in business have increased across the last decade, showing no signs of the decrease we would associate with the transition to the paperless office. Finally, business letters serve many functions, and your proficiency in their efficient and effective production will contribute to your personal and professional success.

9. **Conclusion:** Letter writing is a skill that will continue to be required in the business environment of today and tomorrow.

10. **Close:** Sincerely,

11. **Signature Line:** Scott McLean

12. **Preparation Line:** SSM/sp

13. **Enclosures:** (optional, if needed)

14. **Courtesy Copies:** cc: Jenn Yee

15. **Logo/Contact Information:** 13 N. Mill Street Nyack, NY 10960

Always remember that letters represent you and your company in your absence. In order to communicate effectively and project a positive image,

- be clear, concise, specific, and respectful;
- each word should contribute to your purpose;
- each paragraph should focus on one idea;
- the parts of the letter should form a complete message;
- the letter should be free of errors.

BUSINESS LETTERS & OTHER LETTERS

Business letters are written messages to a person or group within a professional setting. Business letters are used when the writer would like to be formal and professional. Letters may vary in length depending on the writer's objective, purpose, and message of the letter. The letter can address anyone including, but not limited to: clients and customers, managers, agencies, suppliers, and other business personnel or organizations. It is important to remember that any business letter is a legal document between the interested parties. These documents can be held for up to seven years, so it is important that all information is honest and legitimate.

The Difference Between a Business letter and other letters

The main thing that differentiates a business letter from other letters is that a business letter is a legal document. The writer can be held liable for anything written in the letter. For example, if it is stated that a project will be completed by a certain date in a business letter, the project legally must be completed by that date. However, if the project can't be completed by that date, another letter can be written stating that the project is behind schedule and why. For this reason, business letters must be written differently than letters used for personal use.

A business letter is used primarily to request or provide information, to relate a deal, to bring or continue conversation, and/or to discuss prior negotiations. A business letter can be classified as private, however, it is typically not circulated to others, but rather meant for the eyes of the participants involved. Therefore, a business letter needs to be clear, focused, and to the point. When writing a business letter, the author should avoid interjecting personal stories.

A business letter needs to be concise and clear. Being too wordy is the biggest downfall in this form of writing. Keep sentences short and precise. Avoid over using adjectives and adverbs that distract from the focus of the message. Organize the letter from most important subjects to least. The content of the letter should be persuasive and usable. The tone of the letter should be formal and professional.

Also, in a business letter, it is preferable to use personal singular pronouns like "I" and "you". Avoid using plural pronouns like "we" since it can mislead the audience to assume that the company supports the message of the letter. In addition, personal pronouns are easier to understand, because it directly refers to the parties involved.

Formatting Your Business Letter

- Use single spacing. NEVER use double spaces within the business letter.
- Use a simple format with font that is easy to read.
- For block, and modified block formats use single spaces.
- Leave a blank line between each paragraph. This makes it easier to follow the changes of topics within the letter.

The Introduction

- This paragraph should introduce why you are writing the letter and sum up the key points in the following paragraphs.
- Include a statement that shows you are knowledgeable of the audience to which your letter is directed.

The Body

- Provide background or history regarding the purpose of the letter.
- Talk about key points you are making.
- Include a justification of the importance of the main points.
- List any important dates, discussions, and conversations that are relevant.
- Ask questions, if necessary.

Conclusion

- Summarize the main points of the letter.
- Restate the problem and resolution if pertinent.
- Include deadlines.
- Provide contact information (Email, Phone Number, Fax, Etc…).

Closing Salutation

It is important to take into account your audience when ending any business document. Being both respectful and professional are two important elements of your ending salutation. You must remember that each employer, boss, or co-worker may have different expectations as to what is acceptable as a proper salutation. A few general ending salutations deemed professional include:

- Sincerely,
- Respectfully yours,
- Yours truly,
- Best,

These should be used with individuals whom you do not have a relationship with, new co-workers, potential clients, or a large email to a wide variety of individuals. When you are sending a business document to an individual to whom you are accustomed, your salutation should change. Consider a professional salutation, which is not too formal. Examples include:

- Kind regards,
- Best regards,
- Many thanks,
- With appreciation,
- Best wishes,

When in doubt about which type of salutation should be used, a simple “Thanks” or Thank you” is always appropriate.

“Signature Block”

Always close a letter. ‘Sincerely’ would be the safest way to close out a business letter. On a typed business letter, following the closing, you should leave a space to sign your name with a pen. This will allow for a more personal touch on an otherwise bland letter. This is the only handwriting on the paper so make sure the signature is clear. Below this personal signature should be your typed first and last name to allow for easy reading. After this you can include anything else that the reader may need to know. This could include anything from job title, identification, a notation that there are copies attached at the bottom of the document, or other contact information, such as e-mail address or business phone number.

Tips on Writing Business Letters

- Address the reader formally (Mr., Miss, or Mrs.) unless otherwise directed.

- Address the letter to a specific person whenever possible, and not the company so it does not get discarded.
- Use a colon after the salutation if using the reader's last name and a comma if using their first name.
- Use company letterhead to make the document more professional, if the document is related to company affairs.
- Use a subject line to inform the reader quickly of the documents content.
- Sign your name in ink neatly at the bottom, between the closing and the Electronic Signature of the document.
- If a letter does not fill an entire page, put be sure the content of the letter is in the middle of is the page and the document is balanced.
- Be sure to list the people on the letter that you are sending copies to so a certain individual is not left out.
- It is okay to use specific pronouns, such as "I" and "You", but be careful when using "We". This is simply because it can commit your company to what you have written.

VIDEO: THE KEY FORMS OF BUSINESS WRITING - BASIC LETTER

Please cut/paste the following link into the youtube search bar to view the video:

Watch this video online: https://youtu.be/I2txr6OY5dY

VIDEO: 12 BUSINESS WRITING TIPS FOR EFFECTIVE BUSINESS EMAILS AND LETTERS

Please cut and paste the following link in the youtube search bar:

Watch this video online: https://youtu.be/GkQn76-8MvM

DESCRIPTIVE AND PRESCRIPTIVE REPORTS

DO NOT USE THIS ONE FOR GE'S BOOKREPORTS OVERVIEW

In this learning unit, students will learn about writing 4 major kinds of reports:

- Instructional Descriptive Reports
- Instructional Prescriptive Reports
- Classification Reports
- Partition Reports

The Instructional Descriptive Report is a 2nd Person Instructional Report, meaning that it is written using the 2nd person voice (the understood "you") and tells its reader how to do something.

The Instructional Prescriptive Report, on the other hand, is a 3rd person Process Report. It is written using the 3rd person voice (employing the pronouns he/ she/ it/ they) and tells how something is done.

A Classification Report classifies similar items into categories according to related components.

A Partition Report divides a single item into categories.

The findings of reports are often presented through live interactions in a workplace, and so this unit includes preparation for an informative/ instructional presentation as well.

REPORTS OVERVIEW

Learning Objectives

Module 7: Reports

- Learn about different types of business reports
- Learn about the format for each type of report
- Learn to write the different types of business reports

Business reports are used as a way of communicating to other businesses and investors the successes and future plans of the company. Therefore, business reports are essential to every company. Typically, a business report will start with a formal introduction that states a problem the business aims to solve. Then, the body of the report gives facts and hypothesis used to solve these problem/s. The conclusion will tie up all loose ends and give goals to be reached in future business ventures.

Writing A Business Report

When writing a business report, it is important to remember the following tips:

- Know the audience that will be reading the report.
- Use a professional and objective business style.
- Include factual information that proves your statements.
- Organize this factual data in easy-to-read charts and graphs.
- Keep all sections well-organized and in an easy-to-navigate fashion.

Audience

The audience of the report should be identified early in the writing process. An audience's background, knowledge, and need for the information need to be characterized for the report to be usable. Further questions as to why the audience needs this information should also be identified. What circumstances brought about the need for this information? In answering these questions early in the writing process, the author will be able to anticipate questions the reader might have.

Purpose

Remember when compiling a business report that it needs to hold the interest of the reader. To accomplish this goal, one must be attentive to the overall design. There should be enough factual information to make the report credible, but not so much dry, technical language as to lose the reader on the first page. By interspersing charts, graphs, and pictures, the author will increase the likelihood that the report will hold the reader's interest and focus.

It is always a beneficial to begin the report with an eye-catching picture or question. This can persuade the reader to read further to find the answer or to see how the picture fits into the overall report. After this, it is important to include factual data. If possible, ask questions of the reader throughout. This allows the reader to become more involved in the overall process, which keeps their attention. A business report should be written assuming the reader has little knowledge of the company because these reports are read by those in and out of the organization. Business reports should have a cohesive message so readers to not draw incorrect conclusions.

Graphics

It is important to include graphics in a report. Graphics are visual descriptions of information that can be easily understood by the reader. In many work settings the audience is a business professional with limited time. Various graphics can help to convey the pertinent information quickly. It is important to take the reader centered approach when creating graphics. Consider your audience and what information you want to convey. Examples of graphics are:

- *pie charts*: Pie charts are useful for showing different portions or divisions of a whole. For example, showing what percentages of expenses come from which department in a company.
- *bar graphs*: Bar graphs can be used to show the amounts or frequency of occurrence of different characteristics of data.
- *trend graphs*: Trend graphs show how data is distributed over time. Trend graphs are also known as X/Y scatter plots.
- *pictures*: Pictures and illustrations are useful in manuals or instructions to show the subject you are writing about. They can also make a document more interesting and intriguing.

Graphics are powerful tools in report writing but they are not always appropriate. If there is not a place for a graph or other graphic in the report do not try to force one in. Not only will an unnecessary graph clutter a report, it will weaken your credibility. Take care to make sure that the graphic you choose delivers the message and information you want.

Factual Detail

A good report includes factual details that support the purpose of the report. Keep the reader in mind when selecting these details because too many technical details may be difficult to understand. The details should support the purpose of the report and be necessary for the reader to be persuaded.

Research Methods

While composing a business report or any report requiring factual information it is important to conduct research. By using credible information you will establish credibility, meet your reader's needs, and persuade your audience. The following are five methods of conducting research.

Using your memory and creativity to explore ideas

• Brainstorming, free writing, or creating flow charts, matrices, or cluster sketches

Internet

• Using search engines or internet directories. Be careful during this to ensure proper citation and the sights you are getting information from are credible sources and not just a bloggers opinion.

Libraries

• Using indexes, references, government documents, or computerized full-text sources

Interviewing

• Conducting a face-to-face interview or telephone interview. Make sure you know something about the person or have a reference. People are generally more willing to set up interviews when they are not "cold calls"

Surveys

• Conducting a survey to retrieve information from a large group of people. When dealing with the results, remember who it is that you surveyed to see if there could be skewed results.

Documentation

Information borrowed from another source needs to be cited. Variations of citation methods can be used for the report. The most important part is making sure to include citations. Not only will you lose credibility among colleges for plagiarism, you can be sued and fined by the original author.

In this module we will be talking about the following types of reports:

- Instruction and Process
- Classification
- Partition
- Compare/Contrast
- Feasibility

Each section in the module will describe each type of report and how to develop one.

DO NOT USE THIS ONE FOR GE'S BOOKEXPLANATORY REPORTS

Explanatory Reports

There are two types of explanatory reports: a Procedure Explanation (which is secondPerson Instructional Report), and a Process Explanation. These reports do not give opinions, only the explanation on how to do something or how something is done.

A Procedure Explanation directly tells how to perform the steps, using the second-person *you*, whereas the Process Explanation explains how the steps are/were performed, using either the first-person *I* / *we*, or third-person *he*/*she*/*it*/*they*.

Procedure Explanation/ Second Person Instructional Report

As an example, if I were stranded on the interstate with a flat tire and needed to know how to change it, I might call you and you would give me step-by-step instructions that I would need to follow. This would be a Procedure Instructional Explanation, using the s*econd person (understood you):*

1. *Open the trunk.*
2. *Remove the jack.*
3. *Etc.*

Process Explanation

Process Explanations can be classified into three categories: Processes in which people are the agents of the action; Processes in which machines are the agents of the action, and Processes in which nature is the agent of the action. These reports are referred to as Third Person Instructional Reports.

Examples

Processes by People

If I knew you had been stranded on the interstate, I might ask how you fixed your flat tire. You would tell me step-by-step how you did this (using the first person *I*), but never expect me to do it.

1. *I opened the trunk.*
2. *I removed the jack.*
3. *Etc.*

I might ask you how cars are assembled. You would tell me step-by-step how this is done (using the third person, *they*), but never expect me to do it.

Processes by Machines

You may need to explain how a fax machine works. You would explain step-by-step how this machine works (using the third person, *it*).

Processes by Nature

You may explain beach erosion, explaining the step-by-step process (using the third person, *it*).
Note that headings, subheadings, and visuals are important in instructional reports. Procedure reports (2nd person Instructional reports), will have major steps, followed by a sub steps and markers. Process reports will have headings, subheading, and markers. Both reports will have visuals.

See the following example:

OER Example 2nd Person Instructional Report: https://s3-us-west-2.amazonaws.com/oerfiles/technical+writing/Example+2nd+PERSON+Meter+Review+and+Update+Procedures+with+Notes+2.doc

(Note major headings that categorize the steps into 5 major categories, with each major category followed by its steps and sub steps.

INSTRUCTIONS AND PROCESS REPORTS

"Instructions & Process Reports" was written by Joseph Moxley

"How is this done? How can I do this?"– These questions guide authors as they describe processes. Learn how to write instructions and processes so that readers know how to do something or understand how something is done. By viewing sample process texts, note the focus on the objective voice, numbered steps, visual rhetoric, and clever animations or video. Write a descriptive or prescriptive process report.

There are three types of process texts:

1. Descriptive processes answer "How is this done?" These texts describe how a process occurs so that readers can understand it better.
2. Prescriptive processes are instructions; they explain "How can I do this?" In other words, they prescribe how something should be done so that readers can do it.
3. Blended descriptive and prescriptive processes make the main thrust of the document a descriptive process while having a few call-out boxes summarizing how the readers can perform the process. In other words, writers may address both "How can I do this?" and "How is this done?" in different parts of one text. Alternatively, they might develop different versions of the same document for two audiences–an audience of users and an audience of interested parties.

Watch this video online: https://youtu.be/MB_rcmmpC6s

Why Write About Processes?

Process texts are extremely common in school and professions. In school, teachers frequently assign process assignments. For example, humanities professors may ask for a description of how an artistic or literary period evolved; history professors, the contributions of a culture's leaders over time; social science professors, the chronology of inventions; engineering professors, explanations of how sound is changed into electrical signals; business professors, how the Federal Reserve works or how to sell a product.

On a daily basis, we read descriptive processes. Intelligent people are inquisitive; they want to understand how things work. Last year, for example, over three million readers a month accessed How Stuff Works, a Web site containing thousands of process essays. We routinely read processes, including recipes, user manuals for new software, or advice columns on how to lose weight or how to succeed in school or a profession. People are always wondering about things, wondering how computers work, how grass grows, how heart disease occurs, how far the human eye can see, and so on.
Instructions: Use the sections below, as directed by your instructor, to learn about writing processes. Read sample process reports and write your own process-driven project.

Writers of process texts are practicing what specialists call "expository writing" or "explanatory writing." These texts focus on answering one of the following questions: "How is this done? How can I do this?"

Diverse Rhetorical Situations

Most prescriptive and descriptive processes are written to explain how something works. Most processes are written in chronological order and most rely extensively on visuals. To promote clarity, writers often number particular steps in a process. When the topic is learning a software program, writers use screenshots and call-outs and screen movies to walk a user through the tutorial.

Nonetheless, other purposes and organizational schemes are available. Writers may speculate about whether a process exists; they may argue a process exists with the intention of selling the reader something.

While the topics of process reports may be diverse, the rhetorical stance of most process reports tends to be more uniform than the rhetorical stance of other projects, as illustrated below.

Process Texts Purposes Audiences Voices Media

Descriptive Process Analysis

- Explain, speculate, or argue about "How is this done?"
- Students
- Researchers
- Curious people

- Objective
- Imperative
- Authoritative

- Essays
- Newspapers
- Magazines
- Web sites
- Video

Prescriptive Process Analysis

- Explain "How can I do this?"
- Technicians
- Users
- Decision makers

- Objective
- Imperative
- Authoritative

- Essays
- User manuals
- Policy manuals
- Tutorials
- Web sites
- Videos

Rhetorical Analysis of Online Readings

Analyze the Web sites annotated below. Consider the context, audience, purpose, and media invoked by the following readings. Also examine how ideas are developed in these texts. Are assertions grounded in personal experience, interviews with authorities, questionnaires, Internet and library research, or empirical research?

1. Instruction Processes: Recipes and Physical Processes

- How Pencils Are Made:Using an objective voice and extensive graphics, this piece is written to explain how pencils are made–not for future pencil makers but for interested readers.
- Yoga Postures Step-by-Step: Santosha.com provides a searchable database of yoga postures. The description of each posture is supplemented by animations that show a figure doing the postures correctly. Presumably, readers will do more than read about the postures: they will try them!

2. Instruction Processes: Software Tutorials
Do you have a question about how to use a software tool, such as Microsoft Word, FrontPage, DreamWeaver, or HTML? As you can imagine, given the growth of the Internet and information technologies, tutorials and user manuals are exceedingly commonplace on the Internet. Below are links to several worthwhile sites.

- ToolsforWriters: Authored by writing students at the University of South Florida, this e-zine includes many tutorials on using software tools, including Microsoft Word, FrontPage, and Excel. Most of these tutorials have screen shots and call-outs, highlighting important steps.
- Catalyst: How To Documents. Authored by Center for Teaching, Learning and Technology at the University of Washington, "Catalyst is an integrated collection of resources, training, tools, templates, and support to help educators make effective use of technology in teaching."

3. Instruction Processes: Personal Development
Do you ever have difficulties finding balance in your life–eating well, exercising regularly, balancing school with work? The Internet provides many "development" Web sites that are designed to help you change your life:

- Zen: The Seat of Enlightenment. The Zen Mountain Monastery provides a description of Zen meditation, including photographs and animated examples of breathing postures. From this site, readers can learn about The Zen Mountain Monastery, perhaps becoming sufficiently interested to enroll in some of the institute's seminars.
- Ten Steps to Attract a Life Partner. Using a list form to organize her text, Katherin Scott, a personal development coach, outlines strategies for finding a life partner. From this site, readers can purchase coaching documents or inquire about workshops, so you could argue this text is written–in part–to sell the author's expertise.
- Don't Ask Me Where I'm Going. I'm Busy Driving. Steve Kaye writes this six-step guide to asserting control over your life for readers of Fluid Power Journal, a journal for engineers.

4. Instruction Processes: Academic Processes
Choosing majors, getting good grades, securing internships, researching topics–these topics are commonly addressed on university Web sites. You can go to your college's home page and search for career resources, search the Internet, or consider the following examples to help you choose a career or do well in school:

- Undergraduate Advising at the University of Washington presents "How to Choose a Major and Investigate a Career." Written for students, this site provides links to University of Washington resources as well as national resources.

- As a service to its students, Cornell University publishes " The Seven Steps of the Research Process,"employing a hypertextual format.
- Using a hypertextual format, Duke University provides a guide similar to Cornell's guide to the research process, also outlining seven steps: Guide to Library Research. In addition, the Duke guide provides a drop-down menu that addresses specific questions students pose when facing research assignments.
- Using internal hyperlinks, Athabasca University, a Canadian distance education university, providesThe AU Library Guide to the Research Process.

5. **Theoretical Processes: Psychological or Educational Development**
Educators and psychologists have propounded many models of cognitive, moral, social, and intellectual development. Below are some links to some major theorists whose models of development have captured the imagination of others.

- Lawrence Kholberg's model of ethical development is well presented on the Internet.
- The University of Illinois at Chicago presents a brief introduction to Kholberg and other developmental psychologists:Moral Development and Moral Education: An Overview.
- Kohlberg's Moral Dilemmas (at Haverford College)
- William Perry's Scheme of Intellectual and Ethical Development.
- Meet Your Students by Richard M. Felder.

*Some articles are used across multiple genres and disciplines.

EXAMPLES OF INSTRUCTIONAL AND PROCESS REPORTS

Prescriptive Process 3rd Person Instructional: How Pencils are Made

http://www.pencilpages.com/articles/make.htm

Blended Prescriptive 2nd Person Instructional with Prescriptive Explanation: The Salutation Pose

http://www.santosha.com/anjaneya.html

Blended Descriptive 2nd Person Instructional with Prescriptive Explanation: How to Find Resources

http://guides.library.cornell.edu/sevensteps

VIDEO: CASIO SE-S10 INSTRUCTIONAL VIDEO

Watch this video online: https://youtu.be/hSpKgT1yjdE

VIDEO: HOW TO FILE A LATE CONTRIBUTION REPORT

http://youtu.be/s8AlJh33iH0

CLASSIFICATION AND PARTITION REPORTS

CLASSIFICATION REPORTS AND PARTITION REPORTS

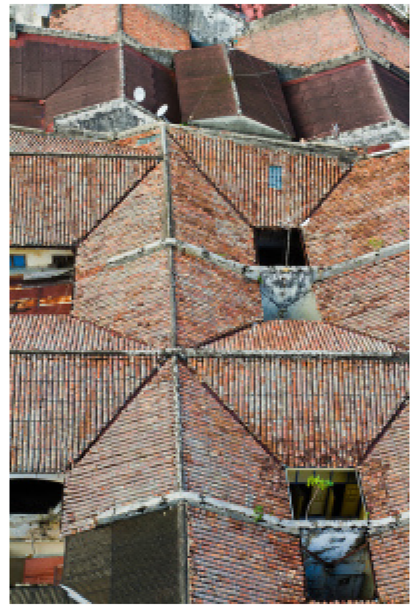
Of the seven common patterns of organization (Formal classification, informal classification, comparison, partitioning, segmenting, cause/effect, and problem/solution) we will cover two: Formal Classification and Partitioning.

Classification and Partition Reports are used to organize information into categories for easy analysis. While a classification report or a partition report is usually a part of a report that organizes data into sections for analysis, a classification analysis or a partition analysis can be a separate report, depending on the request.

The information presented in each section of the report must be parallel to other sections and exclusive to each specific section of analysis. Information in any section is not to be compared with information in another section; the information in any section must be able to stand alone. This is important to avoid complicated access to information.

First, a parallel structure provides a pattern for a reader to follow. Second, information that is exclusive to each section provides a reader access to the information from any section without having to take time scanning text in other sections. Each section must present information on one item or part. Thus, categories in a classification report or a partition report present information that is parallel, exclusive, non-overlapping, and complete. Do not give opinions or use subjective words that suggest opinions, such as *expensive*, *small*, *comfortable.* Just offer the facts.

A focused title provides a guide for the information needed in a classification or partition report. In addition, if the classification or partition is a separate report, an outline prefaces the report, which includes the introduction. The



body of the report is formatted in sections, using headings, subheadings, and a visual that presents an overview of the reported data. This visual is presented after the introduction. A conclusion is usually not needed.

The difference between a Classification Report and a Partition Report is that the Classification Report organizes many similar subjects into groups and analyzes these subjects according to their specific parts. The Partition Report organizes the parts of a single subject and analyzes these parts according to their components.

Access the following file for an example of a Classification Report. Note that the major headings, sub headings, markers, and content following a parallel structure. In addition, note that only facts are presented. The report does not use subjective wording or offer opinions.
https://s3-us-west-2.amazonaws.com/oerfiles/technical+writing/Example+Classification+Report.doc

Access the following file for an examples of Partition Reports. Note that the sub groups of a Classification Report details the contents of partition reports for each group. Also note that the major headings, sub headings, markers, and content of each partition follows a parallel structure. In addition, note that only facts are presented. The reports do not use subjective wording or offer opinions.

https://s3-us-west-2.amazonaws.com/oerfiles/technical+writing/Example+Partition+Report.doc

The use of a diagram that visually details Classification Reports or Partition Reports add a reference for a report's text. These diagrams usually show contents in hierarchal structures, linear structures, or layout mapping. When creating a visual that represents a report text, remember that the visual and text are mutually exclusive. Although the visual and text complement each other, each can stand alone. Each presents the same information in different formats.

See the following example of a Partition Report that details an Evacuation Plan. Note that both the diagram shows the reader the exact same details the text explains to the reader.

https://s3-us-west-2.amazonaws.com/oerfiles/technical+writing/Example+Partition+Evacuation+Plan.docx

ORGANIZATIONAL PATTERNS

There are seven different patterns that are commonly used to organize documents: Formal classification, informal classification, comparison, partitioning, segmenting, cause/effect, and problem/solution. Which organizational pattern is used will depend on the type of document that is being composed; however, the goal of effective organizing is to make the document easier to use, and several organizational patterns are often used in a single document.

Formal Classification

Formal classification is simply grouping facts together based on their common attributes. Each group is often divided into subgroups enabling the facts to be precisely classified. Formal classification requires that each fact can only be present in one grouping, and each grouping must follow the same principle. For example, to classify three animals, each animal should only fit into one group. A tiger, wolf, and zebra could be grouped into categories such as feline, canine, and equine. Each grouping follows the same principle of grouping the animals according to their biological family. A faulty classification would be feline, canine, and mammal because feline and canine are biological families and mammal refers to a biological class. Still further, each species can be broken up into subgroups and divisions like in cattle, Herefords and Jerseys are both cattle, but one is a beef animal and the other is a dairy animal.

Informal Classification

Informal classification can help you create a reader-centered communication when you need to organize information about a large number of items but find it impossible or undesirable to classify them according to the kind of objective characteristic that is necessary for formal classification.

Informal classification differs from formal classification because the groupings need not follow a consistent principle of classification; however, like formal classification, each fact should still only fit into one grouping. For example, a tiger, wolf, and zebra could be classified into canines and African mammals. The groupings do not follow a consistent principle, but each animal can only be grouped into one category. Informal classification is a valid organizational pattern and can be very useful to readers when properly used.

Partitioning

Partitioning refers to describing an object. If a document must be written about a bicycle, a writer may divide the description into the smaller parts of the bicycle. A writer may first describe the braking system, then the gear system, then the frame, seat, and tires. By dividing the document into smaller parts, information becomes easier to locate and the document becomes more useful to the reader.

Guidelines for Describing an Object

1. Choose a principle of classification suited to your readers and purpose.
2. Use only one basis for partitioning at a time.
3. Arrange the parts of your description in a way your readers will find useful.
4. When describing each part, provide details that your readers will find useful.
5. Include graphics if they will help your readers understand and use your information about the object.

CLASSIFYING REPORT - HOW TO ORGANIZE

Organize information into logical groups.

As with describing, narrating, defining, and comparing, classifying is a component of all writing genres. Just as writers pause to describe ideas and events or define new concepts in most documents, they routinely classify information--that is, show or tell readers how information can be grouped into categories.

Occasionally, an entire document focuses on explaining a taxonomy–that is, a scheme of classification.

Why Classify Information?

To make knowledge, we routinely categorize information. A biologist might refer to the periodic table. A musician might speak about country music, new age music, jazz, or techno. A movie critic might talk about suspense, thriller, drama, or comedic movies. A religious studies professor might discuss Christian religions, Muslim sects, and Buddhist practices. As a college student, you might talk about specific colleges' sports teams according to the divisions their teams play in. Universities often subdivide areas of specialty according to the following categories:

1. Natural sciences

- Agriculture
- Geology
- Biology
- Zoology

2. Social sciences

- Psychology
- Political Science
- Sociology
- Anthropology
- Social work

3. Applied science

- Biomedicine
- Mathematics
- Chemistry
- Engineering
- Physics

4. Humanities

- English literature
- American studies
- History
- Interdisciplinary studies
- Modern languages
- Architecture
- Art history

5. Fine arts

- Painting
- Sculpture
- Ceramics
- Theater

Likewise, you would group information in a classification report by logical groups aimed at communicating your message. For example, suppose I am going to write a report on the different activities that a visitor can engage in when he/she is in town. I would probably group them like this:

Activities of historical significance or at historical landmarks

Musical Activities or Events

Theater Activities or Events

Outdoor Activities or Venues

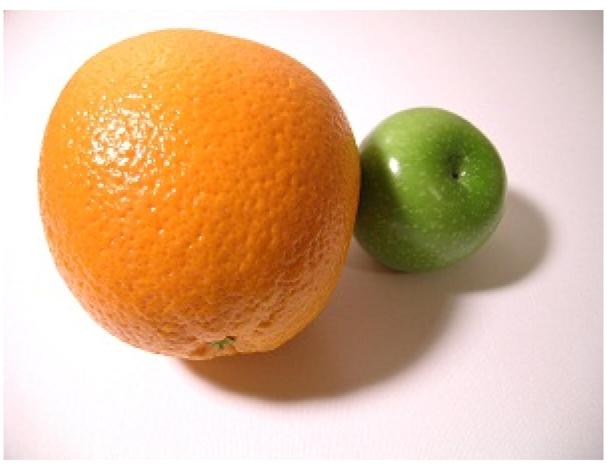
Restaurants and Bars

Depending on whether I wanted to persuade visitors to attend these events or simply to inform them, I would adjust my tone and language. I would also probably make several versions. One would target a young, single audience; one would target families; one would target businesses that may want to come to town for a convention. Audience analysis is crucial because it affects the tone and language, but it also affects the categories you come up with. For example, if my audience is families, I would probably change the last group to just Restaurants or Family Friendly Restaurants.

COMPARING AND CONTRASTING

Define content by comparing and contrasting categories or classes of objects.

Comparing and contrasting issues can be a powerful way to organize and understand knowledge. Typically, comparing and contrasting require you to define a class or category of objects and then define their similarities and differences. You may be asked to compare/contrast two items such as movies, lap tops, or even theories. What you use as your basis of comparison are called your criteria. I may, for example, choose to compare/contrast two laptops I am interested in buying. I would consider the price, the memory size, and the software the machine comes with (if any). Each one of these items (price, memory size, and software) are the criteria.



Comparing and contrasting are very natural processes, a strategy we employ in our everyday lives to understand ideas and events. We learn new ideas by comparing the new ideas with what we've learned in the past. We understand differences between people and events by comparing new events and people to past people and events. Comparisons are often conducted to prove that one concept or object is superior to another. People selling a grant idea or business proposal or people marketing a product may compare and contrast one idea or product to another, advocating their position. As consumers, we routinely compare and contrast. For example, you could compare MP3 players by going to an online site and noting different brands, products, descriptions, prices, shipping costs, dealer rankings, and the states of the dealers. You could compare used cars by noting their make/model, cost,Consumer Reports ranking, and availability. Students are frequently asked to compare and contrast topics for essay examinations. In fact, comparing and contrasting are extremely common academic exercises.

How to Effectively Compare and Contrast Information

When comparing and contrasting, you can either chunk or sequence your analysis. When you chunk you analysis, you first talk about Choice A, explicating whatever points you wish, and then discuss Choice B, elaborating as necessary. For example, if you were comparing the Miami Hurricanes football team to the Nebraska Cornhuskers, you could have a paragraph or so about the Hurricanes and then move on to the Cornhuskers.

Alternatively, when sequencing, you flipflop your analysis, discussing one component of Choice A and Choice B, then another component of Choice A and Choice B, and so on. For example, if you were arguing who would make a better president, George W. Bush or Al Gore, you could discuss Bush and Gore's views on the environment, then their views on health care reform, taxation, and so on.

People seem to find texts that sequence information easier to follow than texts that chunk information, perhaps because each unit of analysis is compared tit for tat. In other words, you don't need to hold in your memory what the writer said about Subject A, Topic 3 while reading Subject B, Topics 1 and 2.

Chunking	Sequencing
Choice A I. Subject A A. Topic 1 Subject A B. Topic 2 Subject A C. Topic 3 II. Subject B A. Topic 1 Subject B A. Topic 1 Subject B A. Topic 1	Choice B I. Topic 1 A. B. II. Topic 2 A. B. III. Topic 3 A. B.

Example

- Fact Sheet: Airline security: Federalizing workers at issue for lawmakers by CNN.

VIDEO: INTEGUMENTARY SYSTEM EPITHELIAL CLASSIFICATION

Watch this video online: https://youtu.be/HQDqb9yoHTE

VIDEO: HOW TO WRITE A COMPARATIVE ANALYSIS

Watch this video online: https://youtu.be/eVhhTOAzHXc

VIDEO: HOW TO WRITE THE PERFECT PRESS RELEASE

Watch this video online: https://youtu.be/Yqh0ADRfmvY

VIDEO: HOW TO WRITE A PRESS RELEASE FOR INTERNET MARKETING PROMOTION

Watch this video online: https://youtu.be/iXfQHy1ix2g

INFORMATIVE PRESENTATIONS

PRESENTATIONS OVERVIEW

Module: 10 Presentations

- Learn about oral presentations
- Learn about informative presentations
- Learn about persuasive presentations
- Tips for creating effective presentations

I'm sure you've heard that the fear of public speaking ranks highest for most people. In the business setting, however, you may be asked to present your findings, reports, and other information via an oral presentation. Why is this section in a technical writing text? Because many times the written technical writing piece is accompanied by the oral presentation and also because effective business presentations follow principles that are used in written technical writing communication.

You will, for example, have to analyze your audience to see how you can best convey your message. Design and format principles used in technical writing are also used in presentations. See Appendix C for more information about design and visuals.

Oral Presentation

The format for the Instructional Oral Presentation will be familiar to you. It includes the following: Introduction, Body and Conclusion.

In the introduction, you must

- tell the audience how the presentation is meaningful to them,
- show openness
- tell how the presentation relates to past experiences of the audience
- tell your expertise regarding the topic/issue.

The presentation of these steps is referred to as the MORE (+E) principle: Meaningful to audience, Openness of speaker, Relates to past experiences, Expertise of the speaker on the subject, and the speaker Evaluated the audience (knows what the level of the audience's knowledge of the topic/issue is).

First, the speaker must make the presentation meaningful to the audience, so they want to listen. If the p resentation is not meaningful, there is no reason to listen. Second, the speaker must be open to show that he/she is willing to have the audience be a part of the presentation in order to win the confidence and support of the audience. Third, the speaker must make the subject relative to the audience's experience, so the audience can draw parallels in order to create interest in the subject and a better understanding of the material. Fourth, the speaker must relay expert knowledge to make him/her credible. Expert knowledge can be personal experiences of the speaker and/or researched information. The speaker must provide the source of the expert information. Last, it is important that the speaker evaluate the audience to judge how much the audience may/may not know about the subject. It may be necessary to revise slightly the presentation, leaving out emphasis or adding emphasis, to keep the presentation relative to the audience's understanding.

The **body** of the presentation begins with what you want the audience to know, and presents the instruction.

The **conclusion** of the presentation briefly summarizes the steps in the body.

An instructional report simply gives instruction. Do not add your opinion regarding benefits or consequences. Just give the instructions on how to do something.

See the following example:

https://s3-us-west-2.amazonaws.com/oerfiles/technical+writing/Example+Informative+Oral+Presentation+Installing+a+hard+drive.doc

FUNCTIONS OF THE PRESENTATION TO INFORM

Informative Presentations

Informative presentations focus on helping the audience to understand a topic, issue, or technique more clearly. You might say, "Is that all?" and the answer is both yes and no. An affirmative response underscores the idea that informative speeches do not seek to motivate the audience to change their minds, adopt a new idea, start a new habit, or get out there and vote. They may, however, inform audiences on issues that may be under consideration in an election or referendum. On the other hand, a negative response reaffirms the idea that to communicate a topic, issue, or subject clearly is a challenge in itself and shouldn't be viewed as a simplistic process. There are distinct functions inherent in a speech to inform, and you may choose to use one or more of these functions in your speech. Let's take a look at the functions and see how they relate to the central objective of facilitating audience understanding.

Share

The basic definition of communication highlights the process of understanding and sharing meaning. An informative speech follows this definition in the aspect of sharing content and information with an audience. You won't be asking the audience to actually do anything in terms of offering a response or solving a problem. Instead you'll be offering to share with the audience some of the information you have gathered relating to a topic. This act of sharing will reduce ignorance, increase learning, and facilitate understanding of your chosen topic.

Increase Understanding

How well does your audience grasp the information? This should be a guiding question to you on two levels. The first involves what they already know—or don't know—about your topic, and what key terms or ideas might be necessary for someone completely unfamiliar with your topic to grasp the ideas you are presenting. The second involves your presentation and the illustration of ideas. A bar chart, a pie graph, and a video clip may all serve you and the audience well, but how will each ingredient in your speech contribute to their understanding? The audience will respond to your attention statement and hopefully maintain interest, but how will you take your speech beyond superficial coverage of content and effectively communicate key relationships that increase understanding? These questions should serve as a challenge for your informative speech, and by looking at your speech from an audience-oriented perspective, you will increase your ability to increase the audience's understanding.

Change Perceptions

How you perceive stimuli has everything to do with a range of factors that are unique to you. We all want to make sense of our world, share our experiences, and learn that many people face the same challenges we do. Many people perceive the process of speaking in public as a significant challenge, and in this text, we have broken down the process into several manageable steps. In so doing, we have to some degree changed your perception of public speaking. When you present your speech to inform, you may want to change the audience member's perceptions of your topic. You may present an informative speech on air pollution and want to change common perceptions such as the idea that most of North America's air pollution comes from private cars, or that nuclear power plants are a major source of air pollution. You won't be asking people to go out and vote, or change their choice of automobiles, but you will help your audience change their perceptions of your topic.

Gain Skills

Just as you want to increase the audience's understanding, you may want to help the audience members gain skills. If you are presenting a speech on how to make salsa from fresh ingredients, your audience may thank you for not only the knowledge of the key ingredients and their preparation but also the product available at the conclusion. If your audience members have never made their own salsa, they may gain a new skill from your speech. In the same way, perhaps you decide to inform your audience about eBay, a person-to-person marketplace much like a garage sale in which items are auctioned or available for purchase over the Internet. You may project onto a screen in class the main Web site and take the audience through a step-by-step process on how to sell an item. The audience may learn an important skill, clean out the old items in their garage, and buy new things for the house with their newfound skills. Your intentions, of course, are not to argue that salsa is better than ketchup or that eBay is better than Amazon, but to inform the audience, increasing their understanding of the subject, and in this case, gaining new skills.

Exposition versus Interpretation

When we share information informally, we often provide our own perspective and attitude for our own reasons. But when we set out to inform an audience, taking sides or using sarcasm to communicate attitude may divide the audience into groups that agree or disagree with the speaker. The speech to inform the audience on a topic, idea, or area of content is not intended to be a display of attitude and opinion. Consider the expectations of people who attend a formal dinner. Will they use whatever fork or spoon they want, or are there expectations of protocol and decorum? In any given communication context there are expectations, both implicit and explicit. If you attend a rally on campus for health care reform, you may expect the speaker to motivate you to urge the university to stop investing in pharmaceutical companies, for example. On the other hand, if you enroll in a biochemistry course, you expect a teacher to inform you about the discipline of biochemistry—not to convince you that pharmaceutical companies are a good or bad influence on our health care system.

The speech to inform is like the classroom setting in that the goal is to inform, not to persuade, entertain, display attitude, or create comedy. If you have analyzed your audience, you'll be better prepared to develop appropriate ways to gain their attention and inform them on your topic. You want to communicate thoughts, ideas, and relationships and allow each listener specifically, and the audience generally, to draw their own conclusions. The speech to inform is all about sharing information to meet the audience's needs, not your own. While you might want to inform them about your views on politics in the Middle East, you'll need to consider what they are here to learn from you and let your audience-oriented perspective guide you as you prepare.

Exposition

This relationship between informing as opposed to persuading your audience is often expressed in terms of exposition versus interpretation. Exposition means a public exhibition or display, often expressing a complex topic in a way that makes the relationships and content clear. Expository prose is writing to inform; you may have been asked to write an expository essay in an English course or an expository report in a journalism course. The goal is to communicate the topic and content to your audience in ways that illustrate, explain, and reinforce the overall content to make your topic more accessible to the audience. The audience wants to learn about your topic and may have some knowledge on it as you do. It is your responsibility to consider ways to display the information effectively.

Interpretation and Bias

Interpretation involves adapting the information to communicate a message, perspective, or agenda. Your insights and attitudes will guide your selection of material, what you focus on, and what you delete (choosing what not to present to the audience). Your interpretation will involve personal bias. Bias is an unreasoned or not-well-thought-out judgment. Bias involves beliefs or ideas held on the basis of conviction rather than current evidence. Beliefs are often called "habits of the mind" because we come to rely on them to make decisions. Which is the better, cheapest, most expensive, or the middle-priced product? People often choose the middle-priced product and use the belief "if it costs more it must be better" (and the opposite: "if it is cheap it must not be very good"). The middle-priced item, regardless of actual price, is often perceived as "good enough." All these perceptions are based on beliefs, and they may not apply to the given decision or even be based on any evidence or rational thinking.

By extension, marketing students learn to facilitate the customer "relationship" with the brand. If you come to believe a brand stands for excellence, and a new product comes out under that brand label, you are more likely to choose it over an unknown or lesser-known competitor. Again, your choice of the new product is based on a belief rather than evidence or rational thinking. We take mental shortcuts all day long, but in our speech to inform, we have to be careful not to reinforce bias.

Bias is like a filter on your perceptions, thoughts, and ideas. Bias encourages you to accept positive evidence that supports your existing beliefs (regardless of whether they are true) and reject negative evidence that does not support your beliefs. Furthermore, bias makes you likely to reject positive support for opposing beliefs and accept negative evidence (again, regardless of whether the evidence is true). So what is positive and what is negative? In a biased frame of mind, that which supports your existing beliefs is positive and likely to be accepted, while that which challenges your beliefs is likely to be viewed as negative and rejected. There is the clear danger in bias. You are inclined to tune out or ignore information, regardless of how valuable, useful, or relevant it may be, simply because it doesn't agree with or support what you already believe.

Point of View

Let's say you are going to present an informative speech on a controversial topic like same-sex marriage. Without advocating or condemning same-sex marriage, you could inform your audience about current laws in various states, recent and proposed changes in laws, the number of same-sex couples who have gotten married in various places, the implications of being married or not being able to marry, and so on. But as you prepare and research your topic, do you only read or examine information that supports your existing view? If you only choose to present information that agrees with your prior view, you've incorporated bias into your speech. Now let's say the audience members have different points of view, even biased ones, and as you present your information you see many people start to fidget in their seats. You can probably anticipate that if they were to speak, the first word they would say is "but" and then present their question or assertion. In effect, they will be having a debate with themselves and hardly listening to you.

You can anticipate the effects of bias and mitigate them to some degree. First, know the difference between your point of view or perspective and your bias. Your point of view is your perception of an idea or concept from your previous experience and understanding. It is unique to you and is influenced by your experiences and also factors like gender, race, ethnicity, physical characteristics, and social class. Everyone has a point of view, as hard as they may try to be open-minded. But bias, as we've discussed previously, involves actively selecting information that supports or agrees with your current belief and takes away from any competing belief. To make sure you are not presenting a biased speech, frame your discussion to inform from a neutral stance and consider alternative points of view to present, compare and contrast, and diversify your speech. The goal of the speech to inform is to present an expository speech that reduces or tries to be free from overt interpretation.

This relates to our previous discussion on changing perceptions. Clearly no one can be completely objective and remove themselves from their own perceptual process. People are not modern works of minimalist art, where form and function are paramount and the artist is completely removed from the expression. People express themselves and naturally relate what is happening now to what has happened to them in the past. You are your own artist, but you also control your creations.

Objectivity involves expressions and perceptions of facts that are free from distortion by your prejudices, bias, feelings or interpretations. For example, is the post office box blue? An objective response would be yes or no, but a subjective response might sound like "Well, it's not really blue as much as it is navy, even a bit of purple, kind of like the color of my ex-boyfriend's car, remember? I don't care for the color myself." Subjectivity involves expressions or perceptions that are modified, altered, or impacted by your personal bias, experiences, and background. In an informative speech, your audience will expect you to present the information in a relatively objective form. The speech should meet the audience's need as they learn about the content, not your feelings, attitudes, or commentary on the content.

Here are five suggestions to help you present a neutral speech:

1. Keep your language neutral and not very positive for some issues while very negative for others.
2. Keep your sources credible and not from biased organizations. The National Rifle Association (NRA) will have a biased view of the Second Amendment, for example, as will the American Civil Liberties Union (ACLU) on civil rights.
3. Keep your presentation balanced. If you use a source that supports one clear side of an issue, include an alternative source and view. Give each equal time and respectful consideration.
4. Keep your audience in mind. Not everyone will agree with every point or source of evidence, but diversity in your speech will have more to offer everyone.
5. Keep who you represent in mind: Your business and yourself.

Key Takeaways

- The purpose of an informative speech is to share ideas with the audience, increase their understanding, change their perceptions, or help them gain new skills.
- An informative speech incorporates the speaker's point of view but not attitude or interpretation.

TYPES OF PRESENTATIONS TO INFORM

Explanation

Have you ever listened to a lecture or speech where you just didn't get it? It wasn't that you weren't interested, at least not at first. Perhaps the professor used language and jargon, or gave a confusing example, or omitted something that would have linked facts or concepts together. Soon you probably lost interest and sat there, attending the speech or lecture in body but certainly not in mind. An effective speech to inform will take a complex topic or issue and explain it to the audience in ways that increase audience understanding. Perhaps the speech where you felt lost lacked definitions upfront, or a clear foundation in the introduction. You certainly didn't learn much, and that's exactly what you want to avoid when you address your audience. Consider how you felt and then find ways to explain your topic—visually, using definitions and examples, providing a case study—that can lay a foundation on common ground with your audience and build on it.

No one likes to feel left out. As the speaker, it's your responsibility to ensure that this doesn't happen. Also know that to teach someone something new—perhaps a skill that they did not posses or a perspective that allows them to see new connections—is a real gift, both to you and the audience members. You will feel rewarded because you made a difference and they will perceive the gain in their own understanding.

Report

As a business communicator, you may be called upon to give an informative report where you communicate status, trends, or relationships that pertain to a specific topic. You might have only a few moments to speak, and you may have to prepare within a tight time frame. Your listeners may want "just the highlights," only to ask pointed questions that require significant depth and preparation on your part. The informative report is a speech where you organize your information around key events, discoveries, or technical data and provide context and illustration for your audience. They may naturally wonder, "Why are sales up (or down)?" or "What is the product leader in your lineup?" and you need to anticipate their perspective and present the key information that relates to your topic. If everyone in the room knows the product line, you may not need much information about your best seller, but instead place emphasis on marketing research that seems to indicate why it is the best seller.

Perhaps you are asked to be the scout and examine a new market, developing strategies to penetrate it. You'll need to orient your audience and provide key information about the market and demonstrate leadership as you articulate your strategies. You have a perspective gained by time and research, and your audience wants to know why you see things the way you do, as well as learn what you learned. A status report may be short or long, and may be an update that requires little background, but always consider the audience and what common ground you are building your speech on.

Description

Have you ever listened to a friend tell you about their recent trip somewhere and found the details fascinating, making you want to travel there or visit a similar place? Or perhaps you listened to your chemistry teacher describe a chemical reaction you were going to perform in class and you understood the process and could reasonably anticipate the outcome. Describing information requires emphasis on language that is vivid, captures attention, and excites the imagination. Your audience will be drawn to your effective use of color, descriptive language, and visual aids. An informative speech that focuses description will be visual in many ways. You may choose to illustrate with images, video and audio clips, and maps. Your first-person experience combined with your content will allow the audience to come to know a topic, area, or place through you, or secondhand. Their imagination is your ally, and you should aim to stimulate it with attention-getting devices and clear visual aids. Use your imagination to place yourself in their perspective: how would you like to have someone describe the topic to you?

Demonstration

You want to teach the audience how to throw a fast pitch in softball or a curveball in baseball. You want to demonstrate how to make salsa or how to program the applications on a smartphone. Each of these topics will call on your kindergarten experience of "show and tell." A demonstrative speech focuses on clearly showing a process and telling the audience important details about each step so that they can imitate, repeat, or do the action themselves. If the topic is complicated, think of ways to simplify each step.

Consider the visual aids or supplies you will need. You may have noticed that cooking shows on television rarely show the chef chopping and measuring ingredients during the demonstration. Instead, the ingredients are chopped and measured ahead of time and the chef simply adds each item to the dish with a brief comment like, "Now we'll stir in half a cup of chicken stock." If you want to present a demonstration speech on the ways to make a paper airplane, one that will turn left or right, go up, down or in loops, consider how best to present your topic. Perhaps by illustrating the process of making one airplane followed by example on how to make adjustments to the plane to allow for different flight patterns would be effective. Would you need additional paper airplanes made in advance of your speech? Would an example of the paper airplane in each of the key stages of production be helpful to have ready before the speech? Having all your preparation done ahead of time can make a world of difference, and your audience will appreciate your thoughtful approach.

By considering each step and focusing on how to simplify it, you can understand how the audience might grasp the new information and how you can best help them. Also, consider the desired outcome; for example, will your listeners be able to actually do the task themselves or will they gain an appreciation of the complexities of a difficult skill like piloting an airplane to a safe landing? Regardless of the sequence or pattern you will illustrate or demonstrate, consider how people from your anticipated audience will respond, and budget additional time for repetition and clarification.

Informative presentations come in all sizes, shapes, and forms. You may need to create an "elevator speech" style presentation with the emphasis on brevity, or produce a comprehensive summary of several points that require multiple visual aids to communicate complex processes or trends. The main goal in an informative presentation is to inform, not to persuade, and that requires an emphasis on credibility, for the speaker and the data or information presented. Extra attention to sources is required and you'll need to indicate what reports, texts, or Web sites were sources for your analysis and conclusions.

Here are additional, more specific types of informative presentations:

- Biographical information
- Case study results
- Comparative advantage results
- Cost-benefit analysis results
- Feasibility studies
- Field study results
- Financial trends analysis
- Health, safety, and accident rates
- Instruction guidelines
- Laboratory results
- Product or service orientations
- Progress reports
- Research results
- Technical specifications

Depending on the rhetorical situation, the audience, and the specific information to be presented, any of these types of presentation may be given as an explanation, a report, a description, or a demonstration.

GETTING STARTED WITH AN INFORMATIVE PRESENTATION

After all, the ultimate goal of all research is not objectivity, but truth. -Helene Deutsch

Getting Started

Introductory Exercises

1. Please make a list of five activities you have participated in recently. Choose one and create a time order list, from start to finish, of at least five major steps involved in accomplishing the activity.
2. From the list of five activities above, please consider which of the activities the audience (or your class) has probably had the least experience with. Now make a list from that activity of at least three things you would explain to them so that they could better understand it. From that new list, consider how you might show those three things, including visual aids.

Storytelling is a basic part of human communication. You've probably told several short stories just today to relate to friends what the drive to school was like, how your partner has been acting, what your boss said to a customer, or even what your speech teacher did in class. With each story you were sharing information, but is sharing the same as informing? At first you might be tempted to say "sure," but consider whether you had a purpose for telling a friend about another friend's actions, or if the words you used to discuss your boss communicated any attitude.

At some point in your business career you will be called upon to teach someone something. It may be a customer, coworker, or supervisor, and in each case you are performing an informative speech. It is distinct from a sales speech, or persuasive speech, in that your goal is to communicate the information so that your listener understands. For example, let's say you have the task of teaching a customer how to use a remote control (which button does what) to program a DVD/R to record. Easy, you say? Sure, it's easy for you. But for them it is new, so take a moment and consider their perspective. You may recommend this unit versus that unit, and aim for a sale, but that goal is separate from first teaching them to be successful at a task they want to learn to perform. You may need to repeat yourself several times, and they may not catch on as fast as you expect, but their mastery of the skill or task they want to learn can directly lead to a sale. They will have more confidence in you and in themselves once they've mastered the task, and will be more receptive to your advice about the competing products available.

While your end goal may be a sale, the relationship you form has more long-term value. That customer may tell a friend about the experience, show their family what they learned, and before you know it someone else comes in asking for you by name. Communicating respect and focusing on their needs is a positive first step. The informative speech is one performance you'll give many times across your career, whether your audience is one person, a small group, or a large auditorium full of listeners. Once you master the art of the informative speech, you may mix and match it with other styles and techniques.

PREPARING YOUR INFORMATIVE SPEECH

Now that we've covered issues central to the success of your informative speech, there's no doubt you want to get down to work. Here are five final suggestions to help you succeed.

Start with What You Know

Are you taking other classes right now that are fresh in your memory? Are you working on a challenging chemistry problem that might lend itself to your informative speech? Are you reading a novel by Gabriel García Márquez that might inspire you to present a biographical speech, informing your audience about the author? Perhaps you have a hobby or outside interest that you are excited about that would serve well. Regardless of where you draw the inspiration, it's a good strategy to start with what you know and work from there. You'll be more enthusiastic, helping your audience to listen intently, and you'll save yourself time. Consider the audience's needs, not just your need to cross a speech off your "to-do" list. This speech will be an opportunity for you to take prepared material and present it, gaining experience and important feedback. In the "real world," you often lack time and the consequences of a less than effective speech can be serious. Look forward to the opportunity and use what you know to perform an effective, engaging speech.

Consider Your Audience's Prior Knowledge

You don't want to present a speech on the harmful effects of smoking when no one in the audience smokes. You may be more effective addressing the issue of secondhand smoke, underscoring the relationship to relevance and addressing the issue of importance with your audience. The audience will want to learn something from you, not hear everything they have heard before. It's a challenge to assess what they've heard before, and often a class activity is conducted to allow audience members to come to know each other. You can also use their speeches and topic selection as points to consider. Think about age, gender, and socioeconomic status, as well as your listeners' culture or language. Survey the audience if possible, or ask a couple of classmates what they think of the topics you are considering.

In the same way, when you prepare a speech in a business situation, do your homework. Access the company Web site, visit the location and get to know people, and even call members of the company to discuss your topic. The more information you can gather about your audience, the better you will be able to adapt and present an effective speech.

Adapting Jargon and Technical Terms

You may have a topic in mind from another class or an outside activity, but chances are that there are terms specific to the area or activity. From wakeboarding to rugby to a chemical process that contributes to global warming, there will be jargon and technical terms. Define and describe the key terms for your audience as part of your speech and substitute common terms where appropriate. Your audience will enjoy learning more about the topic and appreciate your consideration as you present your speech.

Using Outside Information

Even if you think you know everything there is to know about your topic, using outside sources will contribute depth to your speech, provide support for your main points, and even enhance your credibility as a speaker. "According to ____________" is a normal way of attributing information to a source, and you should give credit where credit is due. There is nothing wrong with using outside information as long as you clearly cite your sources and do not present someone else's information as your own.

Presenting Information Ethically

A central but often unspoken expectation of the speaker is that we will be ethical. This means, fundamentally, that we perceive one another as human beings with common interests and needs, and that we attend to the needs of others as well as our own. An ethical informative speaker expresses respect for listeners by avoiding prejudiced comments against any group, and by being honest about the information presented, including information that may contradict the speaker's personal biases. The ethical speaker also admits it when he or she does not know something. The best salespersons recognize that ethical communication is the key to success, as it builds a healthy relationship where the customer's needs are met, thereby meeting the salesperson's own needs.

Reciprocity

Tyler [1] discusses ethical communication and specifically indicates reciprocity as a key principle. Reciprocity, or a relationship of mutual exchange and interdependence, is an important characteristic of a relationship, particularly between a speaker and the audience. We've examined previously the transactional nature of communication, and it is important to reinforce this aspect here. We exchange meaning with one another in conversation, and much like a game, it takes more than one person to play. This leads to interdependence, or the dependence of the conversational partners on one another. Inequality in the levels of dependence can negatively impact the communication and, as a result, the relationship. You as the speaker will have certain expectations and roles, but dominating your audience will not encourage them to fulfill their roles in terms of participation and active listening. Communication involves give and take, and in a public speaking setting, where the communication may be perceived as "all to one," don't forget that the audience is also communicating in terms of feedback with you. You have a responsibility to attend to that feedback, and develop reciprocity with your audience. Without them, you don't have a speech.

Mutuality

Mutuality means that you search for common ground and understanding with the audience, establishing this space and building on it throughout the speech. This involves examining viewpoints other than your own, and taking steps to insure the speech integrates an inclusive, accessible format rather than an ethnocentric one.

Nonjudgmentalism

Nonjudgmentalism underlines the need to be open-minded, an expression of one's willingness to examine diverse perspectives. Your audience expects you to state the truth as you perceive it, with supporting and clarifying information to support your position, and to speak honestly. They also expect you to be open to their point of view and be able to negotiate meaning and understanding in a constructive way. Nonjudgmentalism may include taking the perspective that being different is not inherently bad and that there is common ground to be found with each other.

While this characteristic should be understood, we can see evidence of breakdowns in communication when audiences perceive they are not being told the whole truth. This does not mean that the relationship with the audience requires honesty and excessive self-disclosure. The use of euphemisms and displays of sensitivity are key components of effective communication, and your emphasis on the content of your speech and not yourself will be appreciated. Nonjudgmentalism does underscore the importance of approaching communication from an honest perspective where you value and respect your audience.

Honesty

Honesty, or truthfulness, directly relates to trust, a cornerstone in the foundation of a relationship with your audience. Without it, the building (the relationship) would fall down. Without trust, a relationship will not open and develop the possibility of mutual understanding. You want to share information and the audience hopefully wants to learn from you. If you "cherry-pick" your data, only choosing the best information to support only your point and ignore contrary or related issues, you may turn your informative speech into a persuasive one with bias as a central feature.

Look at the debate over the U.S. conflict with Iraq. There has been considerable discussion concerning the cherry-picking of issues and facts to create a case for armed intervention. To what degree the information at the time was accurate or inaccurate will continue to be a hotly debated issue, but the example holds in terms on an audience's response to a perceived dishonestly. Partial truths are incomplete and often misleading, and you don't want your audience to turn against you because they suspect you are being less than forthright and honest.

Respect

Respect should be present throughout a speech, demonstrating the speaker's high esteem for the audience. Respect can be defined as an act of giving and displaying particular attention to the value you associate with someone or a group. This definition involves two key components. You need to give respect in order to earn from others, and you need to show it. Displays of respect include making time for conversation, not interrupting, and even giving appropriate eye contact during conversations.

Trust

Communication involves sharing and that requires trust. Trust means the ability to rely on the character or truth of someone, that what you say you mean and your audience knows it. Trust is a process, not a thing. It builds over time, through increased interaction and the reduction of uncertainty. It can be lost, but it can also be regained. It should be noted that it takes a long time to build trust in a relationship and can be lost in a much shorter amount of time. If your audience suspects you mislead them this time, how will they approach your next presentation? Acknowledging trust and its importance in your relationship with the audience is the first step in focusing on this key characteristic.

Avoid Exploitation

Finally, when we speak ethically, we do not intentionally exploit one another. Exploitation means taking advantage, using someone else for one's own purposes. Perceiving a relationship with an audience as a means to an end and only focusing on what you get out of it, will lead you to treat people as objects. The temptation to exploit others can be great in business situations, where a promotion, a bonus, or even one's livelihood are at stake.

Suppose you are a bank loan officer. Whenever a customer contacts the bank to inquire about applying for a loan, your job is to provide an informative presentation about the types of loans available, their rates and terms. If you are paid a commission based on the number of loans you make and their amounts and rates, wouldn't you be tempted to encourage them to borrow the maximum amount they can qualify for? Or perhaps to take a loan with confusing terms that will end up costing much more in fees and interest than the customer realizes? After all, these practices are within the law; aren't they just part of the way business is done? If you are an ethical loan officer, you realize you would be exploiting customers if you treated them this way. You know it is more valuable to uphold your long-term relationships with customers than to exploit them so that you can earn a bigger commission.

Consider these ethical principles when preparing and presenting your speech, and you will help address many of these natural expectations of others and develop healthier, more effective speeches.

Sample Informative Presentation

Here is a generic sample speech in outline form with notes and suggestions.

Attention Statement

Show a picture of a goldfish and a tomato and ask the audience, "What do these have in common?"

Introduction

1. Briefly introduce genetically modified foods.
2. State your topic and specific purpose: "My speech today will inform you on genetically modified foods that are increasingly part of our food supply."
3. Introduce your credibility and the topic: "My research on this topic has shown me that our food supply has changed but many people are unaware of the changes."
4. State your main points: "Today I will define genes, DNA, genome engineering and genetic manipulation, discuss how the technology applies to foods, and provide common examples."

Body

1. *Information*. Provide a simple explanation of the genes, DNA and genetic modification in case there are people who do not know about it. Provide clear definitions of key terms.
2. *Genes and DNA*. Provide arguments by generalization and authority.
3. *Genome engineering and genetic manipulation.* Provide arguments by analogy, cause, and principle.
4. *Case study.* In one early experiment, GM (genetically modified) tomatoes were developed with fish genes to make them resistant to cold weather, although this type of tomato was never marketed.
5. Highlight other examples.

Conclusion

Reiterate your main points and provide synthesis, but do not introduce new content.

Residual Message

"Genetically modified foods are more common in our food supply than ever before."

Key Takeaway

In preparing an informative speech, use your knowledge and consider the audience's knowledge, avoid unnecessary jargon, give credit to your sources, and present the information ethically.

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[1] Tyler, V. (1978). Report of the working groups of the second SCA summer conference on intercultural communication. In N. C. Asuncio-Lande (Ed.), Ethical Perspectives and Critical Issues in Intercultural Communication (pp. 170–177). Falls Church, VA: SCA.

CREATING AN INFORMATIVE PRESENTATION

Learning Objectives

1. Discuss the parts of an informational presentation.
2. Understand the five parts of any presentation.

An informational presentation is common request in business and industry. It's the verbal and visual equivalent of a written report. Information sharing is part of any business or organization. Informative presentations serve to present specific information for specific audiences for specific goals or functions. The type of presentation is often identified by its primary purpose or function. Informative presentations are often analytical or involve the rational analysis of information. Sometimes they simply "report the facts" with no analysis at all, but still need to communicate the information in a clear and concise format. While a presentation may have conclusions, propositions, or even a call to action, the demonstration of the analysis is the primary function.

A sales report presentation, for example, is not designed to make a sale. It is, however, supposed to report sales to date and may forecast future sales based on previous trends.

An informative presentation does not have to be a formal event, though it can be. It can be generic and nonspecific to the audience or listener, but the more you know about your audience, the better. When you tailor your message to that audience, you zero in on your target and increase your effectiveness. The emphasis is on clear and concise communication, but it may address several key questions:

- Topic: Product or Service?
- Who are you?
- Who is the target market?
- What is the revenue model?
- What are the specifications?
- How was the information gathered?
- How does the unit work?
- How does current information compare to previous information?

Table 13.2 "Presentation Components and Their Functions" lists the five main parts or components of any presentation. [1]

Table 13.2 Presentation Components and Their Functions

Component	Function
Attention Statement	Raise interest and motivate the listener
Introduction	Communicate a point and common ground
Body	Address key points
Conclusion	Summarize key points
Residual Message	Communicate central theme, moral of story, or main point

You will need to address the questions to establish relevance and meet the audience's needs. The five parts of any speech will serve to help you get organized.

Sample Speech Guidelines

Imagine that you have been assigned to give an informative presentation lasting five to seven minutes. Follow the guidelines in Table 13.3 "Sample Speech Guidelines" and apply them to your presentation.

Table 13.3 Sample Speech Guidelines

1. Topic	Choose a product or service that interests you, research it, and report your findings in your speech.

2. Purpose	Your general purpose, of course, is to inform. But you need to formulate a more specific purpose statement that expresses a point you have to make about your topic—what you hope to accomplish in your speech.
3. Audience	Think about what your audience might already know about your topic and what they may not know, and perhaps any attitudes toward or concerns about it. Consider how this may affect the way that you will present your information.
4. Supporting Materials	Using the information gathered in your search for information, determine what is most worthwhile, interesting, and important to include in your speech. Time limits will require that you be selective about what you use. Use visual aids!
5. Organization	1. Write a central idea statement that expresses the message, or point, that you hope to get across to your listeners in the speech. 2. Determine the two to three main points that will be needed to support your central idea. 3. Finally, prepare a complete sentence outline of the body of the speech.
6. Introduction	Develop an opening that will 1. get the attention and interest of your listeners, 2. express your central idea or message, 3. lead into the body of your speech.
7. Conclusion	The conclusion should review and/or summarize the important ideas in your speech and bring it to a smooth close.
8. Delivery	The speech should be delivered extemporaneously (not reading but speaking), using speaking notes and not reading from the manuscript. Work on maximum eye contact with your listeners. Use any visual aids or handouts that may be helpful.

Key Takeaway

Informative presentations illustrate, explain, describe, and instruct the audience on topics and processes.

Exercises

1. Write a brief summary of a class or presentation you personally observed recently; include what you learned. Compare with classmates.
2. Search online for an informative speech or presentation that applies to business or industry. Indicate one part or aspect of the presentation that you thought was effective and one you would improve. Provide the link to the presentation in your post or assignment.
3. Pick a product or service and come up with a list of five points that you could address in a two-minute informative speech. Place them in rank order and indicate why.
4. With the points discussed in this chapter in mind, observe someone presenting a speech. What elements of their speech could you use in your speech? What elements would you not want to use? Why? Compare with a classmate.

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[1] McLean, S. (2003). The basics of speech communication. Boston: Allyn & Bacon.

RESEARCH

RESEARCH OVERVIEW

The next module of the course addresses

Learning Objectives

In this module you will learn about

- Reliable sources
- How to document sources in the APA style
- When to credit sources
- Tips for developing your research paper
- Tips for blending your research into your writing

You will learn how to investigate and solve a problem by researching the problem, reporting the data, and offering solutions.

The problem must be a practical problem, one in which you have a personal impact on solving. First, you will collect analysis and recommend solutions to the problem. Second, you will gather external research on how companies like yours solved similar problems and report your findings. Third, you will compile the findings from your investigation into a Feasibility Report or Proposal on solving the problem. Fourth and last, you will write a Persuasive PowerPoint Presentation that outlines your research solutions.

Remember that this is not a typical research paper, where you research an issue and simply report the research. Therefore, do not choose issues like changing laws, fighting wars, drug usage, or global warming, among others. While these are important issues and you can certainly offer solutions, they are too broad for you to have a personal effect on their changing. They would fit the definition of writing a typical research paper to research the issue and write a research paper reporting you findings.

Your problem for this course needs to be a practical problem, one in which you will have a personal effect on changing. The problem does not need to be a real problem. You can create a scenario and work from that. We will develop and narrow our problems together as the course progresses.

TEXTUAL RESEARCH

"Textual Research" was written by Joseph M. Moxley

Research is defined by many academic disciplines, such as English or History, as primarily a textual process. In other words, some researchers (commonly called "scholars") focus on texts—that is, on responding to them, critiquing them, or in rereading them with a particular theory in mind, such as Capitalism, Marxism, Psychoanalysis, Behaviorism, Deconstruction, Modernism, Postmodernism. Additionally, scholars can develop their work in response to everyday experiences, issues in the popular culture, the media, and the Internet. Beyond debate and logic, scholars lack a way to prove one idea or approach is superior to any other.

Trained in the traditions and methods of Western humanism, scholars rely on dialectic, seeking knowledge via the deliberate confrontation of opposing viewpoints. This emphasis on dialectic is sometimes referred to as the ceaseless debate, a cycle of interpretation and reinterpretation. The knowledge scholars generate is often about the meaning of texts, derived from the act of reading, articulated as critical analysis, and refined by dialectic. For example, historians argue about the best ways to interpret a body of texts. Critics argue about which theory provides the most worthwhile reading of the canon—that is, a privileged set of texts. Philosophers argue about a philosopher's ideas or about a body of texts that advocate a particular philosophical position.

In addition to focusing on texts—what they mean, how they should be read—scholars develop ideas by responding to, and drawing on, their personal experiences as well as ideas found in the media. In other words, scholars can address topics that emerge from their everyday experiences as a member of a culture. Rather than relying on observations of the empirical world and developing or testing hypotheses, scholars are engaged in the great debate—a never-ending dialectic about ideas. Unlike the methodologies informed by Positivism, scholars lack a way to prove or disprove their positions. Ultimately, scholars are more concerned with participating in the great debate, the scholarly exchange of ideas, as opposed to presuming that truth will one day be found so the debate will need to come to an end. Scholars make meaning by discussing texts and by applying theories to create new readings of texts.

At modern research universities, scholars tend to reside in departments in such departments as English, American Studies, Philosophy, and History. However, all disciplines rely on a scholarly methodology when they conduct debates about ideas, texts, and events. Additionally, some of the activities of scholars appear within the methodologies of other research communities that appear within writingcommons.com — especially the ability to summarize and paraphrase the work of others and the ability to dissect and critique the reasoning of other writers.

Across academic disciplines, scholars have developed unique ways to contribute knowledge. Historians, for example, practice a different version of scholarship than philosophers or critics. Historians tend to use a narrative structure, while philosophers and critics prefer an argumentative structure. In contrast to historians and philosophers, critics are concerned with establishing a body of texts (i.e. a canon) for interpretation, interpreting those texts, and generating theories about both of these activities.

APA DOCUMENTATION OVERVIEW

In this course, we will use the APA style of documentation. Technical writers usually write in the APA style of documentation.

See the following APA rules for reporting research:

APA Style of Documentation Guidelines

1. You must document all information that you use from any source regardless of how you report the information.
2. By documenting sources of information, you respect the recorded ideas, or intellectual property, of others.
3. Research writers use a specific format to indicate from where they obtained their information. These formats are called styles of documentation.
4. Two types of documentation styles are MLA, which is the Modern Language Association, and APA, which is the American Psychological Association.
5. Technical writers use the APA style of documentation.
6. The APA style of documentation requires that the entire paper is doubled spaced.
7. The APA style of documentation requires that the page with references is titled as “References,” not “Works Cited.”

Referencing in-text citations

1. Parenthetical documentation for APA requires the author and the date for all information cited. Every sentence in the research section needs a reference to its source, followed by it date of publication.
2. If a direct quotation is cited, APA in-text citation/parenthetical documentation requires the author, the date, and page number or paragraph number must be cited. Paragraph numbers are cited for internet sources. The exception to this rule is citing pdf documents. Page numbers are referenced for sources published as pdf files.
3. When referencing a page number, the number must be identified as a page, for one page (p. 24) or as pp. for multiple pages. (pp. 24-30).
4. When referencing a paragraph number, the number must be identified as a paragraph, for one paragraph (¶ 4) or as (¶ 4-7), for multiple paragraphs.
5. When citing articles with a considerable number of paragraphs, preface the paragraph with the heading of the sub section of the article (Various Models of Reports, ¶ 12).

Citing Sources on the Reference Page

1. APA Does not use quotation marks around titles of articles.
2. APA only capitalizes the initial letter of the first word of a title of an article or book and the initial letter of the first word after a colon in a title of an article or book. And of course, the initial letters of all proper nouns in titles of articles or books are capitalized.
3. APA cites the date (year) after the author’s name.
4. The entries in an APA Reference can be list alphabetically or by location in the paper.

BASIC GUIDELINES FOR CITING RESOURCES

Sources are cited in the body of the text as well as at the end of the document. The APA and MLA styles differ in how to format these citations. The APA style of crediting sources is used in most business documents, as well as medical documents, because the emphasis is on how current the source document information is and how it applies to the current situation.

• In-text citations must clearly show what information the citation is referring to, which is why they must be put in parenthesis and written inside the period. In the APA style of crediting sources, you generally include the author or authors' last name(s) and the year the source was most recently published.

Example: On November 8, 2009, the world's largest cookie was made (Smith, 2009).

•To clearly show that a citation is for multiple sentences, it should be put at the end of the first sentence (inside the period). This clearly introduces the citation at the same time the information is introduced.

Example: The topic of cookies and their origins has been studied by John Smith (2009). Cookies are thought to have come from… They were originally used for…

•Citations at the end of a writing should be well organized, and follow all the rules of the citation style. For example, APA style requires citations to be in alphabetical order.

•If information is not available for a complete citation, just skip the part of the citation that you can't find, filling in all areas of information that are available. You should try your hardest to find all information, however, to make your writing most credible.

Example: Author's name is missing and there is not an organization name mentioned, write citation as follows: "The Preparation of Bacterial and Oral Smears, and the Use of Simple Stains." Microbiology Laboratory. New Jersey: Pearson Education Inc, 2003. 21-30.

In the APA style of crediting sources, you will also have a REFERENCE page.

For more information on the APA method of crediting sources see OWL English Purdue located using the following link:

https://owl.english.purdue.edu/owl/section/2/10/.

APA STYLE DOCUMENTATION

American Psychological Association Style (APA) is most commonly used to cite sources within the social sciences.

Title page:

- Contains title
- Is double spaced
- Contains author name
  - First name, middle initial(s), last name
  - Do not use titles (Dr.) or degrees (Ph.D.)
- Contains name of institutional affiliation
  - Location author conducted research (if applicable)
- Has a page header with title flush to the left and page number flush to the right
  - Should be no more than 12 words
  - Emit all abbreviation or words that contain no purpose

Essay body:

- Is typed and double spaced on 8.5″ by 11″ paper

- Has one inch margins
- Is written with 10-12 pt. font
- Is written in Times New Roman font, or a similar style
- Includes a page header containing title of your page in all capital letters

For more information on APA see the video on youtube: https://www.youtube.com/watch?v=pdAfIqRt60c

or visit the OWL Purdue site at: https://owl.english.purdue.edu/owl/resource/560/01/

APA STYLE IN-TEXT CITATIONS

When citing an APA source from your bibliography in the text, the author's name and publication year are put in parentheses in the normal sentence punctuation. A comma is placed between the name of the author and the date. For the citing of a specific page in the cited publication, *p.* with the page number following is used. If more than one page is being referred to, use *pp.* with the referred pages listed afterward.

Example: English Springer Spaniels originated in England in the year 1802 (Harris, 1977, p.28).

• Harris is the author and the information came from a book he wrote that was published in 1977. The information was found on page 28.

Example: English Springer Spaniels were used for hunting (Harris et al., 1977).

• Harris and three or more others are the authors of the cited information. "et al" is an abbreviation for the Latin phrase, *et alii*, which means "and others".

Example: English Springer Spaniels come in black and white colors (*AKC Dog Book*, 1977).

• The information came from a book call the "AKC Dog Book" that was published in 1977.

• If more than one source by the same author published in the same year is used, differentiate the citations as seen in the following example:

Example: (Smith, 1989a) and (Smith, 1989b)

• Consult publication manual of the *American Psychological Association* for more referencing examples.

Example: According to Keith, Snowboarding had progressed enormously in the past 20 years (2010, pp. 25-28).

• If the Author's name is incorporated into the sentence written itself, only the year and the page numbers are necessary in the parentheses.

APA STYLE REFERENCE LISTS

Types of sources are usually put in the category of printed, electronic, or other. Within these categories are many sub-categories. Each of these sub-categories should be cited slightly differently in the APA format. Below explains the proper ways to list these different sources in the reference list, which should be attached at the end of a document.

The reference list should be formatted as follows:

•Double spaced

•Second and following lines of all citations indented about a half inch

•Times New Roman 12 point font

•In alphabetical order

•If the author's name is not available, the organization name can be substituted

Printed Sources

• Book, One Author

-Give the author's last name followed by a comma and initials (don't put the author's full first or middle name).

-Place the copyright date in parentheses, followed by a period.

-Italicize or underline the title, and capitalize only the first work of the title, the first word of the subtitle, and any proper nouns.

-Follow the city of publication with a comma and the two-letter postal abbreviation for the state. You do not have to give the state of large for well known cities such as New York and Boston.

-Indent the second and subsequent lines by five spaces.

Example: Smith, F. (2008). *AKC Dog Book*. Boston: Dawg Books

• Book, Two or More Authors –Add as many authors as the publication has using the "&" symbol between.

Example: Smith, F. & Harris, S. (2008). *AKC Dog Book*. Boston: Dawg Books

• Anthology or Essay Collection

– If there is one editor, use: (Ed.).

Example: Black, S. (Ed). (1989). *The Origin of Dogs*. New York: Dawg Press

• Government Report

– If the report doesn't list an author, use the name of the agency that published it as the author. If it is a United States government agency, use "U.S"

– If the report has an identifying number, place it immediately after the title.

Example: Smith, F. (2009). *Effects of Bombs on America* (U.S. Bomb Survey- Report 12-3456). Las Vegas, NV: U.S. Bomb Survery.

• Corporate Report

– List the names of the individual authors rather than the corporation if the names are given on the title page.

– If the names of the authors aren't given on the title page, list the corporation as the author.

– When the author and publisher are the same, use the word "Author" as the name of the publisher.

Example: PetSmart, Inc. (2009). *Dog Toy Report 2009*. Minneapolis, MN: Author.

• Essay in a Book

Example: Smith, F. (2009). Dog behavior at night. In S. Harris (Ed.), *Dog Behavior* (pp. 30-33). Boston: Dawg Books.

• Pamphlet or Brochure

– When the author and publisher are the same, use the word "Author" as the name of the publisher.

Example: American Kennel Club. (2009). *Adding a New Puppy to Your Family*. [Brochure]. Raleigh, NC: Author.

• Article in Popular Magazine

– Give the full date of the issue, placing the year first.

– Provide the volume number but not the issue number.

– Be sure to italicize the magazine name as well as the issue number.

Example: Smith, F. (2009, May 8). Border Collies. *AKC Gazette*, *28*, 16-20.

• Newspaper Article

– In front of the page number for newspapers, write *p.* if there is one page, and *pp.* for a range of pages.

Example: Smith, F. (1989, May 8). Dog chokes from eating chicken bones. *Star Tribune*, p.B9.

Electronic Sources

• Report Available Only Through World Wide Web

– Because the site doesn't give the date this page was published on the web, use "n.d." meaning "no date".

Example: English Springer Spaniels. (n.d). Springer Spaniel Facts. Retrieved May 8, 2008, from www.ess.com/facts

• CD-ROM

–Include the title (in italics), the date (in parenthesis), the title of the series in italics, the electronic type and the city, state and manufacturer.

Example: "Dogs." (2008). *Encarta 2008*. CD-ROM. Redmond, WA: Microsoft.

• Email

– References to e-mails are only in parentheses in the text and are not included in the Reference list in APA. The citation in the text includes the author's initials as well as his or her last name and an exact date.

Example: (F. Smith, personal communication, May 8, 2008)

Other Sources

• Letter

– Letters are treated in the same manner as e-mails in APA.

• Interview

– Interviews are treated in the same manner as e-mails in APA.

QUESTIONS TO EVALUATE THE AUTHORITY OF THE RESEARCHER'S METHODS

"Questions to Evaluate the Authority of the Researcher's Methods" was written by Joseph M. Moxley

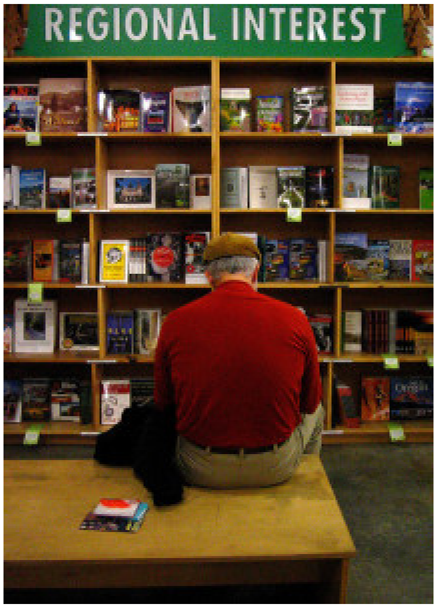
Here are some of the standard questions that academic readers ask when reviewing research reports:

1. Is the source a first-hand or second-hand account? That is, are the authors reporting results of their own research or reviewing someone else's work?
2. Is the source of publication credible? (For example, an essay in the *New England Journal of Medicine* would influence most physicians' opinions about a surgical procedure far more easily than an essay in a biweekly community newspaper.)
3. Do the authors work for research institutes, publications, private companies, or universities? Are they well-known authorities? Can you identify any hidden agendas?
4. Have the authors followed traditional research methods?

DEMYSTIFY RESEARCH METHODS

"Demystify Research Methods" was written by Joseph M. Moxley

Critique research myths that may be impairing your ability to locate, evaluate, and use information.



If you are like most people, you have some definite ideas about what research is. You may envision a pale figure in a white lab coat bent over a microscope or a beaker of bubbling liquid. Perhaps you imagine this isolated and humorless figure engaged in tedious procedures, carefully recorded on graph paper or reduced to inscrutable formulas scrawled in notebooks. Given a few moments, you might expand this vision of research to include a khaki-clad archaeologist digging for relics in the desert or a tweed-jacketed professor studying musty manuscripts in a dusty corner of the library.

These visions of imaginary researchers probably seem disconnected from your personal experience with research. Your first encounter with the term "research" may have been in the form of an English class assignment that required you to write a paper of a specified number of words in which you referenced a minimum number of sources using correct bibliographic citations. You may have spent a few uncomfortable hours in the library searching for material that had some bearing on the topic of your paper, then tried to collect bits and pieces from these sources into a more-or-less coherent whole without committing an obvious act of plagiarism. As you struggled with the apparently contradictory requirements to base your paper on the work of others but say something new, you probably wondered what this assignment had to do with "research."

Five Misconceptions About Research

None of these visions accurately represent the research process. Most people have a distorted picture of what researchers do. They tend to view research as tedious, repetitious, dull, and irrelevant to most of our immediate practical concerns. In fact, research should be the opposite. In order to envision research as interesting, exciting, and fun, you may need to dispel some common misconceptions about where research is done, who does it, and what it entails.

- **Misconception #1**: Research is conducted in a laboratory.
- **Misconception #2**: Research is for eggheads.
- **Misconception #3**: Research has little to do with everyday life.
- **Misconception #4**: Researchers across disciplines agree about what constitutes effective research.
- **Misconception #5**: Researchers think, research, and then write.

Misconception #1: Research Is Conducted In A Laboratory

Whether we realize it or not, most of us have acquired our understanding of research from the images presented by popular culture. Mary Shelley's *Frankenstein*, for example, has provided one of the most dramatic and enduring representations of laboratory research. Contemporary films like *Outbreak*suggest an updated version of the researcher, still white-coated but now isolated from normal social contact by the need for extraordinary anticontamination precautions. Perhaps because it is unfamiliar and, therefore, potentially dangerous, the laboratory offers a more dramatic setting for fictional accounts than other, more accessible research environments.

Of course, some kinds of research require the controlled environments that laboratories provide. The medical research that developed the antibiotics and pain relievers your doctor prescribed that last time you had the flu was conducted in a laboratory. And most of the commercially produced consumer products you use every day–from paint to cereal to hand lotion–undergo testing and refining in some sort of laboratory. But laboratory research is only one particular kind of research.

In reality, research is conducted everywhere. You may have noticed an amiable young person with a clipboard stopping shoppers in the local mall to ask questions about their buying preferences. That person was conducting research. The best-selling account of Lewis and Clark's explorations is the result of research, as is the Thursday night lineup of your favorite TV shows, the design of your computer desk, the pattern of the traffic flow through your neighborhood, and the location of the nearest restaurant. None of the research that produced these results was conducted in a laboratory.

If, for example, you are interested in investigating how people behave in natural situations and under normal conditions, you cannot expect to gather information in a laboratory. In other words, the questions researchers are trying to answer and the methods they select for answering these questions will determine where the research is conducted. Research is carried out wherever researchers must go to collect the information they need.

Misconception #2: Research Is for Eggheads

Just as images from popular culture have influenced our ideas about where research is conducted, pop culture has also created some persistent stereotypes of researchers. In addition to the rather demonic Dr. Frankenstein, you may also think of friendlier, if slightly addled eggheads like the professor on Gilligan's Island, the Jerry Lewis or Eddie Murphy version of *The Nutty Professor*, or the laughable Disney character, Professor Ludwig von Drake. These images all reinforce the notion of researchers as absentminded eccentrics, engrossed in highly technical, specialized projects that most of us cannot understand.

However, just as research can be carried out almost anywhere, anyone can be a researcher. Asking questions about your friend's new romance, gathering evidence of who she was seen with, making deductions based on her new style of dress, and spreading the word about your conclusions is a form of research. These activities don't sound like research to most people because they have not been expressed in academic language. But what if the activities were organized into a research project titled "The Psychosocial Determinants of Gender Relations in Postmodern Dating Culture: A Psychoanalytic Approach"? The point, of course, is not to suggest that gossip qualifies as legitimate research but rather that everyone employs the investigative and exploitative elements of research to make sense of their lives. Research is not just for "eggheads."

Misconception #3: Research Has Little to Do with Everyday Life

While the first two misconceptions concern where research is done and who does it, the third misconception misrepresents the subject matter of research. Because some research focuses on very narrow questions and relies on highly technical knowledge, people often assume that all research must be hard to understand and unrelated to everyday concerns.

However, research need not be difficult to understand, and research is an activity that is defined by its method, not by its subject. In other words, it is true that some significant research is difficult for nonspecialists to understand. Yet all research is valuable to the extent that it affects everyday life.

Watch this video online: https://youtu.be/MSShNSgOAR0

Research takes many forms, but it always entails a search, conducted carefully and diligently, aimed at the discovery and interpretation of new knowledge. Thus, how you go about gathering information, analyzing data, drawing conclusions, and sharing results determines whether your activities qualify as research. Sometimes these activities will be informal, spontaneous, and intuitive, as when you infer that your friend has a new romance or when you read reviews in a computer magazine before purchasing new software. In school and in the workplace, where results are disseminated and evaluated by others, research is likely to be more formal. Regardless of its final form, however, whenever you systematically gather information for the purpose of generating new knowledge, you are conducting research.

Misconception #4: Researchers Across Disciplines Agree About What Constitutes Effective Research

Academic disciplines—for example, mathematics, psychology, physics, engineering, or business—have different ways of conducting and evaluating research. An anthropologist's account of kinship patterns in a tribe of Native Americans bears almost no resemblance to a cognitive psychologist's investigation of sensory responses to light stimuli. Even within a particular academic discipline, researchers may disagree over what makes good research.

Not only do people disagree about appropriate methods of research, but their ideas may change over time. Conceptions about knowledge, available technologies, and research practices influence each other and change constantly. For example, capturing gorillas and studying them in cages might have been considered good research in the 1920s. The work of later researchers like Dian Fossey, however, demonstrated how animals might be better understood in their natural environment. Today, research based on observations of wild animals in captivity would gain little support or interest.

Because no one way of doing research is equally acceptable to all researchers in all academic disciplines, researchers must select the methodology that will be most persuasive to their readers.

Misconception #5: Researchers Think, Research, and Then Write

When you first begin a research project, you are wise to integrate writing activities with research activities. Unfortunately, many people wrongly separate the research process from the writing process. They naively assume they should first think about a topic, identify a research question, research it, and then—after all of the excitement is drained from the project—write it up. Rather than using the generative power of writing (that is, our ability to generate new ideas by writing) to help define and energize a research project, some people delay writing until after they have completed the research. Waiting to write about a research project until you're done researching may waste your time and can result in dull, listless prose.

You can save time and ensure that your research is focused by writing summaries of others' research, by writing drafts of your research goals, and by writing about the results you hope to find before you find them. In the process, you will eliminate vague or contradictory ideas you may have about your project.

Incorporating writing into your research activities helps you identify your rhetorical situation and define your readers' priorities. Writing about your project in its early stages gives you time to develop ways of describing your research that are comprehensible and interesting to your audience. As you redraft and revise, your writing—and your thinking—will become clearer, more precise, and thus more credible.

We can all take a lesson in the importance of making your research your own from Gary Starkweather, who built a laser printer that made billions of dollars for Xerox and helped change the way business is done all over the world. The experience taught him several things:

It's better to try and fail than to decide something can't be done and not try at all. Research is a place where failure should be, if not encouraged, at least viewed as a sign that something's happening. Uncertainty is bad for manufacturing, but essential for research.

Believe in your own ideas and don't trim your sails just to be popular with your colleagues. Howard Aiken, inventor of the first digital computer, said: "If it's truly a good idea, you'll have to jam it down their throats."

Be open to suggestion. Often someone who hasn't stared at a problem until they went cross-eyed has the fresh view that can solve it. The best way to a breakthrough is constant small improvement — those waiting for the big break are just lazy; they're waiting to be teleported to the top of the hill instead of walking.

Source: Gary Starkweather Profile

INTELLECTUAL PROPERTY

"Intellectual Property" was written by Joseph M. Moxley

Identify the ethical responsibilities of authors. Understand intellectual property and copyright.

In order to avoid inadvertent plagiarism or academic dishonesty, you must understand intellectual property and copyright. In our digital age, where users can easily download information, we must consider these issues from an ethical perspective as well.

Intellectual Property

"*The ease of saving images off of the web has caused a very real problem for artists and content providers alike. If you have placed your intellectual property on the web chances are that sooner or later someone is going to 'borrow' a little bit of it… without your permission.*" -Linda Cole

Intellectual Property (IP) refers to a document or ideas owned by authors, publishers, and corporations. IP is anything that reflects an original thought that is written down or expressed in any media, such as word-processed documents, emails, Web sites, and music. Simply put, what you create is your "intellectual property." Graphics, songs, poems, pictures, and essays are examples of "properties" that are owned by their creators, properties that are subject to U.S. and international copyright laws.

Intellectual Property Resources

Copyright

Copyright refers to the laws that protect your ownership of property (whether or not you file a formal copyright application). Plagiarism refers to the theft of someone's intellectual property. According to the U.S. Copyright Office,

Copyright is a form of protection provided by the laws of the United States (title 17, U.S.Code) to the authors of "original works of authorship" including literary, dramatic, musical, artistic, and certain other intellectual works. (U.S. Copyright Office, Copyright Basics, Circular 1).

Copyright refers to the laws that protect the creator's intellectual property. Copyright laws allow you (as the creator) certain rights. You can:

1. Reproduce the work in copies such as books or CDs.
2. Prepare a derivative work. For example, if you write a book or short story, only you can create a play or movie from that story. (Of course, you can sell these rights if you so desire.)
3. Distribute copies of your work to the public by sales or other methods. You get to perform or display the work publicly (e.g., plays, music, or dance performances).

Copyright Resources

Watch this video online: https://youtu.be/TzV8GAtK0A0

- iCopyright : "Our goal is to put the iCopyright icon on every Web page—and give it intelligence. It will "know" about the content it sits on. It will help publishers protect, license, and track their intellectual property. It will give credit to the people who created it. It will help Internet users obtain the proper license to reprint or reuse copyrighted works in the format they desire."
- Privacy in the Online Classroom: Article that explores reasons to limit access and restriction methods
- Chilling Effects Clearinghouse : Written by students at UC Berkeley's Boalt Hall School of Law, "These pages will help you understand the protections intellectual property laws and the First Amendment give to your online activities. We are excited about the new opportunities the Internet offers individuals to express their views, parody politicians, celebrate their favorite movie stars, or criticize businesses."

- Copyright : Intellectual Property in the Information Age: A Classroom Guide to Copyright from Janice Walker, University of South Florida, Dept. of English.
- Intellectual Property Law: This site "provides information about intellectual property law including patent, trademark and copyright. Resources include comprehensive links, general information, space for professionals to publish articles and forums for discussing related issues."
- Gigalaw.com : Excellent resource for information on intellectual property and copyright.
- Copyright Myths : Wonderful, easy-to-understand, rich essay on copyright. If you're going to read just one essay on copyright, read this one!

In most colleges and universities, there is an Office for Institutional Research (or a department that is named similarly). When you conduct research for a project leading to your degree (like your doctoral research), you generally need to ask permission from this Office to proceed. They will ask for your research instrument and evaluate the ethics in your study.

PROBLEM ANALYSIS

PROBLEM ANALYSIS OVERVIEW

A Problem Analysis investigates a situation/problem in order to allow the researcher to understand more fully the problem, in order to recommend practical solutions for solving it.

In addition, a Problem Analysis determines the degree of the problem and if the problem is a genuinely related to the specific site under investigated. For example, a workplace can request that a study be conducted to estimate the cost and time involved in installing a new lighting system because a number of employees have filed insurance claims because of eye problems. Before investigating the cost of lighting, a problem analysis would determine the degree that the lighting is affecting employees or if the lighting is not actually the problem. It may be that, after reviewing records, the eye problems are isolated to workers in one particular shop. In this case, the problem analysis study would recommend solutions related to this particular area.

However, it could also be determined, after further investigation focused on interviewing the workers in the shops, that the lighting was not the cause of the problem. Instead, the interviews determined that the workers were staying up all night studying for classes that they were taking. Thus, the problem analysis would report that the lighting was not the cause of the problem, saving the company time and money. (This may be the case when you investigate your problem. However, if it is, you will need to choose another problem in order to complete the research portion of this class.)

Problem Analysis Procedure (with Format Used to write A Problem Analysis Report)

PROBLEM

Identify the problem. State and describe the Problem.

BACKGROUND

Begin by identifying the name and position of the person requesting the Problem Analysis. The person requesting the Problem Analysis needs be an administrator or a person who holds a position in the company that can approve your collecting of internal data, such as conducting interviews with employees, reviewing company records, or conducting an onsite investigation. Give some background of the company/agency that is experiencing the problem, such as the company's type of business, how long they have been in business, how many employees the company employs, etc. End the section with a rationale of why the person suspects there is a specific problem.

RESEARCH

The research section opens with a brief introduction to the internal investigation of detailed areas of research. The introduction must reference all areas of detailed research, in the exact order that they are discussed in the detailed section. One area of the investigation must be employee interviews. Other areas may include items such as reviewing company records, investigating supply rooms, or conducting site investigations.

FINDINGS

Report the results of your investigation. Discuss each area of research, in the same order that you investigated specific areas. You must have parallel order, so the reader has easy access to reference the information.

CONCLUSIONS

From your findings, discuss the outcomes, what you determine are facts. Emphasize that there is a problem, identify the problem and how your investigation supports your decision, or emphasize that there is not a problem, identify the suspected problem and how your investigation supports you decision. Note that you need to have a problem for this assignment. Therefore, if you determine that there is not a problem, you will need to do another Problem Analysis.

RECOMMENDATIONS

Identify 3 recommendations that you believe will solve the problem. Your Recommendations section will begin with a preface statement. Next you will identify the recommendations. Identify the number of each recommendation, followed by the recommendation. Be sure to begin each recommendation with an action verb (using the understood you).

See the following example of a Problem Analysis document: Problem Analysis Report for Teldon Facilities

PLANNING REPORTS (ANNOTATED)

Notes have been added to the following reading in order to show how the selection relates to the Problem Analysis Report Assessment Project. See markers at the end of sentences to access the added notes. The markers identify the notes that are presented at the end of the reading.

Planning Reports

The first task to be completed before starting a report is to determine what needs to be addressed. According to Paul V. Anderson's text, *Technical Communication: A Reader-Centered Approach*, the basic superstructure for a report and the questions to be answered in each section are the following (p. 541):

- Introduction – What will the readers gain from reading the report?
- Method of obtaining facts – Are the facts reliable?

- **Facts** – What have you found that is useful for the readers?
- **Discussion** – How do the facts work from the reader's point of view?
- **Conclusions** – Why are the facts significant to the readers?
- **Recommendations** – What do you think the readers should do?
- **Attachments**

This is a basic superstructure, not an outline. Some of these elements may be in a different order, addressed together, or completely omitted. An effective report includes these elements to improve the usability and usefulness of the report. If the report isn't easy to navigate, the persuasiveness of the report will be lost and/or it will be thrown out.

Introduction

For some reports, the introduction may only need to be a sentence or two, but for longer more extensive reports it may take multiple pages. The introduction is where the objective of research is stated and briefly explained. An introduction should tell the reader what the main focus of the report is and in doing so tell the reader why the research and report is important for them to read. Essentially we answer the question "What will we gain from reading this report?" **[b1]** The introduction should explain the problem that the report is aiming to solve.**[b2]**

For longer reports, your introduction may take multiple pages. Such things such as 1) What problem your report solves, 2) what activities you performed toward solving that problem and 3) how your readers can apply your information to their own efforts towards solving the problem should be answers within the introduction. Also, ensure that within your introduction your main points are stated.

The main points within most introductions will include your major conclusions and recommendations. Although you should discuss these fully at the end of your report, your readers will appreciate a brief summary of your main points in your introduction.

Examples:

- Beginning of report:"In this report, I present the information you wanted to have before deciding whether to place new university stables on next year's list of major funding drives." (Anderson, 2007, p.542)
- Summarizing main points: "Overall it seems that the stables would make a good fundraiser project because of the strength of the current programs offered there, the condition of the current facilities, and the existence of a loyal core of alumni who used the facilities while undergraduates." (Anderson, 2007,p. 543)

In addition, the introduction may explain how the report is organized, outline its scope, encourage openness to your message, and provide important background information for your readers to understand the rest of the report.

Method of Obtaining Information

The purpose of this section is to show the readers how you obtained your information. Stating where you obtained your information will help to tell the readers if your research is reliable. Your method will help readers to understand the uses and limitations of your research.**[b3]** A good, descriptive method section will allow anyone else to recreate your experiment exactly and obtain the same result. Be very detailed in the method section and reread it as if you were trying to do this experiment for the first time based on your method section.**[b4]**

Results

The results section is the most valuable part of the report to readers. The whole point of research is to find the results so they need to be conveyed clearly and effectively.[b5] A results section may likely contain tables, graphs, text, and pictures. Include anything that is important in showing the reader what was found through research. Do not include extraneous information as it will only clutter the results section. Make sure you check the date of your information, where it comes from, and who the source was. Keep the prose simple and descriptive in this section, leave the analysis of the results for the discussion section.

Discussion

The discussion section is where you interpret your results.[b6] Your results section may be nothing but tables and graphs with a few accompanying sentences. Your discussion section is where you make sense of those tables and graphs and explain how they relate to the problem or question the report is trying to research. The discussion also explains what the results mean to the company. In some reports, mainly shorter ones, the discussion and facts sections may be put into one to make reading the report shorter and easier.

Conclusion

The conclusion section explains why the results are important and how they affect the reader. It is a good practice to summarize your facts and restate the problem so the reader clearly understands the importance of your findings. This is your chance to tell the reader how they or the company will benefit from your findings. The conclusion usually does not make recommendations for action but will inevitably get the reader thinking about it.[b7]

Recommendation

Here is where you state the purpose of the report and what you want to be accomplished after the readers are done with your report.[b8] This section may not be in some reports because the decision to be made may be beyond your knowledge and power.

Reader's Six Basic Questions

When reading your report, readers will ask six questions that revolve around one goal: does the information and ideas that you provide offer a guide for future action? Examine these questions while pretending you are the audience you're writing to. Ensure your report answers the questions in order to create a well written report.

- **What will we gain from reading your report?**

Readers in the workplace only want to read information relevant directly to them. Therefore, you need to make sure that you explain how this information is relevant to the readers responsibility, interests and goals.

- **Are your facts reliable?**

Readers want to ensure that the facts you provide will give a sound basis for their decisions or actions.

- **What do you know that is useful to us?**

The readers are not interested in all the information you know about a given subject. They only want to know information that is pertinent to them. Especially ones they can put directly to use (Example: The most important sales figures for this quarter are as follows:….")

- **How do you interpret those facts from our point of view?**

Facts within relevancy are meaningless. in order to make facts meaningful, people must interpret them and identify the relationships or patterns among them. Usually Readers want you to do this form them, rather than leaving the work up to them.

- **How are those facts significant to us?**

Readers also want you to go beyond just the interpretation of the facts, they want you to explain what these facts mean in terms of their responsibilities, interests and goals.

- **What do you think we should do?**

Because you have studied the facts you're presenting in detail, readers will make the assumption that you are qualified to make a recommendation.

These questions are general in order to be applicable to a variety of reports. Some reports will take very little to answer these questions, however in larger reports writers often need to take hundreds of pages to answer these question. Readers often seek answers to these basic questions by asking multiple more specific questions. However, these six questions are the general ones that can be applied to your work.

Revision Checklist

Once you have written your report review it using the checklist.

Introduction

1. Does it clearly state the topic of the report?
2. Does it tell your reader why you are writing about this topic?
3. Does it persuade the reader to continue reading?
4. Does it provide background information for the reader?

Method

1. Does it explain the process of obtaining the facts and ideas within the report?

Facts

1. Does it present clear and specific facts?

Discussion

1. Does it present the generalizations from the facts that will be meaningful to the reader?

Conclusions

1. Does it explain the significance of the facts?

Recommendations

1. Does it tell your reader what they should do next and why?

References

Anderson, Paul V. *Technical Communication: A Reader-Centered Approach*. 2008. Thompson Wadsworth Publishers. 2008. Pages 541-545.

[b1]This information relates to the Background section of the Problem Analysis Report.

[b2]This is the Problem that you identify at the Beginning of your Problem Analysis.

[b3]This refers to the introductory paragraph that begins the Research Section of the Problem Analysis Report.

[b4]This is refers to the Detailed Research that is presented in the Problem Analysis Report.

[b5]This refers to the Findings Section of the Problem Analysis Report.

[b6]This refers to the Findings Section of the Problem Analysis Report.

[b7]This refers to the Conclusion Section of the Problem Analysis Report.

[b8]This refers to the Recommendations Section of the Problem Analysis Report.

SUMMARIES AND RESPONSES

SUMMARIES AND RESPONSES

To learn about writing effective summary and response essays, read this article from Colorado State: http://writing.colostate.edu/guides/teaching/rst/pop5i.cfm

PROPOSAL

THE PROPOSAL OVERVIEW

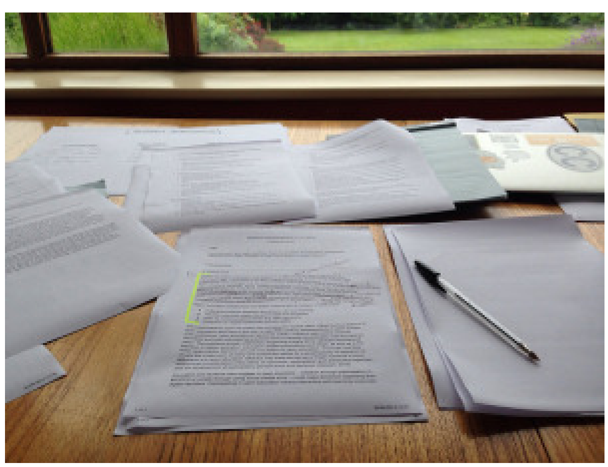
Learning Objectives

Module Six: Proposals

- Learn about the purpose of proposals
- Learn about the components of propoals
- Learn about the ethics involved in creating proposals
- Learn to write your own proposal

A Proposal is a document that outlines a project the organization or department wants to undertake. It is like a blueprint for the project and includes key components that give the reader a clear understanding of what is to be done, how much it will cost, how it will be accomplished and by when. Proposals make ask for funding or they may be for approval from the administration of the organization. Either way, proposals both seek to inform and persuade.

Components of a Proposal
A basic Research Proposal have the following sections: **Problem**, **Solution**, **Research**, **Implementation**, **Method of Operation**, **Timelines**, **Costs**, and **Benefits.** These different sections are presented as follows:



Problem section
Introduce the problem. State and discuss the problem. In the discussion, define and detail the 5 W's (who, what, where, when, and why).

Solution section: discuss the solution. Since your problem is unique, the research will not present the solution to your problem. However, the research will discuss similar problems and the solutions to these problems. This research will provide you information with which to formulate a solution that is relative to your specific problem.

Research section: If your proposal requires it, research your topic. Your sources must be current, within the last 2 or 3 years. Therefore, you need to research journals or newspapers for published articles, published interviews, published speeches, and other current materials You cannot use books. Information in books is usually outdated.

You will need at three (3) or four (4) documents that address a problem similar to the one you have chosen. Although you will not find your exact situation/problem, you will find documents that refer to similar problems. These documents will have similar populations, environments, workforces, etc. For example, if you propose to implement a shuttle bus service from the parking lot to work places for a more efficient and effective way for people to report to work, you may find documents from other workplaces, with circumstances similar to yours, which experienced similar problems and solved them by providing shuttle bus services.

The research will provide you with information that validates your topic as a **problem** and your **solution,** as well as validating your proposed **implementation**, **methods of operation**, **costs**, and **benefits** as credible.

Note that you need at least three (3) references/sources for your proposal.

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

Methods of Operation section: This section will tell how the solution will fit into and be used as a functional part of the day to day operation of the organization. Detail the date you expect to launch the solution into the operation the company, the place from where the solution will operate, how it will operate, and who will be involved (identify their responsibilities, duties, and any titles, certifications, degrees, and other qualifications needed).

Costs section: This section tells how much the solution will cost. Detail the cost. Report costs in dollar amounts. This should not only include equipment and materials, but also overhead costs and additional personnel costs that might be involved.

Timeline section: Although projected dates may be included in the methods of operation section, you may want to set out milestones and timelines in a separate section to provide detail for your administration. It also provides opportunities to report on the status of your project and keep your administration informed, as well, as keeps staff involved in the proposal on task.

Benefits section: This section explains the benefits of the solution. There is little reason why your proposal should be accepted if there are not meaningful benefits. Thus, be sure to show that your solution will result in substantial benefits for the organization, company, etc.

Reference page: The reference page is a separate page that references your research. Remember to use the APA style of documentation.

Appendices: The Appendices include the full summaries and responses, the Problem Analysis, and any information that is meaningful to the proposal.

See the following example of a Proposal: Sample Student Proposal

- Proposals to funding agencies also may include measurable goals and objectives, letters of support for the organization, an executive summary and a description of deliverables. More on these types of proposals under Proposals to funding sources.

PREPARING BUSINESS PROPOSALS

Objective of the Proposal

In a proposal, you make an offer in attempt to persuade the reader to accept it. In exchange for money, time, or some other consideration, you will give the reader something they want, create something they desire, or do something they wish to have done.

Business proposals have two objectives: To persuade and to protect.

1. Persuasion comes from the wording of the proposal. By definition, a proposal is an offer that needs to be accepted by the reader in order to succeed. If the proposal is not persuasive, you will not get what you want.
2. Proposals serve metaphorically and often legally as a **contract**, so they need to protect you. If they are worded vaguely or they exaggerate promises, clients can take legal action if you do not perform the expectations stated. You also need to make sure you comply with any state laws when writing a proposal.

Expertise in writing proposals requires two things: you must be able to present your offer in the most appealing way possible, while carefully defining the limits of your offer so that no one thinks you are promising more than you can offer.

Making a proposal appealing without promising more than you can offer can be difficult, since you need to set limits on your persuasiveness.

Variety

There are many different kinds of proposal situations.

1. You may need to write for a reader who is employed in your own organization.
2. Your proposal may be your own idea, or the idea of your reader.
3. Your proposal may stand alone or compete with other proposals.
4. Your company/group may have to proofread and approve of your proposal before you submit it to your readers, or you may have to send it directly to them.
5. Your proposal may be heavily regulated for content and structure, or you may have free range on what you think it should sound like.
6. Finally, the proposal can be evaluated in a plethora of ways.

Readers

When you write a proposal, you are representing yourself, your idea, and your company. You are asking your readers to invest something (time, money, other resources), because you can not provide it yourself. The readers will review the proposal with caution because they may have limited supplies and if your idea does not seem well thought out or effective, they will not consider it. If your business proposal is competing against others, the readers will need to consider each one in order to pick the best.

Point: If your business proposal is not convincing, respectful, or well-written, it will not be considered.

Writing a Business Proposal

Business proposals need to be organized. There are many different ways to write a business proposal. Asking the reader to make a decision whether to invest in you or not is a very important aspect and should be incorporated in every business proposal. For the reader, investing in you takes their limited resources and puts them in your hands. Therefore, business proposals should be precise and address many different issues the reader might have such as money, time, space, and costs. In the overview we were given typical sections for a proposal. Below is a slightly different approach, but one that is generally accepted also.

Frequently Asked Questions

Most of the time, readers want to know three things when they consider a proposal: **Problem, solution, and cost.**

The problem, need, or goal of your proposal should be clearly addressed in order to let the reader know why the proposal was written and why they should be interested in it. A properly written problem/need/goal will add clarity to your proposal.

If you provide a problem, be sure to describe what actions you plan on taking to solve the problem. The reader wants to make sure that your solution will work effectively and if it is worth investing in.

Cost is also important. The reader will consider the problem and solution and determine their answer on what their financial situation is. A good business proposal can flounder because the cost may be too high.

Capability can be considered as well, if you agree to perform some work. If you are being paid, readers want to make sure that you will work hard.

Strategy of Conventions

A business proposal needs to have a framework. Usually, there are ten topics that need to be addressed. However, all proposals need to have the following:

Introduction, Problem, Solution, and Cost

The following is a detailed description of the ideal sequence of thought you should lead your reader through:

• In the introduction, the reader should learn what you want to do.

• You should present a problem, need, or goal to the reader. This should persuade the reader that the problem is important to them.

• The plan of action to solve the problem, meet the need, or achieve the goal should give objectives and solutions in order to persuade the reader that the plan of action is effective.

• Giving methods, providing a schedule, showing resources, and describing qualifications should persuade the reader that you are capable of planning, managing, and completing the proposed solution.

• Explaining how the benefit exceeds the cost will persuade the reader that the proposed action is reasonable.

By including at least these four sections, you are leading the reader through a persuasive argument on why your proposal deserves to be considered. If you divide the proposal up into several sections, it is more efficient for the reader to concentrate on the sections that are more important and skim through the other sections, instead of having to read the whole thing and look for key points.

Superstructure

The superstructure provides a framework for writers to organize their proposal. Writers can use it as a guideline, but note that it is not mandatory for writers to include every single element listed below in their proposal. Sections can be combined or even briefly stated in other sections.

Introduction

In the introduction, you want to focus on what you are announcing. Although you may want to reveal the full description in the beginning, it may be better to make the introduction brief and allow the full description to be revealed throughout the letter. This way, readers can get a glimpse of what you will be talking about without you explaining it several times (in the beginning and later on).

Problem

After the introduction, you should present your readers with a problem, need, or goal that is significant to them. It is important to summarize the problem from the readers' point of view, otherwise they may think that it doesn't affect them and become disinterested. Stating a problem can take some research. Sometimes, readers may provide a problem for you (like when a firm writes your company a letter explaining a problem and how you should solve it). Other times, readers may still give you a problem, but be vague. Other times, you may have to define the problem yourself, based on your own frustration or helplessness. Before you consider something to be a problem, try to talk about it with a potential reader to see if it is worth writing a business proposal about. If the feedback is positive, you will know you have more means for continuing the proposal.

Objectives

After you describe your problem and before you state your solution, tell your reader what the goals of the solution are. The objectives help to connect the problem and solution together. Objectives should be brief or listed, and should tell how the action of the solution solves the problem.

Solution

How do you want to achieve the objectives that you have listed? Your solution should answer this question. To do this, you must address each objective and persuade your readers that your solution is the best way to achieve the objectives. These statements are only necessary when they are not obvious to the readers. This can be the case when your readers are coworkers and are aware of problems around the workplace.

The solution's description can be tricky because you may find that you are promising more than you can deliver. The best way to counter that is to be very specific (i.e., what are the limits of the program, what are the capabilities, etc.) Make sure that everything you are not sure you can perform is clearly noted as a possibility, not a promise.

Method

After you propose a solution to the problem, readers will want to know the steps you will take to make sure the solution is carried out. How will you produce the result? These are the aspects that most readers will look for:

1. Facilities
2. Equipment
3. Your schedule
4. Your qualifications
5. A plan for managing the proposed project

Sometimes, explaining the method is superfluous. If everyone is already familiar with your methods, you do not have to give a detailed explanation. However, make sure your readers know what you are talking about before you assume that they will know everything about your project.

Resources

If your plan requires equipment, facilities, or other resources this section should be included. Tell your readers what you need and why it is needed. If no special resources are required, you do not need to include this section in your proposal.

Schedule

Schedules help provide readers with three things. First, they give readers a deadline so they know when to expect a final result. Second, schedules can be critiqued by readers to make sure they are feasible. Third, a schedule is a good way to keep track of how a project is proceeding.

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

Qualifications

A qualifications section is a good place to explain the talent and experience of yourself and your team members. Depending on your readers, this section may be small or large. As with all business documents, you need to be honest when you write your qualifications. If you think that you need to learn new programs, remember that the time and money spent gaining experience can take away from the project's completion.

Management

A project's success depends on its management team, and readers are impressed if you can describe your project management structure in your proposal. By identifying each person on your team and explaining what their tasks and responsibilities are, you can coordinate your work efficiently. It is very helpful for each person to know what they will be doing beforehand so there won't be many problems concerning leadership and time management further into the project.

Costs

Since your readers are investing their money and time into your project, it helps to know how much it will cost. A budget statement is good for organizing your expenses, but you should also think about the amount of time you and your team members will spend on the project. You may also include how much money your project will save the readers to make it seem more appealing.

Design

Believe it or not, design DOES matter when writing a business proposal. You want to make the proposal appealing to the readers. If the reader is looking at two proposals and one has graphics and color on the front cover and one has just text, which one do you think they will want to read first?

Revision Checklist

Now that you know what information is required, you can prepare a checklist to make sure that everything is covered and you are not missing something that may be essential.

Introduction

1. Does it state the purpose clearly?
2. Does it provide sufficient background information?
3. Does it foreshadow the rest of the proposal to help guide the reader?

Problem

1. Does it explain the proposed action's need or goal?
2. Does it persuade the reader that the problem is important to them?

Objectives

1. Do your objectives relate directly to the problem?
2. Can you present them without going into the solution?

Solution

1. Is it understandable when it is being described?
2. Is it persuasive in saying that it will achieve the objectives?
3. Does it effectively show that it is the most desirable way to achieve the objectives?
4. Does it offer protection to you and your team members/employer by only promising things that you can deliver?

Method

1. Are the steps in the method described clearly?
2. Is it persuasive enough for your readers to be convinced that it will work?

Resources

1. Can you persuade the readers that you have them or can attain them?
2. Can you clearly identify all of the resources you can supply, protecting you and your employer?

Schedule

1. Does it say when the project will be completed?
2. Has your work been reasonably scheduled?
3. Does the schedule clearly state what you must do to meet your deadlines, protecting you and your employer?
4. Have you included a schedule chart (if it makes your proposal more persuasive?)

Qualifications

1. Can you persuade your readers that you can complete the project successfully?

Management

1. Can you persuade your readers that your team is organized effectively?
2. Have you included an organizational chart that illustrates the hierarchy of your team members and their responsibilities?

Costs

1. Have you presented all of them?
2. Are they reasonable?
3. Are all of your costs included, protecting you and your employer?
4. Do you have a budget table?

Conclusion

1. Are all of your key points summarized?
2. Have you ended on a positive note?

FRONT MATTER: CONTENTS, LISTS, AND MORE

Front matter is an extremely important element to writing any report. Whether its for a specific company research or for other personal reports. Specifics such as the size of the font, font type, formatting, and organization also need to be taken into consideration when creating the front matter of your report.

The first few pages of a report are essential. An abbreviated abstract will assist the reader in finding what the main points of the report will be about.

These elements are often referred to as “Book Elements”, as they are commonly found in larger works.

Important considerations should be made on how your publication will be used. To increase usability, you should consider how your readers will be using the report, and what they will be looking for, and focus on making this easy to find.

Covers

A cover page is a very simple, precise, brief way to introduce your report to the reader. This should contain:

- A large specific title
- Company name
- Name of the author(s)
- Date of the report
- Relevant picture

The use of a relevant picture or two can help reinforce the subject of the report. One goal of the cover page is to be informative and scalable because once it is filed, it will need to be easy to pick out of a stack of other reports. A second goal is to make the report stand out. If the report cover looks bleak and dull, the reader will start reading with a negative outlook. Think of the cover page of a report like what is worn to an interview. The cover page is the first thing that is seen. It will be the foundation for first impressions, for better or worse. One easy way to make the report stand out is to use a theme for the report that your audience can connect to. For example, if a report is written to McDonald's, the cover page will be in yellow and red with the golden arches as a picture. It is important that the reader believes that he or she is the most important aspect of the report.

Title Page

A title page will be very similar to your front cover **and it repeats the information on the cover, but adds more important details.** This may include a report number, date, title, the names and addresses of authors, specific contract information, the name and address of the supervisor, and the name and address of the organization who supported the report (Technical Communications, p.312)

The title page is an opportunity to provide specific, detailed information about the document and its authors to its intended audience.

Sample Draft

(Document number) 10-1 (Date) March 7, 2010 (Title) The Madden Project

By (Author) John Manning Brett Peterson 1234 Touch Down Lane Miami, Fl 57897 Madden Inc
And

(Place to Contact) Madden Inc. No. 54321
Project officer

(Who's in charge) Ari Washington Manager of Exploratory Research 6667 Prime Time Court Mendota Heights, MN 55178
(Who paid for the project) Football Cooperation The Department of Research and Development 1812 Legacy Drive Columbus, OH 99121

Sample Draft

Executive Summary or Abstract

Abstracts are an important element in the business world. This will help a manager learn the main points of your document, and help the reader determine if the entire report is relevant to what they are looking for. Charts and graphs that show factual data are helpful visuals that can be implemented into this section of the document.

Major topics should be mentioned, but not the main points of each. This will be where most of the key words of your report are used, and will be a preview of the information to be covered. Often, summaries are used when representing a report in a database, so illustrating the main topics of your report in this segment can be useful.

The abstract should always be a page or less, especially in informative situations. Typically an abstract should not be more than 15 percent of the total report.

According to the Technical Communications text,

- Identify the intended audience
- Describe Contents
- Tell the reader how the information is presented

Table of Contents

In any report or analysis, a table of contents is helpful to navigating the report. Some lengthy reports may also include a table of graphs and/or a table of figures.

In addition to the summary, this will allow the reader to quickly scan the topics you have covered. This will also help if they are looking for something particular. Use of proper headings and sub-headings give readers a good overview of all the information contained in your document.

Table of contents are usually extremely generic and similar to each other. This is for ease of navigation to the user. Table of contents can be formatted from Microsoft Word.

EXAMPLE:Chicago Manual of Style: Table of Contents: Formatting

Lists of Figures and Tables

This is a useful section to include because your images or tables are referred to repeatedly throughout your text. Include Figures and Tables lists when your article is over about 15 pages. This also allows for easy comparison between images when they are grouped together.

ETHICS AND TECHNICAL COMMUNICATION

As you put together professional documents and begin working in the "real" world, you must understand what could easily lead to your downfall in your professional workplace. The Paul Anderson text claims that at work in a professional setting, there at least three major "sources of guidance":

1. The code of ethics already developed by your field's professionals,
2. The ethical code set in place by your company, and
3. Your own personal ethics.

Some companies have decided to have employees keep their personal ethics at home. In reality, companies that try to keep personal ethics at home find that employees are occasionally asked to perform actions that they do not condone at home. In professional settings we would like to assume that companies would not act unethically, so why should we even pay attention?

The truth is, companies do act unethically whether it is disposing of toxic waste incorrectly or price gouging to name a few. The same goes for writing professional documents. You should keep them clean and standardized to save yourself from damaging a possible job opportunity and the name you represent.

Stakeholders

When writing any professional document, it is important to identify the potential stakeholders. A stakeholder is anyone who will be affected by what you are intending on writing. How you choose to word your document or even the choice to write the document becomes an ethical matter to stakeholders. It is crucial to consider your main objective(s) before writing. If you are writing a document that would be used to harm other living things (like writing a manual for a handgun) you have to weigh the implications to all stakeholders impacted. According to the Paul Anderson text, there are three types of stakeholders: direct, indirect, and remote.

Direct

The direct stakeholders are those initially impacted by what you write. For instance, if you are writing about opening a new waste disposal area, the stakeholders clearly include the company you are writing to. However, disposal companies that might use this waste area in the future are also considered direct stakeholders. Their future business will be impacted based on whether your proposal is accepted or declined.

Indirect

The indirect stakeholders are those that are not impacted until a later time. Using the previous example of the waste disposal, citizens in the area would be indirect stakeholders. The stakeholders don't necessarily need to be people. The nearby eco-systems would be indirect stakeholders to this same proposal. If toxic waste is dumped there, it would harm the animals, rivers and plant life nearby.

Remote

Finally, the remote stakeholders are not affected until far into the future. One example following our hypothetical waste disposal area, is future generations. While it may seem far-fetched, historically, there have been instances where toxic or poisonous things have been disposed of incorrectly and the run-off that went into lakes and streams caused birth defects. While this is remote, it must be considered when writing a document.

Ethical Writing

Once on the job, you will be assigned to create many documents throughout your professional career. Some may be simple and straightforward, some may be difficult and involve questionable objectives. Overall, there are a few basic points to adhere to whenever you are writing a professional document:

- Don't mislead
- Don't manipulate
- Don't stereotype

Don’t mislead

This has more than one meaning to the professional writer. The main point is clear. When writing persuasively, do not write something that can cause the reader to believe something that isn’t true. This can be done by lying, misrepresenting facts, or just “twisting” numbers to favor your opinion and objectives. This is clearly different from the resume ethics. Once you are on the job, you cannot leave out numbers that show you’re behind or over-budget on a project, no matter how well it may work once it is completed. Facts are facts and they must be represented in that way. Be cautious when using figures, charts and tables, making sure they are not misleading. While this may seem easy to read about, when the pressure is on and there are deadlines to meet, taking shortcuts and stretching the truth are very common.

The other, less frequently used component is plagiarizing. While it may seem like this is something students learn to avoid after they graduate, it remains an important guideline for all professionals. Plagiarizing is misrepresenting the source or facts, most commonly when you claim the ideas you are writing about are yours. When you are researching professional documents, make sure you are using material with permission. If you are writing about what you’ve researched, make sure you are citing the sources of your information and giving credit to all the necessary researchers. This rule also extends beyond writing to what is referred to as intellectual property. Intellectual property includes the following:

- Patents – Items whose credit for creation is protected
- Trademarks – Company names (WalMart), logos (the Target bulls-eye), or slogans (I’m lovin’ it)
- Copyright law – Items whose distribution is protected by law (books, movies, or software)

None of these things can be used without proper recognition of or approval from the appropriate company or individual involved.

This law extends beyond the major companies. Any written document in your own company is copyrighted by law once produced. That means if you are borrowing a good idea from a friend at another company, you must cite them as a source. Also, although not required by law, it is a good idea to cite sources from inside your own company as well. You wouldn’t want some one else taking credit for your ideas. Why should you treat others any differently?

The legal consequences are most notable when one considers writing in the professional world. While plagiarizing may give you a failing grade in a class, plagiarizing in the workplace can not only get you fired, but could result in a costly lawsuit or possibly even jail time. It is not only ethical to follow these rules, it is an enforced law. Make sure you properly document all sources so as not to mislead a reader.

Don’t manipulate

If you are holding a professional job, it is understood that you have a decent ability to write persuasively, even if your first persuasive document was your resume. Do not use your ability to persuade people to do what is not in their best interest. While this may not always seem easy, a good writer with a bad motive can twist words to make something sound like it is beneficial to all parties. The audience may find out too late that what you wrote only benefited you and actual ended up hurting them. This goes back to the stakeholders. Make sure they are not only considered and cared for when writing a persuasive document. It is easy to get caught up in the facts and forget all the people involved. Their feelings and livelihood must be considered with every appropriate document you create.

Don't stereotype

Most stereotyping takes place sub-consciously now since work places are careful to not openly discriminate. It is something we may not even be aware we are doing, so it is always a good idea to have a peer or coworker proofread your documents to make sure you have not included anything that may point to discriminatory assumptions.

Addressing Unethical Practices

Many times in the professional setting, workers find it difficult to deal with unethical practices in their company. First, begin by bringing the unethical practice to the surface, which is usually the hardest part. Paul Anderson's text reviews three ways that you can bring your company's practices to the surface. It is easiest to first start *asking questions*. Asking questions may seem too simple but it is an effective way of bringing attention to your company's problems. Ask questions about who their decisions are affecting and why they are making those decisions. This will not put you on the spot for being the bad guy, but it will allow you to voice your opinion.

The second idea Anderson describes as *being helpful* in revealing unethical practices is to *use facts or reason*, instead of accusation. Before you raise questions about your company's unethical practices, make sure you have cold hard facts instead of accusations. Many times accusations are made about situations where people truly do not know the reason those decisions were being made. If you base your thoughts around true facts, your company will assume you looked into the situation and will take your thoughts more seriously.

The third helpful way to bring your company's unethical practices to the surface is to *remain open to others ideas*. What this allows you to do is base a solution around many different sides instead of just your own. Since people usually have different ethical values, your own stance may not coincide with everyone elses'. Make sure you identify possible values of others when considering possible solutions.

Employing Ethical Techniques

In professional writing, ethical dimensions begin to surface especially in persuasive writing. When you are trying to persuade other people to make a certain decision or to take action, stay clear of manipulation and misconceptions. At times, you may be misleading someone unintentionally. In persuasive writing, you must respect the readers values and viewpoints. Do not use false or skewed facts or argue from such premises because you may deceive the reader(s) and cause them to make an unlawful decision.

Avoiding manipulation when writing persuasively is also key. Sometimes you may be aware of the readers point. If so, you must make sure not to use this personal information against them in your writing. It is unethical to persuade readers to make a decision that benefits yourself and not them. Most times, people try to manipulate others to receive some type of reward or gain.

To avoid using misleading or manipulating words and phrases, it is important to be open to alternative viewpoints. In preparing any type of persuasive writing, you will come across conflicting viewpoints, so being aware of other views should not be hard. Keep your readers' ideas and goals in mind and consider what lies behind their concerns. To help solve these problems it may also be good to make statements based on human values. Discussing several opinions and ideas on the subject will make you more persuasive, because most viewpoints will be included to prevent you from appearing biased.

Ethics Decision Checklist

- What is the nature of the ethical dilemma?
- What are the specific aspects of this dilemma that make you uncomfortable?
- What are your competing obligations in this dilemma?
- What advice does a trusted supervisor or mentor offer?
- Does your company's code of conduct address this issue?
- Does your professional association's code of conduct address this issue?
- What are you unwilling to do? What are you willing to do?

- How will you explain or justify your decision?

VIDEO: THE KEY FORMS OF BUSINESS WRITING: PROPOSALS

Please cut and paste the following link in the youtube website to view the video:

Watch this video online: https://youtu.be/oA2VUdsSGNc

VIDEO: QUICK TIPS FOR HOW TO WRITE A BUSINESS PROPOSAL

Please cut and paste the following video link in your browser search bar to view the video:

Watch this video online: https://youtu.be/1RLTuz-IuMg

FEASIBILITY REPORT

FEASIBILITY REPORT SAMPLE FORMATS

A Feasibility Report is presented to the company that requested recommendations to solve a particular problem. This report gives a rationale of the feasibility of the recommendations determined by the Problem Analysis.

The investigator will research each solution that the analysis recommended and present the economic (how much will the solution cost), structural (how will the solution fit into the existing physical structure of the company), and operational (how will the solution fit into the existing operation of the company) feasibility of each recommendation. The investigator will rank these according to his/her priority, but presenting the feasibility of all recommendations, giving the pros and cons of each recommendation. This gives the decision makers a choice to choose the solution they believe is right for the company.

Feasibility Research Report

Note: Except for the cover page and the transmittal letter, the headings will be formatted as shown below.

Cover Page

Use an APA cover page.

Transmittal Letter

A transmittal letter is sent to the company who requested the feasibility report. Although this letter is sent under separate cover than the Feasibility Report, it is a courtesy to include a copy of the transmittal letter in the Report.

This letter tells the need for the feasibility report and the date of completion of the report. The letter includes the background of the project, a reference to the Problem Analysis, and outlines the procedure used to determine the recommendations presented from the feasibility report.

Table of Contents

Identify the sections and their corresponding pages.

Executive Summary

Briefly explain the problem, the three solutions, and the recommendations.

For example:

The purpose of this feasibility research report was to address the problem of ________________. This report offered three alternative solutions to this problem: _________________, ________________, ________________. In addition, the report ranked the alternative solutions, according to its strengths and its benefits. Solution #3, _______ was the first recommendation. Solution # 1 ________________ was the second recommendation. Solution #2, __________ was the third recommendation. (Of course this order depends on your rankings.)

The following format begins the body of the feasibility report.

Introduction

Write a brief introduction: This section will be from the Problem Analysis. Tell the why you conducted an investigation and the

Background

Explain the problem. This section explains how you know there is a problem. This section will explain why you did the investigation, the findings and conclusion from the Problem Analysis.

Purpose

State the specific purpose of the Feasibility Report. For example: The purpose of this report is to address the problem that (the requester is experiencing with state the problem). This report will accomplish this by investigating three alternative solutions to this problem.

Research

From the analyses of the articles (Summaries/Responses), copy and paste the summarized sections here. Only paste the summarized sections. You will attach the entire analyses to the end of the report, as appendices.

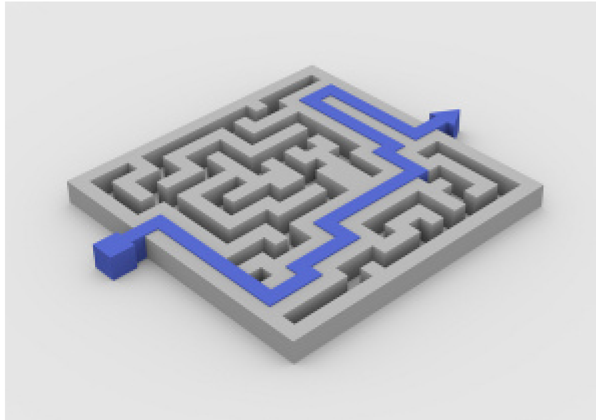
NOTE:

Again, this research is not the same research you did for the Problem Analysis Report. The is the summarized sections of your Summaries/Responses. For this research (the Feasibility Report research) you investigated outside source for the solutions to the problem, whereas for the Problem Analysis your research explored internal sources to reinforce the validity of the problem.

Your Summaries/Responses conduct the research of the feasibility of the problem's solution by examining various sources that addressed the feasibility of solutions to the problem. You may have looked into the recommendations you proposed for your Problem Analysis Report. This will provide research specific to solutions since the recommendations were a result of a previous investigation pertaining to the same problem.

In this Research Section, restate the information from your summaries. Be sure to use in-text citations that reference the source of information. APA requires that each statement in the research is cited, according to its source, followed by the sources year of publication. If you cite a direct quotation, in the in-text citation, follow the source and year of publication with the number of the paragraph from where you fond the quotation. (See the Publication Manual of the American Psychological Association 6th ed. for the proper format.) Citations can be presented as lead-in references or put at the end of the statements. (See the example in the Research Overview.)

The entire documents (your summaries/responses) are attached to the end of the Feasibility Report as appendices. This allows your reader access not only to the summarized information but also to your analysis of the information.



Alternative Solutions

Explain each solution according to technical, operational, and economic feasibilities.

The format will be as follows:

Solution #1

The first solution is __________________. Further explain the solution.

Economic Feasibility

The economic feasibility is the cost of the solution. This includes all the costs involved: the amount for materials, pay for extra staff, costs of contractors, operating cost, etc. Be sure to report the cost in dollars. For example: $5,000.

Structural Feasibility

The structural feasibility is how the solution will fit into the existing structure. Will the solution require more space, such as adding other rooms, constructing partitions, putting in heating systems, etc.

Operational Feasibility

The operational feasibility addresses how the solution will fit into the existing operation. Will more staff need to be hired; will the job descriptions of the existing staff need to be redefined; etc.

Solution #2

The second solution is __________________. Further explain the solution.

Economic Feasibility

The economic feasibility is the cost of the solution. This includes all the costs involved: the amount for materials, pay for extra staff, costs of contractors, operating cost, etc. Be sure to report the cost in dollars. For example: $5,000.

Structural Feasibility

The structural feasibility is how the solution will fit into the existing structure. Will the solution require more space, such as adding other rooms, constructing partitions, putting in heating systems, etc.

Operational Feasibility

The operational feasibility addresses how the solution will fit into the existing operation. Will more staff need to be hired; will the job descriptions of the existing staff need to be redefined; etc.

Solution #3

The third solution is ___________________. Further explain the solution.

Economic Feasibility

The economic feasibility is the cost of the solution. This includes all the costs involved: the amount for materials, pay for extra staff, costs of contractors, operating cost, etc. Be sure to report the cost in dollars.   For example: $5,000.

Structural Feasibility

The structural feasibility is how the solution will fit into the existing structure. Will the solution require more space, such as adding other rooms, constructing partitions, putting in heating systems, etc.

Operational Feasibility

The operational feasibility addresses how the solution will fit into the existing operation. Will more staff need to be hired; will the job descriptions of the existing staff need to be redefined; etc.

Recommendations

This section prioritizes the recommendations according to the investigator's interpretation of the most effective solutions.

Report your recommendations, beginning with your first choice (however, use the number from the order it appeared in the alternative solution section). Explain why you prioritized each choice by elaborating on the strength of each feasibility: economical, structural, and operational. Also, emphasize the solutions benefits. Remember you can suggest that you do not recommend a particular alternative solution. However, you need to explain why you do not recommend the solution, according to the technical, operational, and economic feasibilities.

For example, if you determined that the third solution was the most effective, the first solution was the next best, and the second solution was the least effective, the format would be as follows:

Solution #3

My first recommendation is Solution #3. Solution #3 is to ____________________.

Elaborate on why you ranked the solution as your first recommendation. End with the benefits of the solution.

Solution #1

My second recommendation is Solution #1. Solution #1 is to ____________________.

Elaborate on why you ranked the solution as your second recommendation. End with the benefits of the solution.

Solution #2

My third recommendation is Solution #2. Solution #2 is to ___________________.

> Elaborate on why you ranked the solution as your third recommendation. End with the benefits of the solution.

Note: Each recommendation begins with the same sentence structure: My ____ recommendation is Solution #__. Do not change sentence structure.

Conclusion

Write a brief conclusion.

Reference Page

Be sure to use the APA style of documentation.

Appendices

Attach Appendices to the back of the paper after the reference page. These appendices should include at least four separate appendices, which are labeled Appendix A, Appendix B, Appendix C, and Appendix D. These appendices should include the following:

Appendix A

First complete analysis (Summaries/Response) from article.

Appendix B

Second complete analysis (Summaries/Response) from article.

Appendix C

Third complete analysis (Summaries/Response) from article.

Appendix D

The complete Problem Analysis Report

See the following example of the Feasibility Report: Student Sample of Feasibility Report

WHAT IS A FEASIBILITY STUDY/REPORT

What is a Feasibility Report/Study?

What you should include when putting together a feasibility study/report:

- A feasibility report is a testimony that attempts to create some sort of action. Feasibility reports are created to persuade/help the decision makers to choose between available options. Remember that your option is not the only one, the decision makers will probably have many to choose from. A feasibility report also determines whether or not the investigated task can be done with the amount of resources available OR how many resources will be necessary in order to complete the task. A feasibility may be useful in a lot of different situations such as event planning, finances, or even remodeling your home.

What is a feasibility study?

A feasibility study is a way to evaluate the practicality and desirability of a project. Before a company invests time and money into a project, they need to know how successful the project will be before investing. Sometimes companies want to understand input costs, the amount of research that will need to be done, or even the marketability of a project. With input prices, it is essential that companies understand, (even before they put time and research into the project), how much it would cost to go through with their product. Companies also like to know if they put time into research and go through with their change or promotion of a product, how the public/people will react to the change. Will people be fighting over the new product or will it fall through? The purpose of feasibility studies is to provide companies information and analysis on whether or not you or your company should pursue this course of action.

Feasibility reports are usually used to sway decision makers towards one direction or the other. Many times there is only one course of action but, there needs to be a second course of action.

Questions to Consider for Your Report:

What to consider in creating feasibility studies/reports?

It remains important to consider alternatives when you are creating a feasibility study. Decision makers in companies want to understand why they have to make a choice, and then why they should choose this certain option. Feasibility reports need to include detailed information on the problem that has presented itself to provide decision makers with a reason to consider further options.

Is your argument important and appropriate?

When deciding on whether or not your feasibility study is important you must first recognize the target audience or reader. For professional organizations people want your argument or study to be based around needs or aims of the organization and their future. In professional settings, it is believed that those guiding points or criteria should be known by the people judging your study. In other words, make the study reasonable and have it relate to what you are looking at implementing or the change you want to see happen.

Facts can make your argument important. However, decision makers want to know that your sources are reliable. They want to be assured that the information they are receiving is from a credible source in the industry. This may turn out to be the most important aspect of any feasibility study and report. Due simply to the fact that any information you gather, no matter the presentation, can be ruined if you're lacking information about your sources or in the worst case if your sources are not credible.

What to consider about your alternatives?

It is important to understand how your alternatives compare to the criteria you set in place. In most cases your readers will want to understand how your results compared to others. This allows them to make an educated decision based simply around facts and results. Anderson considers this to be the heart of any feasibility report.

What have you found against your alternatives?

Based on experiments and finding results about possible alternatives and how they fare, it is important to draw conclusions about the alternatives. This is not made to bash other options or products, but is made to set your product or idea apart. You should include general knowledge or conclusions about what each product does well. This remains an important part because once again decision makers need a basis for comparison, they need a reason to select your idea compared to the alternatives and may already be set in place, or in the near future.

What should you throw into a conclusion?

Include in your conclusion how you're going to go implement your ideas for the company and how it will enrich the company. Explain why the company should choose your course of action. Compare statistics and data and help the readers understand the logical choice and the course of action that would aid in selecting one option over the other. Explain your expertise on the subject matter and help them realize that your idea is the choice they are looking for. Based on your experiences they will most likely take your side if you present the argument efficiently. The company will select your course of action, based on the key points you outline in your feasibility study.

Important Features of a Basic Feasibility Report

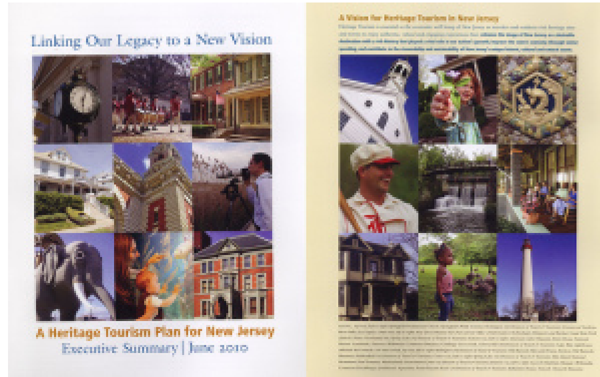
Below are the seven elements of a feasibility report:

- Introduction – You need to persuade the decision maker to even consider any sort of alternative. You need to convince them to even read your report first. Tell them what they will gain personally or as an organization by considering your work.
- Criteria/Constraints – You must specifically map out the criteria of what the ideal outcomes are. This will allow you to make practical and logical decisions. You can present the criteria in your feasibility report in one of two ways. First, you can separate the criteria into its own section. This is best when you have a extensive report and you need to go in-depth with the explanation. Second, you can incorporate the criteria throughout your report as the criteria become relevant. However, it is important to realize that whichever strategy you chose make sure that the criteria is introduced early in the report. It is also very important to map out the constraints of your suggested solutions. This will show the audience that you understand and acknowledge the fact that no solution is perfect. This will also make sure that the audience makes the decision in their best interest.
- Method – It is very important to present facts that are accurate and relevant. You should state the reliable sources you used and what method they came from (internet,interview, book, etc.). Without a credible research method or credible sources your document itself will lack credibility.
- Overview of Alternative Options – You must underline the key features of each possible option. Make sure they are easy to understand and presented in a friendly layout. Keep in mind that the goal is to allow your audience to make the best decision.
- Evaluation – This should be the bulk of your report, you must evaluate the options using the criteria you created. Add graphs, charts, etc. to show that you have studied your options, and have come up with statistics that back up your reasons as to why your alternative beats the competition.
- Conclusions – You need to state the conclusion you have came up with. How did you evaluate the alternatives? And then from there, which alternative best fit your organization.
- Recommendations – You need to use your experience and knowledge in order to state which option you think should be adopted.

- Note: All seven element outlined do not need to be included in the feasibility report depending on audience, circumstance, mission, etc. Also the elements do not need to be in the exact order outlined above. Specifically the conclusion should be mentioned more than just at the end of the report. It should also be summarized in the beginning of the report and in the case the the feasibility report is long, it can be mentioned in the middle as well.

Executive Summary

An executive summary should be included at the beginning of the report. In 2-3 pages, the main points of the feasibility study are summarized for a quick review by busy administrators and school board members. The executive summary provides the reader with an overview of the feasibility study and will help them see the entire picture before they read the details. Some decision-makers may only read the executive summary. Thus, the executive summary should be concise and include the major findings of the study followed by a recommendation.



Introduction

The purpose of the introduction of a feasibility report is two-fold:

- To answer the readers' question: "Why do we need to look into these alternatives-do they matter?"

In order to answer this question, it is necessary to identify the problem that your report will help resolve or what your report is aimed at accomplishing.

- To talk about the other options that you have looked at and analyzed, as well as to tell how you went about researching and analyzing them.

Note: Usually, the introduction to a feasibility report briefly discloses some of the important conclusions and the most feasible options for change. Other elements of a report of this nature, such as the criteria, method, or any other kind of general background, may also be concisely noted and mentioned in this portion of the report.

Criteria/Constraints

What to consider in your feasibility study/report. As you begin formulating what you would like to consider you should realize that usually criteria works around one or more of the following questions.

Will your plan or course of action really do what is desired?

This is often seen on the technical sides. What you have to ask yourself is whether or not your implementation or change really makes that much of a difference. Lets say you are looking to improve an aspect of your company. Will your change really improve the proficiency and speed of what their trying to do. Or will you find in your study that the change actually slows down production or the efficiency of the company's workers. This is important to predict beforehand because sometimes an improvement in the workplace is not always an improvement in how a company works. But many of these factors you will not notice until after you complete your study. And in the worst case you may not see negative ailments until after the plan is implemented.

What will it take to implement your course of action?

Even though your plan of action may seem correct and efficient on paper, it may not be practical towards your line of work. You must take into account the circumstances that arise in every aspect of a professional setting. What you may find is that in one field your plan may be extremely successful, but in another may be a bust. This can also take place from company to company. As you work at different companies along the same field, you will begin to understand what can be successful in one workplace that may not work in another. Sometimes you have to take into account the amount of changes that will need to be implemented for your plan. Do you need to go through extensive changes in operations, or make upgrades to current equipment or materials that are currently in use or in stock? Sometimes the amount of money that needs to be put into a new project may be much more than the actual amount of benefit that would be received from the changes. You must consider your plan as a cost-benefit analysis.

Cost of implementation.

This may become the biggest factor in any business decision. How much will it cost? In not only business, but any professional field, the benefits must outweigh the costs in any decision. This is even the case when deciding to work on one aspect of a project compared to the other. When forming criteria for a feasibility report, you must understand the costs if all went as planned. Then you might even want to find out what the cost would be if you had minor or major setbacks. It is important to understand the costs because unless the benefits outweigh the costs, a company will most likely not go through with your proposed plan of action. Also it is important to look into the future of the company. Maybe your plan of action will not be beneficial for the first year in existence, but what about the years following that? This must be considered because like any other decision in business, the original fixed cost may be high but the marginal gains may be high. In that case it may be a good decision for the company to make a change if it is beneficial for the future. Think about health care companies. Would it be beneficial for a company to invest in new equipment even though the upright payment is very high?

Is your idea/product desirable?

This is as simple as is your plan going to sell. Will people want to overextend themselves for change, or will they reject what you are trying to do? Sometimes a change or solution must be more than just effective and affordable. You must consider the consumers and people that will be changing. Sometimes many feasible courses of action do not succeed simply because they create effects that drive the consumers away. Because of this, the product or plan does not sell. These undesirable side effects can be as simple as tearing away employee morale. Sometimes even though a plan is promoting and expected to increase productivity, how will the employees react? Many times companies overlook how their employees are going to react to change. But the fact of the matter is that the only way to increase production is to keep employees happy. If they are not pushed to improve the company and their own status then they simply will not find change necessary.

Method

Things to keep in mind:

This section of your feasibility report is one of substantial magnitude and importance. This part of your paper demonstrates to the reader what you discovered, through your research, actually matters and has reliability. By telling your audience how you came to know what you have found out and know now, you are demonstrating to them that your results are trustworthy and that they truly hold significance in meaning. With strong methods for finding out your facts, your readers will then feel comfortable and confident to make the necessary changes.

It's all about the source

The question of what sources to use completely varies from study to study. There are several different types of sources that you could use to find your facts-it all just depends on what you are trying to find answers to. Sources can include (but are not limited to):

- Academic journals or reports
- Library research
- Phone calls
- Face-to-face interviews
- Meetings with those who are knowledgeable about the topic or are in your company/organization
- Surveys (Survey Monkey!)
- Usability Testing
- Lab testings

How much is enough?

The length and density of content will vary from each report to the next. You should take into consideration your audience as well as the context and purpose, for which your paper is written. The main goal is to purely get the point across to the readers that what you are reporting has validity, by describing how the means of attaining your information are sound and secure. Make sure that your writing is reader-centered and that they would be satisfied. Doing thus will ensure that your method is long and descriptive enough.

Where does it fit?

The placement of this section of your report will also depend on the type of report that you are writing. If there are only a couple of different methods used throughout your research, it might be a good idea to fit them into the beginning of your report, writing a paragraph for each technique. If you have several, unrelated methods, however, it would be good to place those paragraphs throughout the report, where they would best accompany your analysis or data.

Important note

Sometimes, if it is really obvious how you went about your research, then there might not even be a need to talk about your methods. It is key, though, that your readers always have a clear understanding of the way you obtained your facts and that they are worth trusting.

Revision Checklist

Once your feasibility study is complete analyze the checklist to ensure every topic has been addressed.

Introduction

1. Does it tell your readers why you conducted this study?
2. Does it provide background information the readers will need or want?
3. Does it identify the action or alternatives you investigated?
4. Does it persuade readers to use this study as a valid document?

Criteria

1. Does it identify the standards by which the action or alternatives were evaluated?

Method

1. Does it explain the way you obtained the facts and ideas presented in the report?
2. Does it persuade the readers that this method would produce reliable results?

Overview of Alternatives

1. Does it present a general description of each alternative?

Evaluation

1. Does it evaluate the action or alternative in terms of criteria?
2. Does it present the facts and evidence that supports each evaluative statement?

Conclusions

1. Does it explain the significance from the reader’s viewpoint of your facts?
2. Does it state the conclusion plain and simple?

Recommendations

1. Does it advise which course of action or alternative you recommend?
2. Does it present recommendations which stand out?
3. Does it suggest specific steps your readers may take to act on each of your recommendations?

FRONT MATTER: CONTENTS, LISTS, AND MORE

Front matter is an extremely important element to writing any report. Whether its for a specific company research or for other personal reports. Specifics such as the size of the font, font type, formatting, and organization also need to be taken into consideration when creating the front matter of your report.

The first few pages of a report are essential. An abbreviated abstract will assist the reader in finding what the main points of the report will be about.

These elements are often referred to as “Book Elements”, as they are commonly found in larger works.

Important considerations should be made on how your publication will be used. To increase usability, you should consider how your readers will be using the report, and what they will be looking for, and focus on making this easy to find.

Covers

A cover page is a very simple, precise, brief way to introduce your report to the reader. This should contain:

- A large specific title
- Company name
- Name of the author(s)
- Date of the report
- Relevant picture

The use of a relevant picture or two can help reinforce the subject of the report. One goal of the cover page is to be informative and scalable because once it is filed, it will need to be easy to pick out of a stack of other reports. A second goal is to make the report stand out. If the report cover looks bleak and dull, the reader will start reading with a negative outlook. Think of the cover page of a report like what is worn to an interview. The cover page is the first thing that is seen. It will be the foundation for first impressions, for better or worse. One easy way to make the report stand out is to use a theme for the report that your audience can connect to. For example, if a report is written to McDonald’s, the cover page will be in yellow and red with the golden arches as a picture. It is important that the reader believes that he or she is the most important aspect of the report.

Title Page

A title page will be very similar to your front cover and it repeats the information on the cover, but adds more important details. This may include a report number, date, title, the names and addresses of authors, specific contract information, the name and address of the supervisor, and the name and address of the organization who supported the report (Technical Communications, p.312)

The title page is an opportunity to provide specific, detailed information about the document and its authors to its intended audience.

Sample Draft

(Document number) 10-1 (Date) March 7, 2010 (Title) The Madden Project

By (Author) John Manning Brett Peterson 1234 Touch Down Lane Miami, Fl 57897 Madden Inc
And

(Place to Contact) Madden Inc. No. 54321
Project officer

(Who's in charge) Ari Washington Manager of Exploratory Research 6667 Prime Time Court Mendota Heights, MN 55178
(Who paid for the project) Football Cooperation The Department of Research and Development 1812 Legacy Drive Columbus, OH 99121

Sample Draft

Executive Summary or Abstract

Abstracts are an important element in the business world. This will help a manager learn the main points of your document, and help the reader determine if the entire report is relevant to what they are looking for. Charts and graphs that show factual data are helpful visuals that can be implemented into this section of the document.

Major topics should be mentioned, but not the main points of each. This will be where most of the key words of your report are used, and will be a preview of the information to be covered. Often, summaries are used when representing a report in a database, so illustrating the main topics of your report in this segment can be useful.

The abstract should always be a page or less, especially in informative situations. Typically an abstract should not be more than 15 percent of the total report.

According to the Technical Communications text,

- Identify the intended audience
- Describe Contents
- Tell the reader how the information is presented

Table of Contents

In any report or analysis, a table of contents is helpful to navigating the report. Some lengthy reports may also include a table of graphs and/or a table of figures.

In addition to the summary, this will allow the reader to quickly scan the topics you have covered. This will also help if they are looking for something particular. Use of proper headings and sub-headings give readers a good overview of all the information contained in your document.

Table of contents are usually extremely generic and similar to each other. This is for ease of navigation to the user. Table of contents can be formatted from Microsoft Word.

EXAMPLE:Chicago Manual of Style: Table of Contents: Formatting

Lists of Figures and Tables

This is a useful section to include because your images or tables are referred to repeatedly throughout your text. Include Figures and Tables lists when your article is over about 15 pages. This also allows for easy comparison between images when they are grouped together.

ETHICS AND TECHNICAL COMMUNICATION

As you put together professional documents and begin working in the "real" world, you must understand what could easily lead to your downfall in your professional workplace. The Paul Anderson text claims that at work in a professional setting, there at least three major "sources of guidance":

1. The code of ethics already developed by your field's professionals,
2. The ethical code set in place by your company, and
3. Your own personal ethics.

Some companies have decided to have employees keep their personal ethics at home. In reality, companies that try to keep personal ethics at home find that employees are occasionally asked to perform actions that they do not condone at home. In professional settings we would like to assume that companies would not act unethically, so why should we even pay attention?

The truth is, companies do act unethically whether it is disposing of toxic waste incorrectly or price gouging to name a few. The same goes for writing professional documents. You should keep them clean and standardized to save yourself from damaging a possible job opportunity and the name you represent.

Stakeholders

When writing any professional document, it is important to identify the potential stakeholders. A stakeholder is anyone who will be affected by what you are intending on writing. How you choose to word your document or even the choice to write the document becomes an ethical matter to stakeholders. It is crucial to consider your main objective(s) before writing. If you are writing a document that would be used to harm other living things (like writing a manual for a handgun) you have to weigh the implications to all stakeholders impacted. According to the Paul Anderson text, there are three types of stakeholders: direct, indirect, and remote.

Direct

The direct stakeholders are those initially impacted by what you write. For instance, if you are writing about opening a new waste disposal area, the stakeholders clearly include the company you are writing to. However, disposal companies that might use this waste area in the future are also considered direct stakeholders. Their future business will be impacted based on whether your proposal is accepted or declined.

Indirect

The indirect stakeholders are those that are not impacted until a later time. Using the previous example of the waste disposal, citizens in the area would be indirect stakeholders. The stakeholders don't necessarily need to be people. The nearby eco-systems would be indirect stakeholders to this same proposal. If toxic waste is dumped there, it would harm the animals, rivers and plant life nearby.

Remote

Finally, the remote stakeholders are not affected until far into the future. One example following our hypothetical waste disposal area, is future generations. While it may seem far-fetched, historically, there have been instances where toxic or poisonous things have been disposed of incorrectly and the run-off that went into lakes and streams caused birth defects. While this is remote, it must be considered when writing a document.

Ethical Writing

Once on the job, you will be assigned to create many documents throughout your professional career. Some may be simple and straightforward, some may be difficult and involve questionable objectives. Overall, there are a few basic points to adhere to whenever you are writing a professional document:

- Don't mislead
- Don't manipulate
- Don't stereotype

Don't mislead

This has more than one meaning to the professional writer. The main point is clear. When writing persuasively, do not write something that can cause the reader to believe something that isn't true. This can be done by lying, misrepresenting facts, or just "twisting" numbers to favor your opinion and objectives. This is clearly different from the resume ethics. Once you are on the job, you cannot leave out numbers that show you're behind or over-budget on a project, no matter how well it may work once it is completed. Facts are facts and they must be represented in that way. Be cautious when using figures, charts and tables, making sure they are not misleading. While this may seem easy to read about, when the pressure is on and there are deadlines to meet, taking shortcuts and stretching the truth are very common.

The other, less frequently used component is plagiarizing. While it may seem like this is something students learn to avoid after they graduate, it remains an important guideline for all professionals. Plagiarizing is misrepresenting the source or facts, most commonly when you claim the ideas you are writing about are yours. When you are researching professional documents, make sure you are using material with permission. If you are writing about what you've researched, make sure you are citing the sources of your information and giving credit to all the necessary researchers. This rule also extends beyond writing to what is referred to as intellectual property. Intellectual property includes the following:

- Patents – Items whose credit for creation is protected
- Trademarks – Company names (WalMart), logos (the Target bulls-eye), or slogans (I'm lovin' it)
- Copyright law – Items whose distribution is protected by law (books, movies, or software)

None of these things can be used without proper recognition of or approval from the appropriate company or individual involved.

This law extends beyond the major companies. Any written document in your own company is copyrighted by law once produced. That means if you are borrowing a good idea from a friend at another company, you must cite them as a source. Also, although not required by law, it is a good idea to cite sources from inside your own company as well. You wouldn't want some one else taking credit for your ideas. Why should you treat others any differently?

The legal consequences are most notable when one considers writing in the professional world. While plagiarizing may give you a failing grade in a class, plagiarizing in the workplace can not only get you fired, but could result in a costly lawsuit or possibly even jail time. It is not only ethical to follow these rules, it is an enforced law. Make sure you properly document all sources so as not to mislead a reader.

Don't manipulate

If you are holding a professional job, it is understood that you have a decent ability to write persuasively, even if your first persuasive document was your resume. Do not use your ability to persuade people to do what is not in their best interest. While this may not always seem easy, a good writer with a bad motive can twist words to make something sound like it is beneficial to all parties. The audience may find out too late that what you wrote only benefited you and actual ended up hurting them. This goes back to the stakeholders. Make sure they are not only considered and cared for when writing a persuasive document. It is easy to get caught up in the facts and forget all the people involved. Their feelings and livelihood must be considered with every appropriate document you create.

Don't stereotype

Most stereotyping takes place sub-consciously now since work places are careful to not openly discriminate. It is something we may not even be aware we are doing, so it is always a good idea to have a peer or coworker proofread your documents to make sure you have not included anything that may point to discriminatory assumptions.

Addressing Unethical Practices

Many times in the professional setting, workers find it difficult to deal with unethical practices in their company. First, begin by bringing the unethical practice to the surface, which is usually the hardest part. Paul Anderson's text reviews three ways that you can bring your company's practices to the surface. It is easiest to first start *asking questions*. Asking questions may seem too simple but it is an effective way of bringing attention to your company's problems. Ask questions about who their decisions are affecting and why they are making those decisions. This will not put you on the spot for being the bad guy, but it will allow you to voice your opinion.

The second idea Anderson describes as *being helpful* in revealing unethical practices is to *use facts or reason*, instead of accusation. Before you raise questions about your company's unethical practices, make sure you have cold hard facts instead of accusations. Many times accusations are made about situations where people truly do not know the reason those decisions were being made. If you base your thoughts around true facts, your company will assume you looked into the situation and will take your thoughts more seriously.

The third helpful way to bring your company's unethical practices to the surface is to *remain open to others ideas*. What this allows you to do is base a solution around many different sides instead of just your own. Since people usually have different ethical values, your own stance may not coincide with everyone elses'. Make sure you identify possible values of others when considering possible solutions.

Employing Ethical Techniques

In professional writing, ethical dimensions begin to surface especially in persuasive writing. When you are trying to persuade other people to make a certain decision or to take action, stay clear of manipulation and misconceptions. At times, you may be misleading someone unintentionally. In persuasive writing, you must respect the readers values and viewpoints. Do not use false or skewed facts or argue from such premises because you may deceive the reader(s) and cause them to make an unlawful decision.

Avoiding manipulation when writing persuasively is also key. Sometimes you may be aware of the readers point. If so, you must make sure not to use this personal information against them in your writing. It is unethical to persuade readers to make a decision that benefits yourself and not them. Most times, people try to manipulate others to receive some type of reward or gain.

To avoid using misleading or manipulating words and phrases, it is important to be open to alternative viewpoints. In preparing any type of persuasive writing, you will come across conflicting viewpoints, so being aware of other views should not be hard. Keep your readers' ideas and goals in mind and consider what lies behind their concerns. To help solve these problems it may also be good to make statements based on human values. Discussing several opinions and ideas on the subject will make you more persuasive, because most viewpoints will be included to prevent you from appearing biased.

Legal Issues and Communication

This section presents information about legal aspects of communication which will help ensure that your writing is free of legal concerns.

Appreciating Different Cultures

This section discusses the importance of considering diversity when writing because our world is multicultural, and your writing needs to reflect our world in that regard.

Ethics Decision Checklist

- What is the nature of the ethical dilemma?
- What are the specific aspects of this dilemma that make you uncomfortable?
- What are your competing obligations in this dilemma?
- What advice does a trusted supervisor or mentor offer?
- Does your company's code of conduct address this issue?
- Does your professional association's code of conduct address this issue?
- What are you unwilling to do? What are you willing to do?
- How will you explain or justify your decision?

VIDEO: FEASIBILITY STUDY TUTORIAL

Watch this video online: https://youtu.be/qjz3EphltZQ

VIDEO: FEASIBILITY STUDIES - WHAT TO CONSIDER

Watch this video online: https://youtu.be/b_YiHyNcIE8

PERSUASIVE PRESENTATIONS

PERSUASIVE PRESENTATION OVERVIEW

Remember the introduction of a persuasive presentation must begin with the MORE+E Principle:

M=Meaningful. Tell the audience how the speech is meaningful to them.

O=Open. Make a statement that shows you are approachable.

R=Relates to the past. Refer to a past experience that relates to your topic.

E=Expertise. Tell the audience what qualifies you to make your recommendations.

+E=Evaluate your audience. Always know your audience.

See the following detailed guidelines to help you write your Persuasive Presentation:

EVALUATION CRITERIA FOR A PERSUASIVE ORAL PRESENTATION

Does the speaker follow the format for a persuasive oral presentation?

I. Introduction

- Tell how the topic is meaningful.
- Tell how the tropic relates to the past.
- Express your openness.
- Establish your credibility.
- Set up the topic.

II. Body

- Discuss the topic.
- Discuss the benefits of accepting the suggestions.
- Discuss the consequences of rejecting the suggestions.

III. Conclusion

- Restate the topic.
- Emphasize the main points of the discussion.

- Emphasize the benefits and the consequences.
- Ask for commitment.

Evaluation:

1. What is the Topic?
2. What type of problem does the speech present?
3. How does the speaker relate the speech to the audience?
4. What are the reasons for the proposal?
5. What is the solution?
6. What are the facts and opinions that support the reasons for the proposal and the solution?
7. What is the motivation? Does the speaker emphasize the benefits of action and consequences of action or non-action?
8. How does the conclusion tie the speech together?
9. What is the audience asked to do? What is the request for action? Is it a firm request for action? Is it the last statement?

See the following example of a Persuasive Presentation PowerPoint: Student Example Powerpoint with Detailed Outline Notes.

FUNCTIONS OF THE PRESENTATION TO PERSUADE

Learning Objective

1. Identify and demonstrate the effective use of five functions of speaking to persuade.

What does a presentation to persuade do? There is a range of functions to consider, and they may overlap or you may incorporate more than one as you present. We will discuss how to

- stimulate,
- convince,
- call to action,
- increase consideration, and
- develop tolerance of alternate perspectives.

We will also examine how each of these functions influences the process of persuasion.

Stimulate

When you focus on stimulation as the goal or operational function of your speech, you want to reinforce existing beliefs, intensify them, and bring them to the forefront. Perhaps you've been concerned with global warming for quite some time. Many people in the audience may not know about the melting polar ice caps and the loss of significant ice shelves in Antarctica, including part of the Ross Ice Shelf, an iceberg almost 20 miles wide and 124 miles long, more than twice the size of Rhode Island. They may be unaware of how many ice shelves have broken off, the 6 percent drop in global phytoplankton (the basis of many food chains), and the effects of the introduction of fresh water to the oceans. By presenting these facts, you will reinforce existing beliefs, intensify them, and bring the issue to the surface. You might consider the foundation of common ground and commonly held beliefs, and then introduce information that a mainstream audience may not be aware of that supports that common ground as a strategy to stimulate.

Convince

In a persuasive speech, the goal is to change the attitudes, beliefs, values, or judgments of your audience. If we look back at the idea of motive, in this speech the prosecuting attorney would try to convince the jury members that the defendant is guilty beyond reasonable doubt. He or she may discuss motive, present facts, all with the goal to convince the jury to believe or find that his or her position is true. In the film The Day After Tomorrow, Dennis Quaid stars as a paleoclimatologist who unsuccessfully tries to convince the U.S. vice president that a sudden climate change is about to occur. In the film, much like real life, the vice president listens to Quaid's position with his own bias in mind, listening for only points that reinforce his point of view while rejecting points that do not.

Audience members will also hold beliefs and are likely to involve their own personal bias. Your goal is to get them to agree with your position, so you will need to plan a range of points and examples to get audience members to consider your topic. Perhaps you present Dennis Quaid's argument that loss of the North Atlantic Current will drastically change our climate, clearly establishing the problem for the audience. You might cite the review by a professor, for example, who states in reputable science magazine that the film's depiction of a climate change has a chance of happening, but that the timetable is more on the order of ten years, not seven days as depicted in the film. You then describe a range of possible solutions. If the audience comes to a mental agreement that a problem exists, they will look to you asking, "What are the options?" Then you may indicate a solution that is a better alternative, recommending future action.

In this speech, you are calling your audience to action. You are stating that it's not about stimulating interest to reinforce and accentuate beliefs, or convincing an audience of a viewpoint that you hold, but instead that you want to see your listeners change their behavior. If you were in sales at Toyota, you might incorporate our previous example on global warming to reinforce, and then make a call to action (make a purchase decision), when presenting the Prius hybrid (gas-electric) automobile. The economics, even at current gas prices, might not completely justify the difference in price between a hybrid and a nonhybrid car. However, if you as the salesperson can make a convincing argument that choosing a hybrid car is the right and responsible decision, you may be more likely to get the customer to act. The persuasive speech that focuses on action often generates curiosity, clarifies a problem, and as we have seen, proposes a range of solutions. They key difference here is there is a clear link to action associated with the solutions.

Solutions lead us to considering the goals of action. These goals address the question, "What do I want the audience to do as a result of being engaged by my speech?" The goals of action include adoption, discontinuance, deterrence, and continuance.

Adoption means the speaker wants to persuade the audience to take on a new way of thinking, or adopt a new idea. Examples could include buying a new product, voting for a new candidate, or deciding to donate blood. The key is that the audience member adopts, or takes on, a new view, action, or habit.

Discontinuance involves the speaker persuading the audience to stop doing something what they have been doing, such as smoking. Rather than take on a new habit or action, the speaker is asking the audience member to stop an existing behavior or idea. As such, discontinuance is in some ways the opposite of adoption.

Deterrence is a call action that focuses on persuading audience not to start something if they haven't already started. Perhaps many people in the audience have never tried illicit drugs, or have not gotten behind the wheel of a car while intoxicated. The goal of action in this case would be to deter, or encourage the audience members to refrain from starting or initiating the behavior.

Finally, with continuance, the speaker aims to persuade the audience to continue doing what they have been doing, such as reelect a candidate, keep buying product, or staying in school to get an education.

A speaker may choose to address more than one of these goals of action, depending on the audience analysis. If the audience is largely agreeable and supportive, you may find continuance to be one goal, while adoption is secondary.

These goals serve to guide you in the development of solution steps. Solution steps involve suggestions or ways the audience can take action after your speech. They often proceed from national to personal level, or the inverse. Audience members appreciate a clear discussion of the problem in a persuasive speech, but they also appreciate solutions. You might offer a national solution that may be viewed as unworkable, but your solution on a personal level may be more realistic, such as considering an alternate point of view or making a small donation to a worthy cause.

Increase Consideration

Perhaps you know that your audience is not open to emotional appeals that involve the fear of global warming, so you choose to base your persuasive speech on something they are more open to: the economic argument and the relative cost of car ownership. In this speech, you want to increase consideration on the part of the audience whose members either hold hostile views or perhaps are neutral and simply curious. You might be able to compare and contrast competing cars and show that the costs over ten years are quite similar, but that the Prius has additional features that are the equivalent of a bonus, including high gas mileage. You might describe tax incentives for ownership, maintenance schedules and costs, and resale value. Your arguments and their support aim at increasing the audience's consideration of your position. You won't be asking for action in this presentation, but a corresponding increase of consideration may lead the customer to that point at a later date.

Develop Tolerance of Alternate Perspectives

Finally, you may want to help your audience develop tolerance of alternate perspectives and viewpoints. Perhaps your audience, as in the previous example, is interested in purchasing a car and you are the lead salesperson on that model. As you listen, and do your informal audience analysis, you may learn that horsepower and speed are important values to this customer. You might raise the issue of torque versus horsepower and indicate that the "uumph" you feel as you start a car off the line is torque. Many hybrid and even electric vehicles have great torque, as their systems involve fewer parts and less friction than a corresponding internal combustion-transaxle system. You goal is to help your audience develop tolerance, but not necessarily acceptance, of alternate perspectives. A traditional way of measuring speed has always been how fast a car can go from zero to sixty miles per hour.

You are essentially indicating that there are two relevant factors to consider when discussing speed (horsepower and torque), and asking the customer to consider the alternate perspective. Lots of horsepower might be all right for high speeds, but by raising the issue of their normal driving, they might learn that what counts day in and day out for driving is torque, not horsepower. By starting from common ground, and introducing a related idea, you are persuading your audience to consider an alternate perspective.

Key Takeaway

A persuasive speech may stimulate thought, convince, call to action, increase consideration, or develop tolerance of alternate perspectives.

Exercises

1. Select a commercial for a product or service you do not believe you would ever buy. Evaluate the commercial according to the principles of persuasion described in this section. Does it use more than one principle? Is any principle effective on you as an audience member? If you could change the commercial to increase its persuasive appeal to yourself as a customer, what changes would you make? Discuss your findings with your classmates.
2. Which do you think is a more difficult challenge, discontinuance or deterrence? Why? Give some examples and discuss them with your classmates.
3. Do you think persuasion by continuance is necessary? Or would people continue a given behavior regardless of any persuasive messages? Think of an example and discuss it with your classmates.

PRINCIPLES OF PERSUASION

Learning Objective

1. Identify and demonstrate how to use six principles of persuasion.

What is the best way to succeed in persuading your listeners? There is no one “correct” answer, but many experts have studied persuasion and observed what works and what doesn’t. Social psychologist Robert Cialdini [1] offers us six principles of persuasion that are powerful and effective:

1. Reciprocity
2. Scarcity
3. Authority
4. Commitment and consistency
5. Consensus
6. Liking

You will find these principles both universal and adaptable to a myriad of contexts and environments. Recognizing when each principle is in operation will allow you to leverage the inherent social norms and expectations to your advantage, and enhance your sales position.

Principle of Reciprocity

Reciprocity is the mutual expectation for exchange of value or service. In all cultures, when one person gives something, the receiver is expected to reciprocate, even if only by saying "thank you." There is a moment when the giver has power and influence over the receiver, and if the exchange is dismissed as irrelevant by the giver the moment is lost. In business this principle has several applications. If you are in customer service and go out of your way to meet the customer's need, you are appealing to the principle of reciprocity with the knowledge that all humans perceive the need to reciprocate—in this case, by increasing the likelihood of making a purchase from you because you were especially helpful. Reciprocity builds trust and the relationship develops, reinforcing everything from personal to brand loyalty. By taking the lead and giving, you build in a moment where people will feel compelled from social norms and customs to give back.

Principle of Scarcity

You want what you can't have, and it's universal. People are naturally attracted to the exclusive, the rare, the unusual, and the unique. If they are convinced that they need to act now or it will disappear, they are motivated to action. Scarcity is the perception of inadequate supply or a limited resource. For a sales representative, scarcity may be a key selling point—the particular car, or theater tickets, or pair of shoes you are considering may be sold to someone else if you delay making a decision. By reminding customers not only of what they stand to gain but also of what they stand to lose, the representative increases the chances that the customer will make the shift from contemplation to action and decide to close the sale.

Principle of Authority

Trust is central to the purchase decision. Whom does a customer turn to? A salesperson may be part of the process, but an endorsement by an authority holds credibility that no one with a vested interest can ever attain. Knowledge of a product, field, trends in the field, and even research can make a salesperson more effective by the appeal to the principle of authority. It may seem like extra work to educate your customers, but you need to reveal your expertise to gain credibility. We can borrow a measure of credibility by relating what experts have indicated about a product, service, market, or trend, and our awareness of competing viewpoints allows us insight that is valuable to the customer. Reading the manual of a product is not sufficient to gain expertise—you have to do extra homework. The principal of authority involves referencing experts and expertise.

Principle of Commitment and Consistency

Oral communication can be slippery in memory. What we said at one moment or another, unless recorded, can be hard to recall. Even a handshake, once the symbol of agreement across almost every culture, has lost some of its symbolic meaning and social regard. In many cultures, the written word holds special meaning. If we write it down, or if we sign something, we are more likely to follow through. By extension, even if the customer won't be writing anything down, if you do so in front of them, it can appeal to the principle of commitment and consistency and bring the social norm of honoring one's word to bear at the moment of purchase.

Principle of Consensus

Testimonials, or first person reports on experience with a product or service, can be highly persuasive. People often look to each other when making a purchase decision, and the herd mentality is a powerful force across humanity: if "everybody else" thinks this product is great, it must be great. We often choose the path of the herd, particularly when we lack adequate information. Leverage testimonials from clients to attract more clients by making them part of your team. The principle of consensus involves the tendency of the individual to follow the lead of the group or peers.

Principle of Liking

Safety is the twin of trust as a foundation element for effective communication. If we feel safe, we are more likely to interact and communicate. We tend to be attracted to people who communicate to us that they like us, and who make us feel good about ourselves. Given a choice, these are the people with whom we are likely to associate. Physical attractiveness has long been known to be persuasive, but similarity is also quite effective. We are drawn to people who are like us, or who we perceive ourselves to be, and often make those judgments based on external characteristics like dress, age, sex, race, ethnicity, and perceptions of socioeconomic status. The principle of liking involves the perception of safety and belonging in communication.

Key Takeaway

A persuasive message can succeed through the principles of reciprocity, scarcity, authority, commitment and consistency, consensus, and liking.

Exercises

1. Think of a real-life example of the principle of scarcity being used in a persuasive message. Were you the one trying to persuade someone, or were you the receiver of the scarcity message? Was the message effective? Discuss your thoughts with a classmate.
2. Do you think the principle of consensus often works—are people often persuaded to buy things because other people own that item, or are going to buy it? Are you susceptible to this kind of persuasion? Think of some examples and discuss them with classmates.
3. Do people always use reason to make decisions? Support your opinion and discuss it with classmates.
4. Make a list of five or six people you choose to associate with—friends, neighbors, and coworkers, for example. Next to each person's name, write the characteristics you have in common with that person. Do you find that the principle of liking holds true in your choice of associates? Why or why not? Discuss your findings with your classmates.

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[1] Cialdini, R. (1993). Influence. New York, NY: Quill.

MEETING THE LISTENER'S BASIC NEEDS

Learning Objective

1. Identify and describe several basic needs that people seek to fulfill when they communicate.

In this section we will examine why we communicate, illustrating how meeting the listener's basic needs is central to effective communication. It's normal for the audience to consider why you are persuading them, and there is significant support for the notion that by meeting the audience's basic needs, whether they are a customer, colleague, or supervisor, you will more effectively persuade them to consider your position.

Not all oral presentations involve taking a position, or overt persuasion, but all focus on the inherent relationships and basic needs within the business context. Getting someone to listen to what you have to say involves a measure of persuasion, and getting that person to act on it might require considerable skill. Whether you are persuading a customer to try a new product or service, or informing a supplier that you need additional merchandise, the relationship is central to your communication. The emphasis inherent in our next two discussions is that we all share this common ground, and by understanding that we share basic needs, we can better negotiate meaning and achieve understanding.

Table 14.1 "Reasons for Engaging in Communication" presents some reasons for engaging in communication. As you can see, the final item in the table indicates that we communicate in order to meet our needs. What are those needs? We will discuss them next.

Table 14.1 Reasons for Engaging in Communication

Review	Why We Engage in Communication
Gain Information	We engage in communication to gain information. This information can involve directions to an unknown location, or a better understanding about another person through observation or self-disclosure.
Understand Communication Contexts	We also want to understand the context in which we communication, discerning the range between impersonal and intimate, to better anticipate how to communicate effectively in each setting.
Understand Our Identity	Through engaging in communication, we come to perceive ourselves, our roles, and our relationships with others.
Meet Our Needs	We meet our needs through communication.

Maslow's Hierarchy

If you have taken courses in anthropology, philosophy, psychology, or perhaps sociology in the past, you may have seen Maslow's hierarchy of needs. Psychologist Abraham Maslow [1] provides seven basic categories for human needs, and arranges them in order of priority, from the most basic to the most advanced.

In this figure, we can see that we need energy, water, and air to live. Without any of these three basic elements, which meet our physiological needs (1), we cannot survive. We need to meet them before anything else, and will often sacrifice everything else to get them. Once we have what we need to live, we seek safety (2). A defensible place, protecting your supply lines for your most basic needs, could be your home. For some, however, home is a dangerous place that compromises their safety. Children and victims of domestic violence need shelter to meet this need. In order to leave a hostile living environment, people may place the well-being and safety of another over their own needs, in effect placing themselves at risk. An animal would fight for its own survival above all else, but humans can and do acts of heroism that directly contradict their own self-interest. Our own basic needs motivate us, but sometimes the basic needs of others are more important to us than our own.

We seek affection from others once we have the basics to live and feel safe from immediate danger. We look for a sense of love and belonging (3). All needs in Maslow's model build on the foundation of the previous needs, and the third level reinforces our need to be a part of a family, community, or group. This is an important step that directly relates to business communication. If a person feels safe at your place of business, they are more likely to be open to communication. Communication is the foundation of the business relationship, and without it, you will fail. If they feel on edge, or that they might be pushed around, made to feel stupid, or even unwanted, they will leave and your business will disappear. On the other hand, if you make them feel welcome, provide multiple ways for them to learn, educate themselves, and ask questions in a safe environment, you will form relationships that transcend business and invite success.

Once we have been integrated in a group, we begin to assert our sense of self and self-respect, addressing our need for self-esteem (4). Self-esteem is essentially how we feel about ourselves. Let's say you are a male, but you weren't born with a "fix-it" gene. It's nothing to be ashamed of, but for many men it can be hard to admit. We no longer live in a time when we have to build our own houses or learn about electricity and plumbing as we grow up, and if it is not part of your learning experience, it is unreasonable to expect that you'll be handy with a wrench from the first turn.

The do-it-yourself chain Home Depot may have recognized how this interest in home repair is paired with many men's reluctance to admit their lack of experience. They certainly turned it into an opportunity. Each Saturday around the country, home repair clinics on all sorts of tasks, from cutting and laying tile to building a bird house, are available free to customers at Home Depot stores. You can participate, learn, gain mastery of a skill set, and walk out of the store with all the supplies you need to get the job done. You will also now know someone (the instructor, a Home Depot employee) whom you can return to for follow-up questions. Ultimately, if you don't succeed in getting the job done right, they will help you arrange for professional installation. This model reinforces safety and familiarity, belonging to a group or perceiving a trustworthy support system, and the freedom to make mistakes. It's an interactive program that squarely addresses one of customers' basic of human needs.

Maslow discusses the next level of needs in terms of how we feel about ourselves and our ability to assert control and influence over our lives. Once we are part of a group and have begun to assert ourselves, we start to feel as if we have reached our potential and are actively making a difference in our own world. Maslow calls this self-actualization (5). Self-actualization can involve reaching your full potential, feeling accepted for who you are, and perceiving a degree of control or empowerment in your environment. It may mean the freedom to go beyond building the bird house to the tree house, and to design it yourself as an example of self-expression.

As we progress beyond these levels, our basic human curiosity about the world around us emerges. When we have our basic needs met, we do not need to fear losing our place in a group or access to resources. We are free to explore and play, discovering the world around us. Our need to know (6) motivates us to grow and learn. You may have taken an elective art class that sparked your interest in a new area, or your started a new sport or hobby, like woodworking. If you worked at low-paying jobs that earned you barely enough to meet your basic needs, you may not be able to explore all your interests. You might be too exhausted after sixty or seventy hours a week on a combination of the night shift and the early morning shift across two jobs. If you didn't have to work as many hours to meet your more basic needs, you'd have time to explore your curiosity and address the need to learn. Want to read a good book? You'd have the time. Want to take a watercolor class? Sounds interesting. If, however, we are too busy hunting and gathering food, there is little time for contemplating beauty.

Beyond curiosity lies the aesthetic need to experience beauty (7). Form is freed from function, so that a wine bottle opener can be appreciated for its clever design that resembles a rabbit's head instead of simply how well it works to remove the cork. The appreciation of beauty transcends the everyday, the usual; it becomes exceptional. You may have walked in a building or church and become captivated by the light, the stained-glass windows, or the design. That moment that transcends the mundane, that stops you in your tracks, comes close to describing the human appreciation for the aesthetic, but it's really up to you.

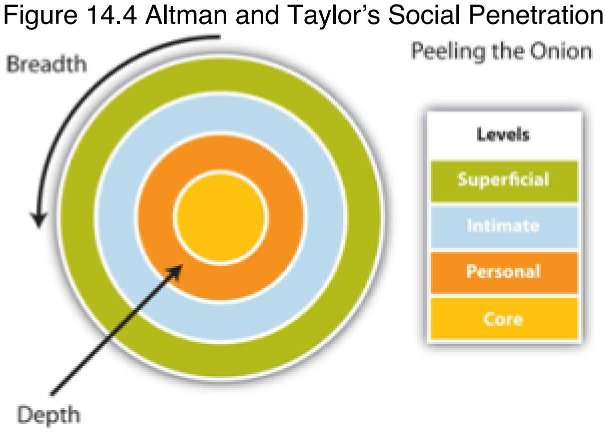
We can see in Maslow's hierarchy how our most basic needs are quite specific, and as we progress through the levels, the level of abstraction increases until ultimately we are freed from the daily grind to contemplate the meaning of a modern painting. As we increase our degree of interconnectedness with others, we become interdependent and, at the same time, begin to express independence and individuality. As a speaker, you may seek the safety of the familiar, only to progress with time and practice to a point where you make words your own.

Your audience will share with you a need for control. You can help meet this need by constructing your speech with an effective introduction, references to points you've discussed, and a clear conclusion. The introduction will set up audience expectations of points you will consider, and allow the audience to see briefly what is coming. Your internal summaries, signposts, and support of your main points all serve to remind the audience what you've discussed and what you will discuss. Finally, your conclusion answers the inherent question, "Did the speaker actually talk about what they said they were going to talk about?" and affirms to the audience that you have fulfilled your objectives.

Social Penetration Theory

The field of communication draws from many disciplines, and in this case, draws lessons from two prominent social psychologists. Irwin Altman and Dalmas Taylor articulated the social penetration theory, which describes how we move from superficial talk to intimate and revealing talk. [3] Altman and Taylor discuss how we attempt to learn about others so that we can better understand how to interact. [4] With a better understanding of others and with more information, we are in a better position to predict how they may behave, what they may value, or what they might feel in specific situations. We usually gain this understanding of others without thinking about it through observation or self-disclosure. In this model, often called the "onion model," we see how we start out on superficial level, but as we peel away the layers, we gain knowledge about the other person that encompasses both breadth and depth.

Figure 14.4 Altman and Taylor's Social Penetration Model



Source: Adapted from Altman and Taylor's social penetration model. [5]

We come to know more about the way a person perceives a situation (breadth), but also gain perspective into how they see the situation through an understanding of their previous experiences (depth). Imagine these two spheres, which represent people, coming together. What touches first? The superficial level. As the two start to overlap, the personal levels may touch, then the intimate level, and finally the core levels may even touch. Have you ever known a couple—perhaps your parents or grandparents—who have been together for a very long time? They know each other's stories and finish each other's sentences. They might represent the near overlap, where their core values, attitudes, and beliefs are similar through a lifetime of shared experiences.

Figure 14.5 American Foreign Service Manual Iceberg Model

We move from public to private information as we progress from small talk to intimate conversations. Imagine an onion. The outer surface can be peeled away, and each new layer reveals another until you arrive at the heart of the onion. People interact on the surface, and only remove layers as trust and confidence grows.

Another way to look at it is to imagine an iceberg. How much of the total iceberg can you see from the surface of the ocean? Not much. But once you start to look under the water, you gain an understanding of the large size of the iceberg, and the extent of its depth. We have to go beyond superficial understanding to know each other, and progress through the process of self-disclosure to come to know and understand one another. See Figure 14.5 "American Foreign Service Manual Iceberg Model" for an illustration of an "iceberg model" adapted from the American Foreign Service Manual. [6] This model has existed in several forms since the 1960s, and serves as a useful illustration of how little we perceive of each other with our first impressions and general assumptions.

Key Takeaway

We are motivated to communicate in order to gain information, get to know one another, better understand our situation or context, come to know ourselves and our role or identity, and meet our fundamental interpersonal needs.

Exercises

1. Consider your life in relation to Maslow's hierarchy of needs. To what degree do you feel you have attained the different levels in the hierarchy? Two or three years ago, were you at the same level where you currently are, or has your position in the hierarchy changed? In what ways do you expect it to change in the future? Discuss your thoughts with your classmates.
2. Think of someone you have met but do not know very well. What kinds of conversations have you had with this person? How might you expect your conversations to change if you have more opportunities to get better acquainted? Discuss your thoughts with a classmate.
3. Think of a conversation you have had within the past day. What were the reasons for having that conversation? Can you relate it to the reasons for engaging in conversation listed in Table 14.1 "Reasons for Engaging in Communication"? Discuss your thoughts with a classmate.
4. Write a brief paragraph about getting to know someone. Discuss whether, in your experience, it followed the social penetration theory. Share and compare with classmates.

[1] Maslow, A. (1970). Motivation and personality (2nd ed.). New York, NY: Harper & Row.

[2] Maslow, A. (1970). Motivation and personality (2nd ed.). New York, NY: Harper & Row.

[3] Altman, I., & Taylor, D. (1973). Social penetration: The development of interpersonal relationships. New York, NY: St. Martin's Press.

[4] Altman, I., & Taylor, D. (1973). Social penetration: The development of interpersonal relationships. New York, NY: St. Martin's Press.

[5] Altman, I., & Taylor, D. (1973). Social penetration: The development of interpersonal relationships. New York, NY: St. Martin's Press.

[6] American oreign Service Manual. (1975)\

PRESENTATIONS TO PERSUADE, GETTING STARTED

We are more easily persuaded, in general, by the reasons that we ourselves discovers than by those which are given to us by others.-Pascal

For every sale you miss because you're too enthusiastic, you will miss a hundred because you're not enthusiastic enough.-Zig Ziglar

Getting Started

Introductory Exercises

1. Please list three things that you recently purchased, preferably in the last twenty-four hours—the things can be items or services. Decide which purchase on your list stands out as most important to you and consider why you made that purchase decision. See if you can list three reasons. Now pretend you are going to sell that same item or service to a friend—would the three reasons remain the same, or would you try additional points for them to consider? Compare your results with a classmate.
2. Please think of one major purchase you made in the past year. It should be significant to you, and not a daily or monthly purchase. Once you made the purchase decision and received the item (e.g., a car), did you notice similar cars on the roads? Did you pay attention to details like color, modifications, or reports in the popular press about quality? Did you talk to your friends about it? What kind of information did you pay attention to—information that reinforced your purchase decision, or information that detracted from your appreciation of your newly acquired possession? Discuss your responses with classmates.

No doubt there has been a time when you wanted something from your parents, your supervisor, or your friends, and you thought about how you were going to present your request. But do you think about how often people—including people you have never met and never will meet—want something from you? When you watch television, advertisements reach out for your attention, whether you watch them or not. When you use the Internet, pop-up advertisements often appear. Living in the United States, and many parts of the world, means that you have been surrounded, even inundated, by persuasive messages. Mass media in general and television in particular make a significant impact you will certainly recognize.

Consider these facts:

- The average person sees between four hundred and six hundred ads per day—that is forty million to fifty million by the time he or she is sixty years old. One of every eleven commercials has a direct message about beauty. [1]
- By age eighteen, the average American teenager will have spent more time watching television—25,000 hours—than learning in a classroom. [2]
- An analysis of music videos found that nearly one-fourth of all MTV videos portray overt violence, with attractive role models being aggressors in more than 80 percent of the violent videos. [3]
- Forty percent of nine- and ten-year-old girls have tried to lose weight, according to an ongoing study funded by the National Heart, Lung and Blood Institute. [4]
- A 1996 study found that the amount of time an adolescent watches soaps, movies, and music videos is associated with their degree of body dissatisfaction and desire to be thin. [5]
- Identification with television stars (for girls and boys), models (girls), or athletes (boys) positively correlated with body dissatisfaction. [6]
- At age thirteen, 53 percent of American girls are "unhappy with their bodies." This grows to 78 percent by the time they reach seventeen. [7]
- By age eighteen, the average American teenager will witness on television 200,000 acts of violence, including 40,000 murders. [8]

Mass communication contains persuasive messages, often called propaganda, in narrative form, in stories and even in presidential speeches. When President Bush made his case for invading Iraq, his speeches incorporated many of the techniques we'll cover in this chapter. Your local city council often involves dialogue, and persuasive speeches, to determine zoning issues, resource allocation, and even spending priorities. You yourself have learned many of the techniques by trial and error and through imitation. If you ever wanted the keys to your parents' car for a special occasion, you used the principles of persuasion to reach your goal.

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[4] Body image and nutrition: Fast facts. (2009). Teen Health and the Media. Retrieved from http://depts.washington.edu/thmedia/view.cgi?section=bodyimage&;page=fastfacts

[5] Tiggemann, M., & Pickering, A. S. (1996). Role of television in adolescent women's body: Dissatisfaction and drive for thinness. International Journal of Eating Disorders, 20, 199–203.

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[7] Brumberg, J. J. (1997). The body project: An intimate history of American girls. New York, NY: Random House.

[8] Huston, A. C., et al. (1992). Big world, small screen: The role of television in American society. Lincoln: University of Nebraska Press.

PERSUASIVE PRESENTION ASSESSMENT

Submit a PowerPoint Persuasive Presentation.

This presentation will be on the Research Report you chose to do: the Proposal or the Feasibility Report.

Either report will follow the same guidelines for writing the Persuasive Presentation.

See the Persuasive Presentation Overview and the example of the PowerPoint Persuasive Oral Presentation to help you.

An additional example of a student PowerPoint can be found here.

Note: Although the example of the PowerPoint Persuasive Presentation is not on the Teldon Facilities Corporation Feasibility Report, Your PowerPoint Persuasive Presentation must be on the same problem as your Feasibility Report or your Proposal.

The presentation must not take more than 7-10 minutes to present. The presentation must follow the format in the lecture notes on the EVALUATION of the Persuasive Oral Presentation link.

Make sure the Persuasive Oral Presentation is on the your Feasibility Report or Proposal.

VIDEO: HOW TO WRITE AN INTRODUCTION FOR PERSUASIVE SPEECHES

Please cut and paste this link in the youtube website to view the video:

Watch this video online: https://youtu.be/NBObNfR2n_4

VIDEO: HOW TO WRITE THE OPENING OF A PERSUASIVE PRESENTATION

Watch this video online: https://youtu.be/Sz0PKvDn9bk

VIDEO: WHY YOU ABSOLUTELY HAVE TO BELIEVE IN YOUR MESSAGE

Watch this video online: https://youtu.be/tnY8UUaA75E

RULES OF WRITING

RULES OF WRITING OVERVIEW

This section is for you to find answers to your questions on punctuation, grammar, word usage, and sentence structure.

BASIC RULES OF PUNCTUATION

1. Subordinating Conjunction – If a sentence begins with a SC, comma after the clause.

Example: After I go home, I will watch TV.

If the SC is in the second part of the sentence, do not use a comma.

Example: I will watch TV after I go home.

2. Conjunctive Adverb – Comma immediately after the CA.

Example: Last night we went to the movies. However, we will stay home tonight.

Comma on both sides of the CA if it interrupts a sentence.

Example: Last night we went to the movies. We will, however, stay home tonight.

3. Prepositional Phrase – If a sentence begins with a PP, comma after the phrase.

Example: After Monday, I will sleep late. If the PP comes in the second part, do not use a comma.

Example: I will sleep late after Monday.

4. Coordinating Conjunction – (FANBOYS_For- And -Nor –But- Or -Yet –So)

If there is a subject after the CC, comma before the CC.

Example: I went to the store, and I bought bread.

If there is no subject after the CC (FANBOY), do not add comma before the CC.

Example: I went to the store and bought bread.

5. Semicolon – Is used as a period in order to connect two main ideas.

Example: Last night we went to the movies; however, we will stay home tonight.

Last night we went to the movies; we will stay home tonight.

Last night we went to the movies; we will, however, stay home tonight.

Semicolon – Is used to separate items in a series when one or more than one of the items has a comma.

We will order the following: pencils, for the tutoring center; paper; and pens.

6. Colon – Signals the beginning of a list.

Example: We will order the following: pencils, paper, and pens.

7. Correlative Conjunctions – Is a relationship between items in a specific part of speech.

Example: Not only Sally but also Henry will go.

I will do it for either Sally or Bill.

I will do it for not only Sally but also for Bill.

EDIT FOR ECONOMY

Be concise. Once you have written a solid draft, a document that has been well researched, take a step back and question whether or not you can delete half of the words. In a world where billions of instant messages and emails are sent daily, brevity is a virtue. People love conciseness. They respect writers and leaders who can explain difficult matters simply.

Tips for Pruning Your Sentences

The following paragraph hurts the eyes and ears of a successful writer:

> “Writing that is redundant and states the obvious and says the same thing over and over again is irritating for readers who want writers to get to the point right away. On the other hand, as I am sure you can understand, it is equally important for writers to avoid confusion when they write and to put down as much information–that is, as many words–as the reader needs in order to understand what the writer means when he or she says what he or she says. Also, of course, when you are writing, it is important for you to remember that readers are reading your words and that you need to be somewhat entertaining–even when the subject is technical when conveying information, so that your readers will keep reading and not go off and do something else like play ice hockey.”

Writers abhor wordiness. All of the empty phrases in the above can be translated into one sentence:

“Balance conciseness with the reader’s need for information and voice”

Watch this video online: https://youtu.be/BTqjOLXhmT0
No matter how much you appreciate the sounds of the words you have used, editing for economy may mean cutting the length of your document in half! By using the editing strategies already discussed, you have begun to chip away needless abstractions, unnecessary jargon, awkward passive constructions, weak verbs, tangled sentence patterns, unnecessary nouns, and strings of prepositional phrases. Yet by evaluating the content in light of your audience and the tone that you hope to establish, you can still find ways to eliminate unnecessary transitions, definitions, references, and examples. In your search for precision and persuasive appeal, you should also delete unnecessary repetitions–redundant adjectives, repeated phrases, and synonyms. Remember, you add clarity and grace by presenting an idea simply. Cutting away unnecessary “deadwood” can eliminate much that interferes with communication.

Watch this video online: https://youtu.be/iLzOvQUQEM4

PUNCTUATION, MECHANICS, CAPITALIZATION, AND SPELLING INTRODUCTION

Habits in writing as in life are only useful if they are broken as soon as they cease to be advantageous.
—W. Somerset Maugham

This chapter is about habit. As Samuel Beckett once noted, “Habit is the ballast that chains the dog to his vomit.” It is amazing how consistently we repeat the exact same little errors out of mere habit. However, we can tackle these habits by identifying them as patterns and writing with an eye for them. As a graduate student, I once misspelled the word “separate” (using an “e” in the middle) 16 times on an exam. My professor circled the offending letter each time and glibly noted, “I wish you could spell better.” His chiding cured me, and (knock wood) I have not misspelled “separate” since. Many students find that they have picked up the habit of putting commas in automatically before prepositions or even after conjunctions rather than before. Once such habits are identified, however, they can be addressed effectively.

No matter how niggling they may seem, details about punctuation, mechanics, capitalization, and spelling are important to master. Even with the spell checker and grammar checker eternally activated, we can make plenty of tiny mistakes that deeply affect sentence meaning. I know of an engineer who has repeatedly reported inaccurate dollar amounts to clients because of his sloppy proofreading. I have read government reports by well-published scientists where the colon was misused more than a dozen times in a single report. Even capitalization rules can be highly important to meaning: a student in geology, for example, must be aware of whether or not to capitalize “ice age” (yes when you mean the specific glacial epoch; no when you mean any of a series of cold periods alternating with periods of relative warmth). Finally, small mechanical errors (such as abbreviating a term or acronym improperly) reflect a general sloppiness and disregard for convention.

So work on the little things. Seek to understand punctuation marks as units affecting grammar and meaning, and accept proper spelling, capitalization, and mechanics as professional necessities. This chapter will help you to do so without immersing you into a grammatical swamp.

Self-Study

For further lessons on punctuation, visit these pages:

“A Brief History of Punctuation” article from about.com

“Brief Overview of Punctuation” article from Purdue’s Online Writing Lab (OWL)

HYPHENS

A wise writer once said, “If you take hyphens seriously you will surely go mad.” Hyphens belong to that category of punctuation marks that will hurt your brain if you think about them too hard, and, like commas, people disagree about their use in certain situations. Nevertheless, if you learn to use hyphens properly, they help you to write efficiently and concretely, and you will have to use them regularly because of the nature of technical writing. Because concepts in science and engineering frequently rely on word blends and complex word relationships, the best writers in these fields master the use of the hyphen.

The Hyphen's Function

Fundamentally, the hyphen is a joiner. It joins:

- two nouns to make one complete word (kilogram-meter);
- an adjective and a noun to make a compound word (accident-prone);
- two words that, when linked, describe a noun (agreed-upon sum, two-dimensional object);
- a prefix with a noun (un-American);
- double numbers (twenty-four);
- numbers and units describing a noun (1000-foot face; a 10-meter difference)
- "self" and "well" words (self-employed, well-known);
- ethnic labels (Irish-American);
- new word blends (cancer-causing, cost-effective);
- prefixes and suffixes to words, in particular when the writer wants to avoid doubling a vowel or tripling a consonant (anti-inflammatory; shell-like).

The rule of thumb I apply when using the hyphen is that the resulting word must act as one unit; therefore, the hyphen creates a new word—either a noun or a modifier—that has a single meaning. Usually, you can tell whether a hyphen is necessary by applying common sense and mentally excluding one of the words in question, testing how the words would work together without the hyphen. For example, the phrases "high-pressure system," "water-repellent surface," and "fuel-efficient car" would not make sense without hyphens, because you would not refer to a "high system," a "water surface," or a "fuel car." As your ears and eyes become attuned to proper hyphenation practices, you will recognize that both meaning and convention dictate where hyphens fit best.

Self-Study

The following websites offer exercises on using the hyphen properly, as well as the correct answers to the exercise questions:

Hyphenation exercises from the Little, Brown Handbook

Hyphen practice from the Chicago-Kent College of Law

Examples of Properly Used Hyphens

Some examples of properly used hyphens follow. Note how the hyphenated word acts as a single unit carrying a meaning that the words being joined would not have individually.

small-scale study two-prong plug strength-to-weight ratio high-velocity flow well-known example frost-free lawn self-employed worker one-third majority coarse-grained wood decision-making process blue-green algae air-ice interface silver-stained cells protein-calorie malnutrition

membrane-bound vesicles phase-contrast microscope long-term-payment loan cost-effective program time-dependant variable radiation-sensitive sample long-chain fatty acid

When Hyphens Are Not Needed

By convention, hyphens are not used in words ending in -ly, nor when the words are so commonly used in combination that no ambiguity results. In these examples, no hyphens are needed:

finely tuned engine	blood pressure	sea level
real estate	census taker	atomic energy
civil rights law	public utility plant	carbon dioxide

Prefixes and Suffixes

Most prefixes do not need to be hyphenated; they are simply added in front of a noun, with no spaces and no joining punctuation necessary. The following is a list of common prefixes that do not require hyphenation when added to a noun:

after	anti	bi	bio	co
cyber	di	down	hetero	homo
infra	inter	macro	micro	mini
nano	photo	poly	stereo	thermo

Common suffixes also do not require hyphenation, assuming no ambiguities of spelling or pronunciation arise. Typically, you do not need to hyphenate words ending in the following suffixes:

able	less	fold	like	wise

Commonly Used Word Blends

Also, especially in technical fields, some words commonly used in succession become joined into one. The resulting word's meaning is readily understood by technical readers, and no hyphen is necessary. Here are some examples of such word blends, typically written as single words:

blackbody	groundwater	airship
downdraft	longwall	upload
setup	runoff	blowout

APOSTROPHES

As you already know, apostrophes are used to form both contractions—two words collapsed into one—and possessives. Handily, we can virtually ignore the issue of contractions here, since they are so easily understood and are rarely used in technical writing. With possessives, the apostrophe is used, typically in combination with an "s," to represent that a word literally or conceptually "possesses" what follows it.

a student's paper	the county's borders
a nation's decision	one hour's passing

Apostrophes with Words ending in "s"

Although practices vary, for words that already end in "s," whether they are singular or plural, we typically indicate possession simply by adding the apostrophe without an additional "s."

Illinois' law	Student Affairs' office
Mars' atmosphere	interviewees' answers

Apostrophes with Acronyms and Numbers

In technical writing, acronyms and numbers are frequently pluralized with the addition of an "s," but there is typically no need to put an apostrophe in front of the "s." Therefore, "SSTs" (sea surface temperatures) is more acceptable than "SST's" when your intention is simply to pluralize. Ideally, use the apostrophe before the "s" with an acronym or a number only to show possession (i.e., "an 1860's law"; "DEP's testing") or when confusion would otherwise result ("mind your p's and q's").

Possessives without the Apostrophe

Convention, frequency of usage, and—to be honest—the economy of advertising, sometimes dictate that the apostrophe is dropped. In proper names that end in "s," especially of geographic locations and organizations, the apostrophe is often omitted. And in everyday combinations where possession is automatically understood, the apostrophe is often dropped.

United States government	Hells Canyon
Veterans Highway	Harpers Ferry
mens room	Johns Hopkins University

Self-Study

For the confused and curious, here are some "Apostrophes for Dummies" websites:

"Guidelines for Using Apostrophes Correctly" page from about.com

"Using Apostrophes to Show Possession" page from dummies.com

QUOTATION MARKS

Despite what you may see practiced—especially in advertising, on television, and even in business letters—the fact is that the period and comma go inside the quotation marks all of the time. Confusion arises because the British system is different, and the American system may automatically look wrong to you, but it is simply one of the frequently broken rules of written English in America: The period and comma go inside the quotation marks.

> Correct: The people of the pine barrens are often called "pineys."
>
> Incorrect: The people of the pine barrens are often called "pineys".

However, the semicolon, colon, dash, question mark, and exclamation point fall outside of the quotation marks (unless, of course, the quoted material has internal punctuation of its own).

> This measurement is commonly known as "dip angle"; dip angle is the angle formed between a normal plane and a vertical.
>
> Built only 50 years ago, Shakhtinsk—"minetown"—is already seedy.
>
> When she was asked the question "Are rainbows possible in winter?" she answered by examining whether raindrops freeze at temperatures below 0 °C. (Quoted material has its own punctuation.)

Self-Study

More advice on quotation marks, including conventions for using them with direct and indirect quotations, is available online at:

> Advice on using quotation marks from Purdue's Online Writing Lab (OWL)
>
> Advice on using quotation marks from St. Cloud State University

SEMICOLONS, COLONS, AND DASHES

Punctuation marks: terribly powerful in the right hands. Punctuation marks are silent allies, and you can train yourself to exploit them as such. Punctuation marks do not just indicate sound patterns—they are symbols that clarify grammatical structure and sentence meaning. And, as I demonstrate in the writing of this paragraph, punctuation marks showcase your facility with the language. What follows are some basics about three of the most powerful and most commonly misused punctuation marks.

The Semicolon

The semicolon is often misused in technical writing; in fact, it is often confused with the colon. Grammatically, the semicolon almost always functions as an equal sign; it says that the two parts being joined are relatively equal in their length and have the same grammatical structure. Also, the semicolon helps you to link two things whose interdependancy you wish to establish. The sentence parts on either side of the semicolon tend to "depend on each other" for complete meaning. Use the semicolon when you wish to create or emphasize a generally equal or even interdependent relationship between two things. Note the interdependent relationship of the two sentence parts linked by the semicolon in this example:

> The sonde presently used is located in the center of the borehole; this location enables the engineer to reduce microphonics and standoff sensitivity.

Here, we see how the second half of the sentence helps to explain a key detail (the sonde location) of the first half. The semicolon, along with the repetition of the word "location," helps to draw our attention to the explanation.

The semicolon is also handy for linking a series of parallel items that could otherwise be confused with each other. One savvy student used the semicolon in a job description on her resume as follows:

> As an engineering assistant, I had a variety of duties: participating in pressure ventilation surveys; drafting, surveying, and data compilation; acting as a company representative during a roof-bolt pull test.

The Colon

The colon: well-loved but, oh, so misunderstood. The colon is not just used to introduce a list; it is far more flexible. The colon can be used after the first word of a sentence or just before the final word of a sentence. The colon can also be used to introduce a grammatically independent sentence. Thus, I call it the most powerful of punctuation marks.

The colon is like a sign on the highway, announcing that something important is coming. It acts as an arrow pointing forward, telling you to read on for important information. A common analogy used to explain the colon is that it acts like a flare in the road, signaling that something meaningful lies ahead.

Use the colon when you wish to provide pithy emphasis.

> To address this problem, we must turn to one of the biologist's most fundamental tools: the Petri dish.

Use the colon to introduce material that explains, amplifies, or summaries what has preceded it.

> The Petri dish: one of the biologist's most fundamental tools.

> In low carbon steels, banding tends to affect two properties in particular: tensile ductility and yield strength.

The colon is also commonly used to present a list or series, which comes in handy when there is a lot of similar material to join:

> A compost facility may not be located as follows: within 300 feet of an exceptional-value wetland; within 100 feet of a perennial stream; within 50 feet of a property line.

The Dash

The dash—which is typically typed as two hyphens or as one long bar (available on your word processor's "symbol" map)—functions almost as a colon does in that it adds to the preceding material, but with extra emphasis. Like a caesura (a timely pause) in music, a dash indicates a strong pause, then gives emphasis to material following the pause. In effect, a dash allows you to *redefine* what was just written, making it more explicit.

You can also use a dash as it is used in the first sentence of this paragraph: to frame an interruptive or parenthetical-type comment that you do not want to de-emphasize.

> Jill Emery confirms that Muslim populations have typically been ruled by non-Muslims—specifically Americans, Russians, Israelis, and the French.
>
> The dissolution took 20 minutes—much longer than anticipated—but measurements were begun as soon as the process was completed.

Finally, the dash we typically use is technically called the “em dash,” and it is significantly longer than the hyphen. There is also an “en dash”—whose length is between that of the hyphen and the em dash, and its best usage is to indicate inclusive dates and numbers:

> July 6–September 17 pp. 48–56.

Like the em dash, the en dash is typically available on your word processor’s symbol map, or it may even be inserted automatically by your word processor when you type inclusive numbers or dates with a hyphen between them. When you type the hyphen, en dash, and em dash, no spaces should appear on either side of the punctuation mark.

Self-Study

For more good-natured advice on using semicolons, colons, and dashes, visit these two fun sites:

> “Semicolons, Colons, and Dashes” webpage from about.com
>
> Writing tips from the “Punctuation Junction”

COMMAS

These little demons compound and trivialize the nightmares of many a professor after an evening of reading student papers. A sure way to irritate educated readers of your work is to give them an overabundance of opportunities to address your comma problems. It is easy but dangerous to take the attitude that Sally once did in a *Peanuts* comic strip, asking Charlie Brown to correct her essay by showing her “where to sprinkle in the little curvy marks.”

You have probably heard the common tips on using commas: “Use one wherever you would naturally use a pause,” or “Read your work aloud, and whenever you feel yourself pausing, put in a comma.” These techniques help to a degree, but our ears tend to trick us and we need other avenues of attack. However, it seems impossible to remember or apply the 17 or so grammatical explanations of comma usage that you were probably introduced to way back in 8th grade. (For example: “Use commas to set off independent clauses joined by the common coordinating conjunctions. . . . Put a comma before the coordinating conjunction in a series.”) Perhaps the best and most instructive way, then, for us to approach the comma is to remember its fundamental function: it is a separator. Knowing this, it is useful to determine what sorts of things generally require separation. In sum, commas are used to separate complete ideas, descriptive phrases, and adjacent items, and before and after most transition words.

Comma Rules

Complete ideas need to be separated by a comma because, by definition, they could be grammatically autonomous, but the writer is choosing to link them. Complete ideas are potentially whole sentences that the writer chooses to link with a conjunction such as "and" or "but."

> Digital recordings made it possible to measure the nuclear magnetic signal at any depth, and this allowed for a precise reading to be taken at every six inches.

Note how the second half of this sentence contains both a subject ("this") and a verb ("allowed"), indicating that a second complete idea is presented, and thus a comma is required.

Descriptive phrases often need to be separated from the things that they describe in order to clarify that the descriptive phrases are subordinate (i.e., they relate to the sentence context, but are less responsible for creating meaning than the sentence's subject and verb). Descriptive phrases tend to come at the very beginning of a sentence, right after the subject of a sentence, or at the very end of a sentence.

> Near the end of the eighteenth century, James Hutton introduced a point of view that radically changed scientists' thinking about geologic processes.
>
> James Lovelock, who first measured CFCs globally, said in 1973 that CFCs constituted no conceivable hazard.
>
> All of the major industrialized nations approved, making the possibility a reality.

In each of these cases, note how the material separated by the comma (e.g., "making the possibility a reality") is subordinate—i.e., it carries context in the sentence, but the primary sentence meaning is still derived from the subject and verb. In each example, the phrase separated by the comma could be deleted from the sentence without destroying the sentence's basic meaning.

Adjacent items are words or phrases that have some sort of parallel relationship, yet are different from each other in meaning. Adjacent items are separated so that the reader can consider each item individually.

> Weathering may extend only a few centimeters beyond the zone in fresh granite, metamorphic rocks, sandstone, shale, and other rocks.
>
> The river caught fire on July 4, 1968, in Cleveland, Ohio.
>
> This approach increases homogeneity, reduces the heating time, and creates a more uniform microstructure.

In the first sentence, the commas are important because each item presented is distinctly different from its adjacent item. In the second example, the dates (July 4, 1968) and places (Cleveland, Ohio) are juxtaposed, and commas are needed because the juxtaposed items are clearly different from each other. In the third example, the three phrases, all beginning with different verbs, are parallel, and the commas work with the verbs to demonstrate that "This approach" has three distinctly different impacts.

Finally, transition words add new viewpoints to your material; commas before and after transition words help to separate them from the sentence ideas they are describing. Transition words tend to appear at the beginning of or in the middle of a sentence, and, by definition, the transition word creates context that links to the preceding sentence. Typical transition words that require commas before and after them include however, thus, therefore, also, and nevertheless.

> Therefore, the natural gas industry can only be understood fully through an analysis of these recent political changes.
>
> The lead precursor was prepared, however, by reacting pure lead acetate with sodium isopropoxide.

Self-Study

There are plenty of websites devoted to exercises on comma usage for those who wish to self-study. Here are two I recommend:

Comma quiz from myenglishlessons.net

A 10-question comma quiz from the Pearson Longman Lab Manual Online

Using a Comma Before "And"

It is true that commas are sometimes optional, depending on sentence meaning and the writer's taste, and many writers choose not to put a comma before the "and" in a series (also known as the "serial comma") involving a parallel list of words. For example, some would write the sentence "I am industrious, resourceful and loyal," using no comma before the "and." This practice is fine as long as you are consistent in applying it. However, I, and the grammar handbooks I consult, recommend a comma even in these circumstances, because—even in the example provided—there is a slight pitch and meaning change between the terms "resourceful" and "loyal."

Most importantly, if the "and" is part of a series of three or more phrases (groups of words) as opposed to single words, you should use a comma before the "and" to keep the reader from confusing the phrases with each other.

> Medical histories taken about each subject included smoking history, frequency of exercise, current height and weight, and recent weight gain.

By always using a comma before the "and" in any series of three or more, you honor the distinctions between each of the separated items, and you avoid any potential reader confusion. The bottom line is this: When you use a comma before the "and" in a series of three or more items or phrases, you are always correct.

That noted, be aware that some professors and many journals will not favor the use of the comma before an "and" in a series (for the journals, it is literally cheaper to print fewer commas).

Self-Study

Plenty of online debate is devoted to the serial comma issue. Here are some related thoughts from "Punctuation Man" and the "Grammar Girl":

Punctuation Man endorsing the serial comma

Grammar Girl weighing in on the serial comma

Comma Overuse

Perhaps the best way to troubleshoot your particular comma problems, especially if they are serious, is to identify and understand the patterns of your errors. We tend to make the same mistakes over and over again; in fact, many writers develop the unfortunate habit of automatically putting commas into slots such as these:

- between the subject and verb of a sentence
- after any number
- before any preposition
- before or after any conjunction

Thus, incorrect sentences such as these appear in papers:

> The bushings, must be adjusted weekly, to ensure that the motor is not damaged.
>
> Many botanists still do not fully appreciate these findings even after 22 years, following the publication of the discovery paper.

> Other manufactured chemicals that also contain bromine are superior for extinguishing fires in situations where people, and electronics are likely to be present.
>
> The price of platinum will rise, or fall depending on several distinct factors.

If the commas above look fine to you, then you may be in the habit of using commas incorrectly, and you will need to attack your specific habits, perhaps even in a routine, repetitive fashion, in order to break yourself of them. Similarly, it is common for someone to have to look up the same tricky word dozens of times before committing its proper spelling to memory. As with spelling, commas (or the absence of commas) must be repeatedly challenged in your writing. As you perfect your comma usage you are also recognizing and reevaluating your sentence patterns, and the rewards are numerous. There is no foolproof or easy way to exorcise all of your comma demons, but reminding yourself of the comma's basic function as a separator and justifying the separation of elements whenever you use the comma is a good beginning. I often recommend to students with comma problems that they re-read their work one last time, just focusing on their comma use, before turning in a paper as a final version. In the end, you simply must make a habit of reading, writing, and revising with comma correctness in mind, and remember that commas have much to do with sentence wording, which is always in the control of the writer.

To demonstrate this last point, Lewis Thomas, a clever essayist as well as a physician and poet, shows us how to use commas effectively—as well as how to word a long sentence so that commas are not overused—in this excerpt from "Notes on Punctuation":

The commas are the most useful and usable of all the stops. It is highly important to put them in place as you go along. If you try to come back after doing a paragraph and stick them in the various spots that tempt you you will discover that they tend to swarm like minnows into all sorts of crevices whose existence you hadn't realized and before you know it the whole long sentence becomes immobilized and lashed up squirming in commas. Better to use them sparingly, and with affection, precisely when the need for one arises, nicely, by itself.

THE PERIOD

Though a seemingly trivial punctuation mark, the period does present some knotty challenges, especially in technical writing. We all know to place a period to signal the termination of a simple sentence that makes a statement. However, here are a few more specialized rules:

- Do not use a period in combination with other punctuation marks unnecessarily, especially when a quotation is involved. In such an instance, end the sentence naturally on whatever punctuation mark is logical (e.g., a question mark).
- Avoid using periods at the ends of abbreviated units of measure, except when the period might be confused with another word. (Therefore, so that it's not confused with the word "in," use "in." to abbreviate "inches.")
- When using a period in conjunction with parentheses, the period comes after the parentheses are closed if the parenthetical comment itself is part of the larger sentence (as in the first bulleted sentence above, and this one). The period comes inside the parentheses only when the parentheses themselves contain a complete independent sentence. (See the example in the second bulleted sentence above, as well as this sentence.)
- By convention, if an abbreviated word (such as "etc.") ends a sentence, let a single period signal the sentence's end—two periods in a row would be incorrect.
- In acronyms commonly understood or commonly used in your field (ASTM, EPA, US, GIS), do not use periods after the capital letters.
- Do use periods after abbreviations and acronyms that are forms of address, initials within proper names, earned degrees, and when expressing measures of time (Dr. Bauer; M.S. degree; Steven S. Wilson, Jr.; 5:00 p.m.; 10 B.C.).

Self-Study

For everything you always wanted to know about the period, but neglected to ask, visit these sites:

> Punctuation rules from infoplease.com
>
> "English 101: Punctuation: Periods" website from thinkouthere.com

PARENTHESES

We are used to using parentheses to identify material that acts as an aside (such as this brief comment) or to add incidental information, but in technical writing the rules for using parentheses can be more nuanced. Some more specialized functions of parentheses include:

- To introduce tables or figures within a sentence:

  In pulse-jet collectors (Figure 3), bags are supported from a metal cage fastened onto a cell plate at the top of the collector.

- To represent converted units:

  The funnel used for this experiment was 7 in. (17.8 cm) in length.

- When enumerating:

  The system has three principal components: (1) a cleaning booth, (2) an air reservoir, and (3) an air spray manifold.

- To indicate product manufacturer names:

  The filtering process involves a 10-mm Dorr-Oliver cyclone (Zefon International).

- To introduce an acronym after it has been written out:

  Units will be expressed in cubic feet per minute (cfm).

Finally, it should be noted that punctuation used alongside parentheses needs to take into account their context. If the parentheses enclose a full sentence beginning with a capital letter, then the end punctuation for the sentence falls *inside* the parentheses. For example:

> Typically, suppliers specify air to cloth ratios of 6:1 or higher. (However, ratios of 4:1 should be used for applications involving silica or feldspathic minerals.)

If the parentheses indicate a citation at the end of a sentence, then the sentence's end punctuation comes after the parentheses are closed:

> In a study comparing three different building types, respirable dust concentrations were significantly lower in the open-structure building (Hugh et al., 2005).

Finally, if the parentheses appear in the midst of a sentence (as in this example), then any necessary punctuation (such as the comma that appeared just a few words ago) is delayed until the parentheses are closed.

ABBREVIATIONS AND ACRONYMS

Abbreviations (the shortened form of a word or phrase) and acronyms (words formed from the initial letters of a phrase) are commonly used in technical writing. In some fields, including chemistry, medicine, computer science, and geographic information systems, acronyms are used so frequently that the reader can feel lost in an alphabet soup. However, the proper use of these devices enhances the reading process, fostering fluid readability and efficient comprehension.

Some style manuals devote entire chapters to the subject of abbreviations and acronyms, and your college library no doubt contains volumes that you can consult when needed. Here, I provide just a few principles you can apply in using abbreviations and acronyms, and in the next section I offer a table of some of the forms most commonly used by student writers.

Abbreviations

- Typically, abbreviate social titles (Ms., Mr.) and professional titles (Dr., Rev.).
- In resumes and cover letters, avoid abbreviations representing titles of degrees (e.g., write out rather than abbreviate “Bachelor of Science”).
- Follow most abbreviations with a period, except those representing units of measure (“Mar.” for March; “mm” for millimeter). See the table that follows for further guidance.
- Typically, do not abbreviate geographic names and countries in text (i.e., write “Saint Cloud” rather than “St. Cloud”; write “United States” rather than “U.S.”). However, these names are usually abbreviated when presented in “tight text” where space can be at a premium, as in tables and figures.
- Use the ampersand symbol (&) in company names if the companies themselves do so in their literature, but avoid using the symbol as a narrative substitute for the word “and” in your text.
- In text, spell out addresses (Third Avenue; the Chrysler Building) but abbreviate city addresses that are part of street names (Central Street SW).
- Try to avoid opening a sentence with an abbreviation; instead, write the word out.
- When presenting a references page, follow the conventions of abbreviation employed by a journal in your field. To preserve space, many journals commonly use abbreviations, without periods, in their references pages (e.g., “J” for Journal; “Am” for “American”).

Acronyms

- Always write out the first in-text reference to an acronym, followed by the acronym itself written in capital letters and enclosed by parentheses. Subsequent references to the acronym can be made just by the capital letters alone. For example: Geographic Information Systems (GIS) is a rapidly expanding field. GIS technology . . .
- Unless they appear at the end of a sentence, do not follow acronyms with a period.
- Generally, acronyms can be pluralized with the addition of a lowercase “s” (“three URLs”); acronyms can be made possessive with an apostrophe followed by a lowercase “s” (“the DOD’s mandate”).
- As subjects, acronyms should be treated as singulars, even when they stand for plurals; therefore, they require a singular verb (“NIOSH is committed to . . .”).
- Be sure to learn and correctly use acronyms associated with professional organizations or certifications within your field (e.g., ASME for American Society of Mechanical Engineers; PE for Professional Engineer).

- With few exceptions, present acronyms in full capital letters (FORTRAN; NIOSH). Some acronyms, such as "scuba" and "radar," are so commonly used that they are not capitalized. Consult the table that follows in the next section to help determine which commonly used acronyms do not appear in all capital letters.
- When an acronym must be preceded by "a" or "an" in a sentence, discern which word to use based on sound rather than the acronym's meaning. If a soft vowel sound opens the acronym, use "an," even if the acronym stands for words that open with a hard sound (i.e., "a special boat unit," but "an SBU"). If the acronym opens with a hard sound, use "a" ("a KC-135 tanker").

Click here to download a pdf of a table of commonly used abbreviations and acronyms.

Self-Study

For comprehensive online acronyms dictionaries, especially for technical fields such as chemistry and medicine, I recommend these sites:

Online acronyms dictionary

Searchable acronyms database, sorted by discipline

Table of commonly used abbreviations and acronyms:

Use this table to check the proper spelling, capitalization, and punctuation of commonly used abbreviations and acronyms. For a much more detailed listing of abbreviations and acronyms, you can check in the back pages of many dictionaries, or consult the *Chicago Manual of Style* (also available online to subscribers) or the free online version of the *United States Government Printing Office Style Manual.*

A or amp	ampere
a.m.	*ante meridiem*, before noon
Assembler	Assembler computer language
atm	standard atmosphere
Ave.	avenue
B.A.	Bachelor of Arts
BASIC	BASIC computer language
Blvd.	boulevard
BP	boiling point
B.S.	Bachelor of Science
Btu	British thermal unit
^{o}C	degrees Celsius
cd	candela
CDC	Centers for Disease Control

CFR	Code of Federal Regulations
CIA	Central Intelligence Agency
cm	centimeter
COBOL	COBOL computer language
Corp.	corporation
D	darcy
DEP	Department of Environmental Protection
DOD	Department of Defense
DOT	Department of Transportation
engg.	engineering
engr.	engineer
e.g.	*exempli gratia*, for example
EPA	Environmental Protection Agency
et al.	*et alii*, and others
etc.	*et cetera*, and so forth
^{o}F	degrees Fahrenheit
FBI	Federal Bureau of Investigation
FCC	Federal Communications Commission
FDA	Food and Drug Administration
fig.	figure
FORTRAN	FORTRAN computer language
ft	foot
gal.	gallon
ha	hectare
h	hour
HP	horsepower
HTML	hypertext markup language
Hz	hertz

i.e.	*id est*, that is
in	inch
Inc.	incorporated
K	Kelvin
kg	kilogram
kw	kilowatt
kWh	kilowatt-hour
l or L	liter
LAFTA	Latin American Free Trade Association
lb	pound
m	meter
mHz	megahertz
min.	minute
mol	mole
M.S.	Master of Science
NASA	National Aeronautics and Space Administration
neg	negative
NIH	National Institutes of Health
NIOSH	National Institute for Occupational Safety and Health
NM	nautical mile
NOAA	National Oceanic and Atmospheric Administration
NSF	National Science Foundation
OPEC	Organization of Petroleum Exporting Countries
OSHA	Occupational Safety and Health Administration
p.	page
Pascal	Pascal computer language
Ph.D.	*Philosophiae Doctor*, Doctor of Philosophy
p.m.	*post meridiem*, after noon

pos	positive
pp.	pages
pt.	pint
qt.	quart
radar	radio detecting and ranging
RPM	revolutions per minute
scuba	self-contained underwater breathing apparatus
sec. or s	second
sq	square
STP	standard temperature and pressure
temp	temperature
Univ.	university
URL	uniform resource locator
USGS	United States Geological Survey
vol.	volume

EXPRESSING TEMPERATURES AND NUMBERS

Style manuals, professional societies, and journals specific to your field publish thorough guidelines about how to handle small matters of mechanics. For instance, *Suggestions to Authors of the Reports of the United States Geological Survey* addresses such issues as whether to use the chemical name or symbol in writing; the American Meteorological Society's *Authors' Guide* dictates how one should express time, time zone, day, month, and year in writing. Chase down such sources within your field for specifics on matters of mechanics.

Two especially noteworthy issues of mechanics that arise regularly in technical writing are how to handle temperature measurements and numbers. Some guidelines on these matters follow.

Referring to Temperature Measurements

Degree measures of temperature are normally expressed with the ° symbol rather than by the written word, with a space after the number but not between the symbol and the temperature scale:

The sample was heated to 80 °C.

Unlike the abbreviations for Fahrenheit and Celsius, the abbreviation for Kelvin (which refers to an absolute scale of temperature) is not preceded by the degree symbol (i.e., 12 K is correct).

Writing about Numbers

The rules for expressing numbers in technical writing are relatively simple and straightforward:

All important measured quantities—particularly those involving decimal points, dimensions, degrees, distances, weights, measures, and sums of money—should be expressed in numeral form (e.g., 1.3 seconds, $25,000, 2 amperes).
Unless they appear as part of a string of larger related numbers, counted numbers of ten or below should be written out.
If possible, a sentence should not begin with a number, but if it does the number should be written out.
Treat similar numbers in grammatically connected groups alike.

Following these rules, here are some examples of properly expressed numbers:

The depth to the water at the time of testing was 16.16 feet.

For this treatment, the steel was heated 18 different times.

Two dramatic changes followed: four samples exploded and thirteen lab technicians resigned.

Self-Study

Check out these handy resources related to expressing numbers and numerals in text:

Technical writing tips for using numbers from a company president offering online technical writing courses

"Using Numbers, Writing Lists" advice from Capital Community College website

CAPITALIZATION

As a technical writer, who must often refer to such things as geographic locations, company names, temperature scales, and processes or apparatuses named after people, you must learn to capitalize consistently and accurately. What follows are ten fundamental rules for capitalization. Check out the first rule. It gets fumbled in papers all the time.

Capitalize the names of major portions of your paper and all references to figures and tables. Note: Some journals and publications do not follow this rule, but most do.

my Introduction	Airshaft 3
see Figure 4	Table 1

Appendix A	Graph

Capitalize the names of established regions, localities, and political divisions.

Wheeling Township	the French Republic
Lancaster County	the United Kingdom
the Wheat Belt	the Arctic Circle

Capitalize the names of highways, routes, bridges, buildings, monuments, parks, ships, automobiles, hotels, forts, dams, railroads, and major coal and mineral deposits.

Highway 13	Route 1
Michigan Avenue	the White House
Alton Railroad	the Statue of Liberty
Herrin No. 6 seam	the Queen Elizabeth

Capitalize the proper names of persons, places and their derivatives, and geographic names (continents, countries, states, cities, oceans, rivers, mountains, lakes, harbors, and valleys).

Howard Pickering	Great Britain
Chicago	British
New York Harbor	Gulf of Mexico
Rocky Mountains	Florida
Aleutian Islands	the Aleutian low

Capitalize the names of historic events and documents, government units, political parties, business and fraternal organizations, clubs and societies, companies, and institutions.

the Second Amendment	the Civil War
Congress	Bureau of Mines
Republicans	Ministry of Energy

Capitalize titles of rank when they are joined to a person's name, and the names of stars and planets. Note: The names earth, sun, and moon are not normally capitalized, although they may be capitalized when used in connection with other bodies of the solar system.

Professor Walker	President Spanier
Milky Way	Venus

Capitalize words named after geographic locations, the names of major historical or geological time frames, and most words derived from proper names. Note: The only way to be sure if a word derived from a person's name should be capitalized is to look it up in the dictionary. For example, "Bunsen burner" (after Robert Bunsen) is capitalized, while "diesel engine" (after Rudolph Diesel) is not. Also, referring to specific geologic time frames, the *Chicago Manual of Style* says not to capitalize the words "era," "period," and "epoch," but the American Association of Petroleum Geologists says that these words should be capitalized. I choose to capitalize them, as those who write in the geological sciences should by convention.

Coriolis force	Fourier coefficients
English tweeds	Walker Circulation
Hadley cell	Petri dish
Boyle's law	Russell volumeter
Planck's constant	Klinkenberg effect
Middle Jurassic Period	Mesozoic Era
the Industrial Revolution	the Inquisitio

Capitalize references to temperature scales, whether written out or abbreviated.

10 ^{o}F	Fahrenheit degrees
22 ^{o}C	Celsius degrees

Capitalize references to major sections of a country or the world.

the Near East	the South

Capitalize the names of specific courses, the names of languages, and the names of semesters.

Anatomy 20	Russian
Spring semester 2009	Fall term, 2006

Common Capitalization Errors

Just as important as knowing when to capitalize is knowing when not to. Below, I set forth a few instances where capital letters are commonly used when they should not be. Please review this advice carefully, in that we all have made such capitalization errors. When in doubt, simply consult a print dictionary.

Do not capitalize the names of the seasons, unless the seasons are personified, as in poetry ("Spring's breath"). (It is, of course, highly unlikely that you would personify a season in a technical paper.)

spring	winter

Do not capitalize the words north, south, east, and west when they refer to directions, in that their meaning becomes generalized rather than site-specific.

We traveled west.	The sun rises in the east.

In general, do not capitalize commonly used words that have come to have specialized meaning, even though their origins are in words that are capitalized.

navy blue	india ink
pasteurization	biblical

Do not capitalize the names of elements. Note: This is a common capitalization error, and can often be found in published work. Confusion no doubt arises because the symbols for elements are capitalized.

tungsten	nitrogen
oxygen	californium

Do not capitalize words that are used so frequently and informally that they have come to have highly generalized meaning.

north pole	big bang theory
arctic climate	midwesterner

SPELLING

To understand the limited power of the spell checker, enjoy the following poem, which has an intriguing literary history:

> I have a spelling checker
> It came with my PC;
> It plainly marks four my revue
> Mistakes I cannot sea.
> I've run this poem threw it,
> I'm sure your pleased too no,
> Its letter perfect in it's weigh,
> My checker tolled me sew.

Just as so many of us rely on calculators to do all our math for us—even to the point that we do not trust calculations done by our own hand—far too many of us use spell checkers as proofreaders, and we ultimately use them to justify our own laziness. I once received a complaint from an outraged professor that a student had continually misspelled "miscellaneous" as "mescaline" (a hallucinogenic drug). The student's spell checker did not pick up the error, but the professor certainly did, and he told me that he even speculated privately that the student who wrote the paper did so while on mescaline.

So proceed with caution when using spell checkers. They are not gods, and they do not substitute for meticulous proofreading and clear thinking. There is an instructive moment in a M*A*S*H episode, when Father Mulcahy complains to Colonel Potter about a typo in a new set of Bibles—one of the commandments reads “thou shalt commit adultery.” Father sheepishly worries aloud that “These lads are taught to follow orders.” For want of a single word the intended meaning is lost. Always proofread a hard copy, with your own two eyes.

Six Rules for Spelling

I have a crusty old copy of a book called *Instant Spelling Dictionary*, now in its third edition but first published in 1964, that I still use frequently. I adapted the six basic spelling rules that appear below from that dictionary. Even without memorizing the rules, you can improve your spelling simply by reviewing them and scanning the examples and exceptions until the fundamental concepts begin to sink in. When in doubt, always look up the word. And do not forget that desktop dictionaries work just as well as electronic ones.

Rule 1. In words ending with a silent “e,” you usually drop the “e” before a suffix that begins with a vowel.

survive + al	=	survival
divide + ing	=	dividing
fortune + ate	=	fortunate

Common Exceptions:

manageable	singeing	mileage
advantageous	dyeing	acreage
peaceable	canoeing	lineage

Rule 2. In words ending with a silent “e,” you usually retain the “e” before a suffix than begins with a consonant.

arrange + ment	=	arrangement
forgive + ness	=	forgiveness
safe + ty	=	safety

Common Exceptions:

ninth (from nine)	argument (from argue)
wisdom (from wise)	wholly (from whole)

Rule 3. In words of two or more syllables that are accented on the final syllable and end in a single consonant preceded by a single vowel, you double the final consonant before a suffix beginning with a vowel.

refer + ing	=	referring
regret + able	=	regrettable

However, if the accent is not on the last syllable, the final consonant is not doubled.

benefit + ed	=	benefited
audit + ed	=	audited

Rule 4. In words of one syllable ending in a single consonant that is preceded by a single vowel, you double the final consonant before a suffix that begins with a vowel. (It sounds more complex than it is; just look at the examples.)

big + est	=	biggest
hot + er	=	hotter
bag + age	=	baggage

Rule 5. In words ending in “y” preceded by a consonant, you usually change the “y” to “i” before any suffix that does not begin with an “i.”

beauty + ful	=	beautiful
accompany + ment	=	accompaniment
accompany + ing	=	accompanying (suffix begins with i)

If the final “y” is preceded by a vowel, however, the rule does not apply.

journeys	obeying	essays
buys	repaying	attorneys

Rule 6. Use “i” before “e” except when the two letters follow “c” and have an “e” sound, or when they have an “a” sound as in “neighbor” and “weigh.”

i before e (e sound)	e before i (a sound)
shield	vein
believe	weight
grieve	veil
mischievous	neighbor

Common Exceptions:

weird	foreign	forfeit
either	ancient	neither
sovereign	siege	height
seize	surfeit	leisure

EVERYDAY WORDS THAT ARE COMMONLY MISSPELLED

If you do find yourself over-relying on spell checkers or misspelling the same word for the 17th time this year, it would obviously be to your advantage to improve your spelling. One shortcut to doing this is to consult the following list of words that are frequently used and misspelled. Many smart writers even put a mark next to a word whenever they have to look it up, thereby helping themselves identify those fiendish words that give them the most trouble. To improve your spelling, you must commit the words you frequently misspell to memory, and physically looking them up until you do so is an effective path to spelling perfection.

A

abandon
abandoned
abundant
absence
academic
academically
accelerator
accept
acceptable
accessible
accidentally
accommodate
accompanied
accompanying
accomplish
accumulate
accuracy
accustomed
achievement
acknowledge
acknowledgment
acquaintance
acquire
acquit
acre
acreage
across
actually
address
admission
admittance
adolescent
adolescence
advantageous
advertisement
aerial
against
aggravate
aggressive
aisle
a lot (never alot)
allotting
almost
already
always
amateur
among
amount
analysis
analyze
ancestry
announcement
annual
apparatus

C

calendar
camouflage
candidate
career
careful
category
ceiling
challenge
channel
chaos
character
characteristics
chief
chiefly
choose
chose
chosen
clothes
clothing
coarse
column
coming
commercial
commission
commitment
committee
communism
communists
compel
compelled
competition
completely
concede
conceivable
condemn
condemned
conferred
confused
connoisseur
conscience
conscientious
conscious
consists
continuous
controlled
controlling
controversial
convenient
coolly
criticism
crowded
cruelty
curiosity
curriculum

F

fallacy
familiar
family
fascinate
fascism
favorite
February
fiery
finally
financial
financially
fission
fluorine
foreign
foresee
foreseeable
forfeit
forty
forward
fourth
frantically
friend
fulfill

G

generally
genius
government
grammar
grammatically
grandeur
Great Britain
grievance
guarantee
guerrilla
guidance

H

handicapped
happily
harass
heard
height
here
hindrance
hoping
hopeless
humorous
hundred
hurriedly
hygiene
hypocrisy
hypocrite

I

M

magazine
maintenance
manageable
maneuver
manner
manual
marriage
mathematics
meant
medicine
medieval
mileage
millennium
miniature
miscellaneous
mischievous
missile
misspelled
mortgage
muscle

N

narrative
naturally
necessary
necessity
nineteen
ninety
ninth
noticeable
noticing
nuclear
nuisance
numerous

O

occasion
occasionally
occur
occurred
occurring
occurrence
official
omission
omit
omitted
oneself
operate
opinion
opponent
opportunity
opposite
oppression

S

saccharine
sacrifice
safety
satellite
schedule
scientists
scintillate
separate
sergeant
shepherd
shining
shrubbery
similar
sincerely
sophomore
souvenir
specifically
statistics
strenuous
stretch
stubbornness
subtle
subtly
succeed
success
succession
succinct
sufficient
summary
summation
summed
supersede
supposed
suppress
surely
surprise
surrounding
syllable
symmetry
symmetrical

T

tariff
technique
temperament
temperature
their
therefore
thorough
though
through
tobacco
tomorrow
tragedy

apparent
apparently
appearance
appreciate
appropriate
appropriately
approximate
approximately
arctic
arguing
argument
article
artistically
association
athlete
athletic
attendance
attitude
awful
awkward

B

balance
bankruptcy
bargain
basically
battalion
beautiful
becoming
before
beginning
believe
beneficial
benefited
biased
biggest
boundary
Britain
bulletin
bureaucratic
business

D

dealt
deceive
decision
deferred
definite
definitely
definition
descend
description
desirable
desperate
develop
different
dilemma
disagree
disappear
disappoint
disapprove
disaster
disastrous
discern
discipline
discussion
dispel
disservice
dissipate
distinct
duly
during

E

echoes
efficiency
efficient
eighth
eliminate
ellipse
embarrass
eminent
empty
endeavor
enemy
enthusiastically
entirely
entrance
environment
equipment
equipped
especially
essential
except
excellent
excess
existence
experience
explanation
extremely

ideally
ignorant
illogical
imagine
imitate
immediately
immense
impossible
incidentally
independent
individually
ingenious
initially
initiative
innocent
innocuous
inoculate
intellectual
intelligence
intelligent
insistent
interest
interfered
interference
interrupt
iridescent
irrelevant
irreplaceable

J

jewelry
judgment
judicial

K

knowledge
knowledgeable

L

laboratory
later
lenient
liable
liaison
library
lightning
likely
listening
literature
loneliness
loose
lose
lying

ordinarily
originally

P

pamphlet
paraffin
parallel
parliament
particular
particularly
pastime
peaceable
peculiar
perceive
permissible
perseverance
persistence
pollute
pollution
population
possess
possession
possible
possibly
practically
preference
preferred
prejudice
prejudiced
primitive
privilege
probably
proceed
procedure
profession
professor
publicly
purpose

Q

quantify
quantity
quiet
quite

R

realize
rebellion
recede
receive
recession
recommend
reference
referring
remembrance
reservoir
rhythm
ridiculous

transferred
trespass
truly
Tuesday
twelfth
tyranny

U

unanimous
unconscious
uncontrollable
undoubtedly
unforeseen
unmistakably
unnatural
unnecessary
until
usable
useful
usually

V

vacuum
valuable
various
vegetable
vehicle
vengeance
villain
violence
vicious
visible

W

warring
weather
Wednesday
weird
where
whether
whistle
wholly
whose
writing
written

TERMS THAT ARE COMMONLY MISSPELLED IN TECHNICAL WRITING

A

abrasive
absorption
aggregate
Aleutian
algae
algorithm
alkali
alkyl
analogous
angular
anomalous
anomaly
aperture
aquatic
aqueous
aquifer
asbestos
asymmetry

B

bandwidth
base line
blackbody
brackish
buoyancy
buoyant

C

capacitance
Celsius
cetacean
chromatography
clear-cut
climatology
coaxial
combustible
condensation
conductivity
configuration
corollary
corrosion
crustacean
crustal

D

data base
deposition
desiccant
diffraction
diffusion
discrete
dissymmetry
divisible
Doppler effect
Doppler radar
drainage

E

ebullient
ebullition
eigenfunction
eigenvalue
emission
emissivity
end point
equilibrium
equinox
evaporation
eyepiece

F

facies change
Fahrenheit
feedback
ferromagnetism
ferrous
filterable
flow chart
fluorescence
fluorescent
Fourier series
Fresnel equations

G

geyser
glacial
gradient

H

half-life
halogen
hatchable
heat-treat
histogram
histology
horsepower
hybridization
hydraulic
hysteresis

I

in situ
incandescent
infinitesimal
inflection
infrared
interference
isotropic
isotropism

L

least squares
logarithm
luminance
luminescence
luminescent
luminosity
luminous

M

manganese
mean life
measurable
metallurgical
metallurgy
midpoint
monetar

N

Newton's law
nucleation
nucle

O

opaque
operable
optical
orogeny
oscillation

P

parameter
peninsula
permeability
Petri dish
phosphorus
photo-ionization
photocell
piezoelectric
Planck's constant
plateau
polarization
polygon
polymerization
porosity
precipitation
predominant

R

radiant
radio frequency
radioactive
radiocarbon
refractive
resistant
resistivity
retardance
reversible
rock salt

S

salinity
seismic
side band
sinusoidal
solenoid
solid state
soluble
space-time
spectrometer
spectroscopy
steam-distilled
stochastic
strata
stratigraphic
stratigraphy
subsidence

T

terranes
test tube
tidal
tonnage
tornadoes
transit time
transmissible
transmissivity
transmittance
troposphere
trough
typhoon

U

unionized

V

valence
viscometer
viscosimeter
viscosity
viscous
visible

W

crystalline crystallography				wave front wave packet wave system wave theory wavelength wettability X xenolith

Self-Study

Word lists of additional commonly misspelled technical terms appear at these sites:

Extensive list of commonly misspelled technical terms

"A Short Guide to Technical Writing" page from the University of Utah

VIDEO: 12 BUSINESS WRITING TIPS FOR EFFECTIVE BUSINESS EMAILS AND LETTERS

Watch this video online: https://youtu.be/GkQn76-8MvM

VIDEO: KEEP IT SIMPLE, BUT NOT TOO SIMPLE!

Please cut/paste the link into the youtube website to view the video:

Watch this video online: https://youtu.be/kdEfd1IvJao

VIDEO: KEEP YOUR WRITING SIMPLE AND CLEAR

cut/paste the following link into the youtube website to view the video:

Watch this video online: https://youtu.be/4_jbuHE57Os

VIDEO: SMART BUSINESS WRITING MADE SIMPLE

Watch this video online: https://youtu.be/DvKso-2_1D0