

Introduction to Technical Writing

1st Year Engineering Students
Introduction



REFERENCES



- Leo Finkelstein, Jr.; Pocket Book of Technical Writing for Engineers and Scientists, McGraw-Hill's Best, 2005.
- Technical & Business Writing (ENGL 2311 at ACC).htm
- Communications\Introduction to Communication Skills - Mind Tools.htm



Why study technical writing?



- Scientists and engineers may be technically brilliant, and creative, but unless they can convince coworkers and supervisors of their worth, the technical skills will be unnoticed, unappreciated, and unused.
- If technical people cannot communicate to others what they are doing, and why is it important, it is they and their excellent technical skills that will be superfluous.

Communication skills are critical tools for success, even survival, in "real world" environments.



Course Content



- Types of communication: oral, written, electronic.
- Information documentation and retrieval.
- Classification and storage of information.
- Ethical considerations.
- Technical writing: Errors in grammar and style.
- Effective writing: how to write effective texts.

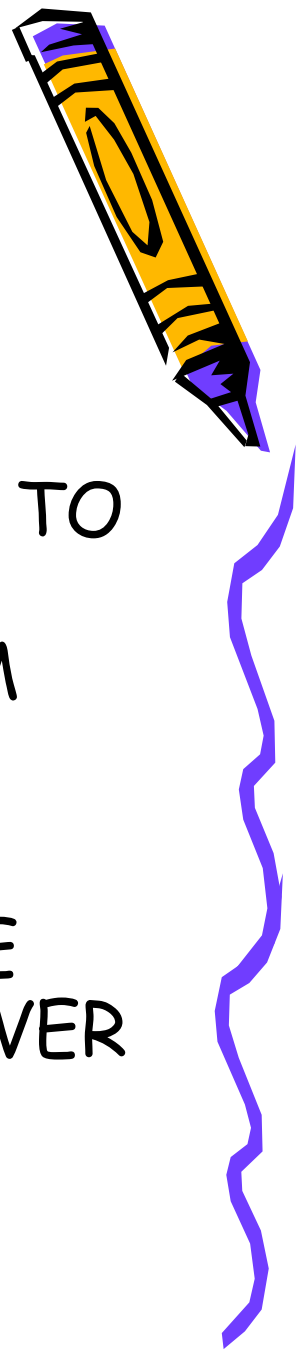


Different forms of technical needs:

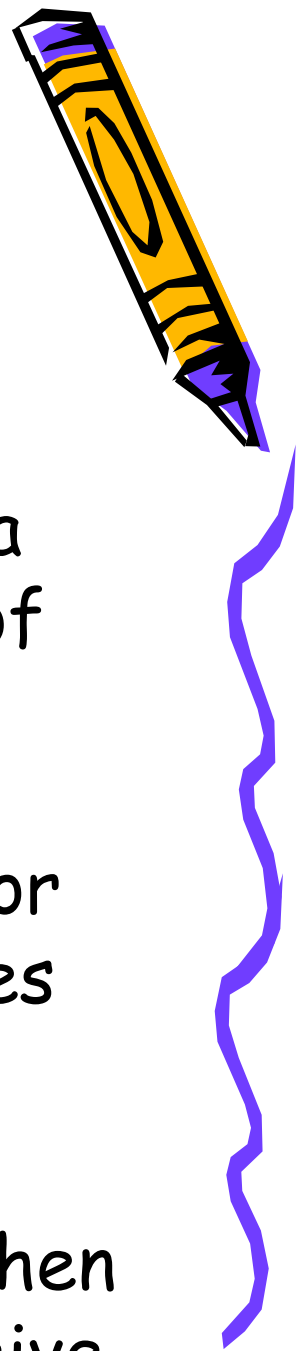
reports, resumes, letters, proposals, etc.

OBJECTIVE

- TO HAVE AN UNDERSTANDING OF RELATION BETWEEN THE MESSAGE TO BE SENT, THE RECIPIENT OF THE MESSAGE, AND THE TYPE AND FORM OF THE MESSAGE.
- THINK SMCROSF
- S SENDER, O OBJECT, M MESSAGE
F FORM, C CODE, S SIZE, R RECEIVER



Why need to get message across

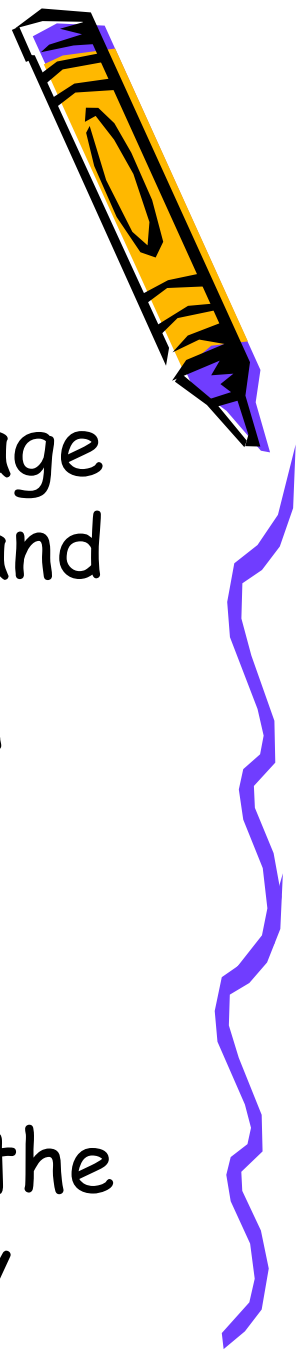


- The purpose of communication is to get your message across to others. This is a process that involves both the sender of the message and the receiver. This process leaves room for error, with messages often misinterpreted by one or more of the parties involved. This causes unnecessary confusion and counter productivity.

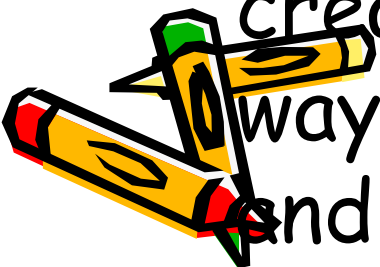


In fact, a message is successful only when both the sender and the receiver perceive it in the same way.

Why Communications Skills Are So Important:



- By successfully getting your message across, you convey your thoughts and ideas effectively. When not successful, the thoughts and ideas that you convey do not necessarily reflect your own, causing a communications breakdown and creating roadblocks that stand in the way of your goals - both personally and professionally.



Important



- In a recent survey of recruiters from companies with more than 50,000 employees, communication skills were cited as the single more important decisive factor in choosing managers. The survey, conducted by the University of Pittsburgh's Katz Business School, points out that communication skills, including written and oral presentations, as well as an ability to work with others, are the main factor contributing to job success.



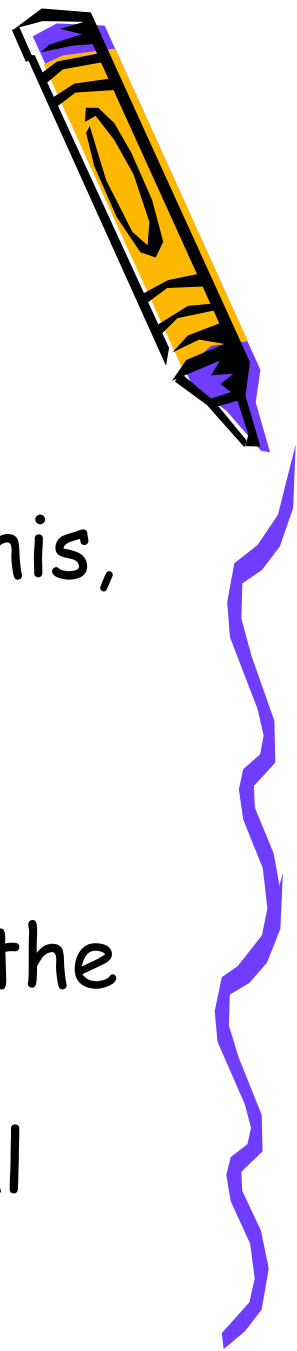
Why Communications Skills Are So Important:



- In spite of the increasing importance placed on communication skills, many individuals continue to struggle with this, unable to communicate their thoughts and ideas effectively - whether in verbal or written format. This inability makes it nearly impossible for them to compete effectively in the workplace, and stands in the way of career



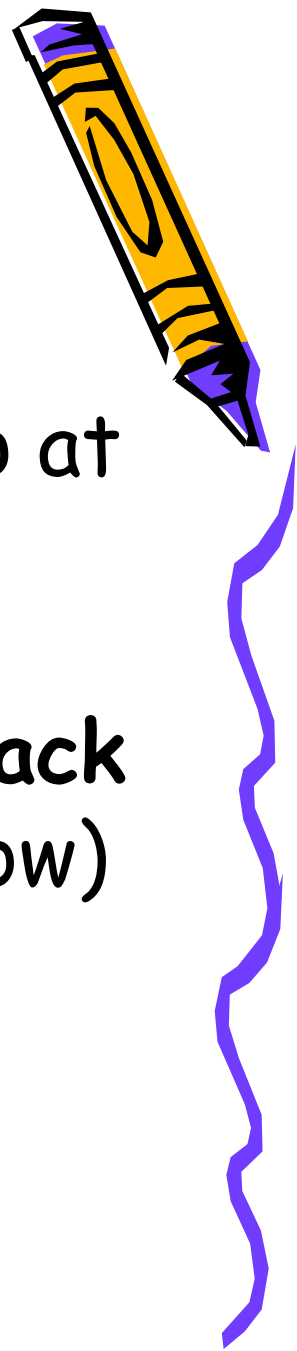
Why Communications Skills Are So Important:



- Getting your message across is paramount to progressing. To do this, you must understand what your message is, what audience you are sending it to, and how it will be perceived. You must also weigh-in the circumstances surrounding your communications, such as situational and cultural context.



Importance of Removing Barriers:

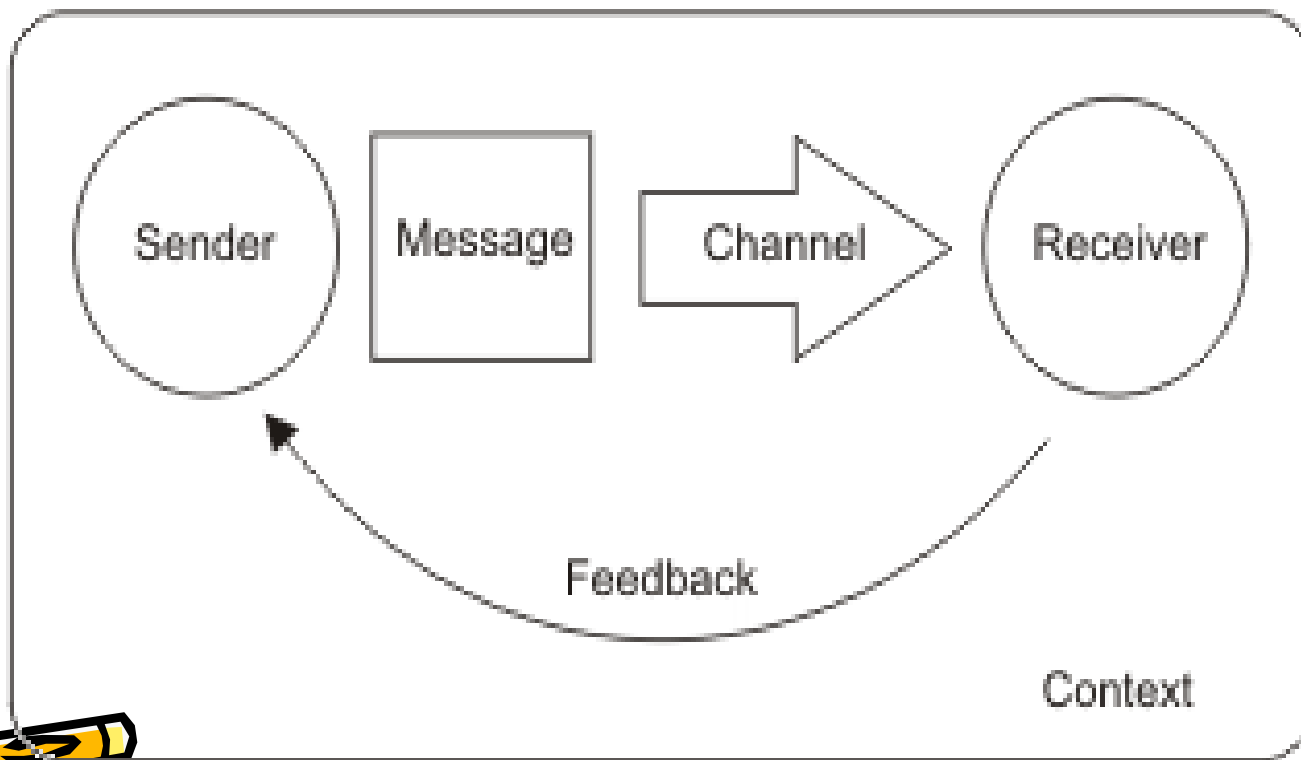


- Communication barriers can pop-up at every stage of the communication process (which consists of **sender, message, channel, receiver, feedback** and **context** - see the diagram below) and have the potential to create misunderstanding and confusion.



Communication Process

The Communications Process



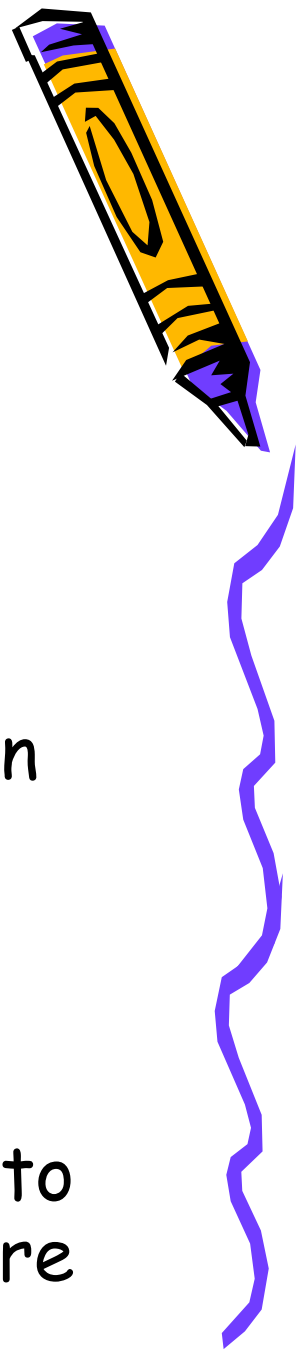


Thus:

- To be an effective communicator and to get your point across without misunderstanding and confusion, your goal should be to lessen the frequency of these barriers at each stage of this process with clear, concise, accurate, well-planned communications. We follow the process through below:



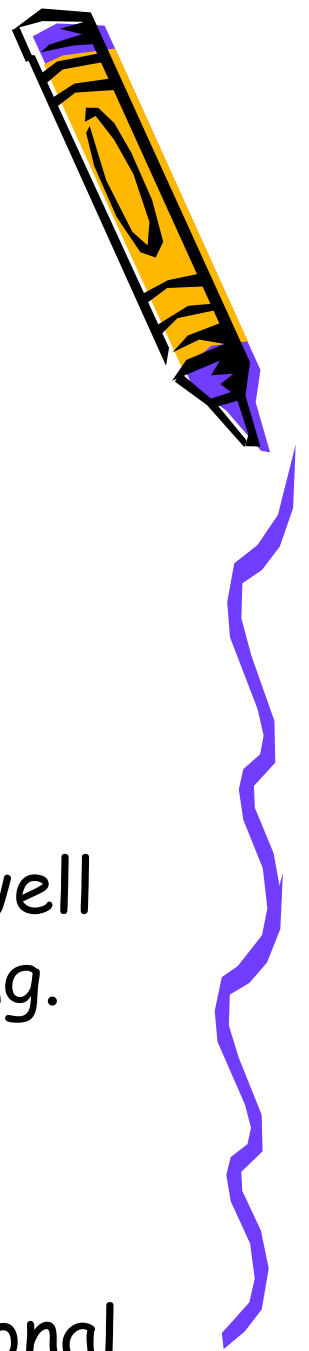
Sender...



- To establish yourself as an effective communicator, you must first establish credibility. In the business arena, this involves displaying knowledge of the subject, the audience and the context in which the message is delivered.
- You must also know your audience (individuals or groups to which you are delivering your message). Failure to understand who you are communicating to will result in delivering messages that are misunderstood.



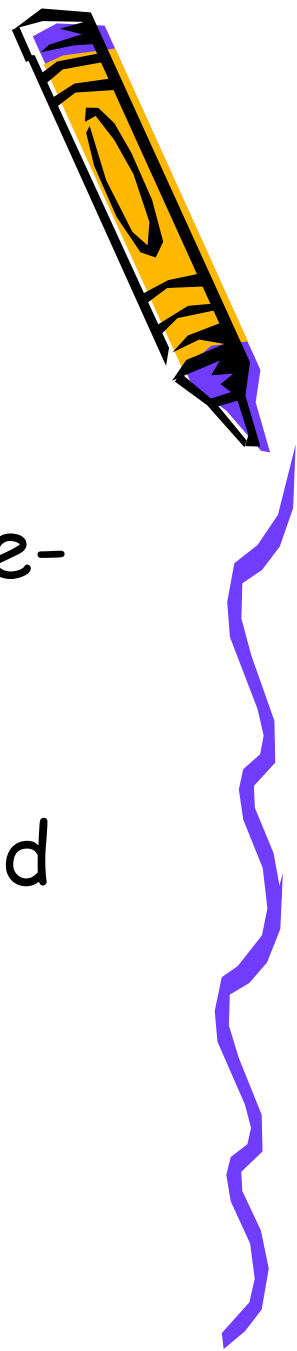
Message...



- Next, consider the message itself. Written, oral and nonverbal communications are effected by the sender's tone, method of organization, validity of the argument, what is communicated and what is left out, as well as your individual style of communicating. Messages also have intellectual and emotional components, with intellect allowing us the ability to reason and emotion allowing us to present motivational appeals ultimately changing minds and



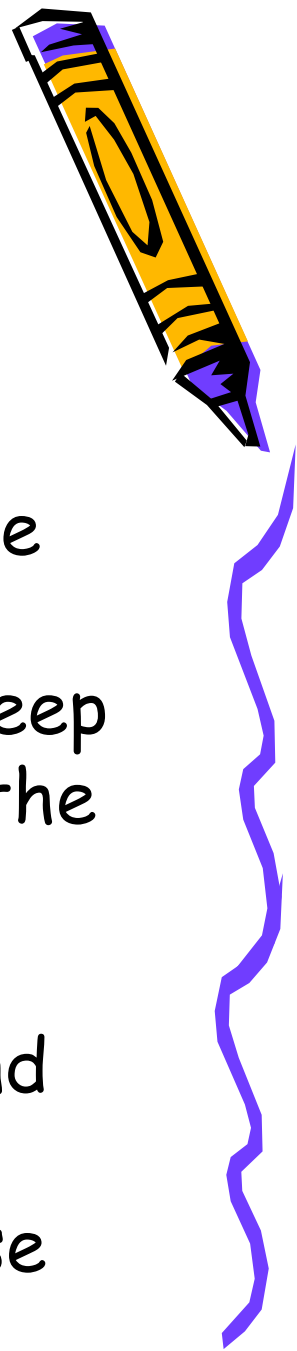
Channel...



- Messages are conveyed through channels, with verbal including face-to-face meetings, telephone and videoconferencing; and written including letters, emails, memos and reports.



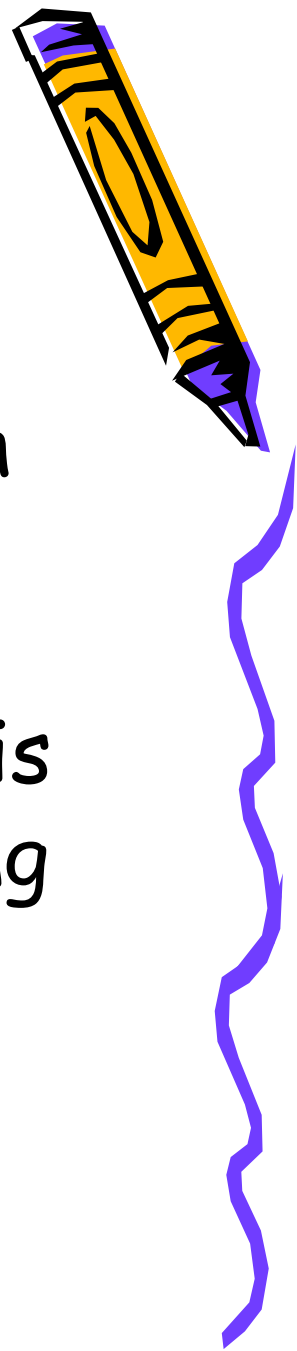
Receiver...



- These messages are delivered to an audience. No doubt, you have in mind the actions or reactions you hope your message prompts from this audience. Keep in mind, your audience also enters into the communication process with ideas and feelings that will undoubtedly influence their understanding of your message and their response. To be a successful communicator, you should consider these before delivering your message, acting appropriately



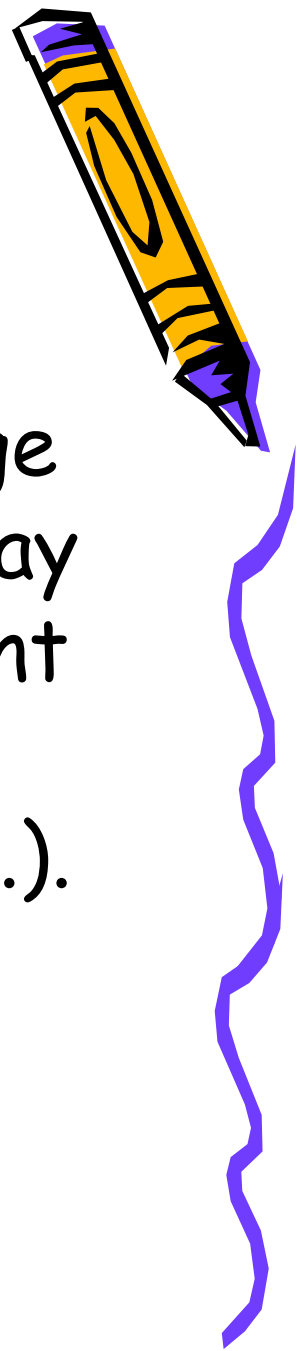
Feedback...



- Your audience will provide you with feedback, verbal and nonverbal reactions to your communicated message. Pay close attention to this feedback as it is crucial to ensuring the audience understood your message.



Context...



- The situation in which your message is delivered is the context. This may include the surrounding environment or broader culture (i.e. corporate culture, international cultures, etc.).



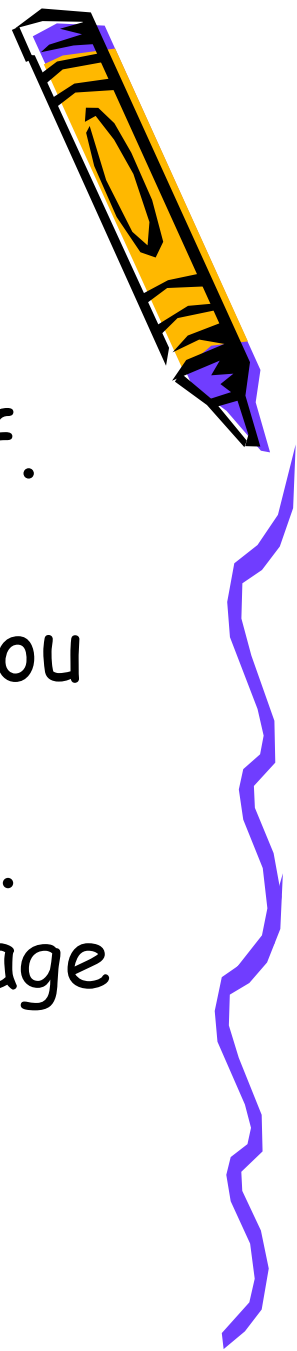
Removing Barriers At All These Stages



- To deliver your messages effectively, you must commit to breaking down the barriers that exist in each of these stages of the communication process.



What makes message not reachable



- Let's begin with the message itself. If your message is too lengthy, disorganized, or contains errors, you can expect the message to be misunderstood and misinterpreted. Use of poor verbal and body language can also confuse the message.



Barriers in context



- Barriers in context tend to stem from senders offering too much information too fast. When in doubt here, less is oftentimes more. It is best to be mindful of the demands on other people's time, especially in today's ultra-busy society.
- Once you understand this, you need to work to understand your audience's culture, making sure you can converse and deliver your message to people of different backgrounds and cultures within your own organization, in this country and even abroad.



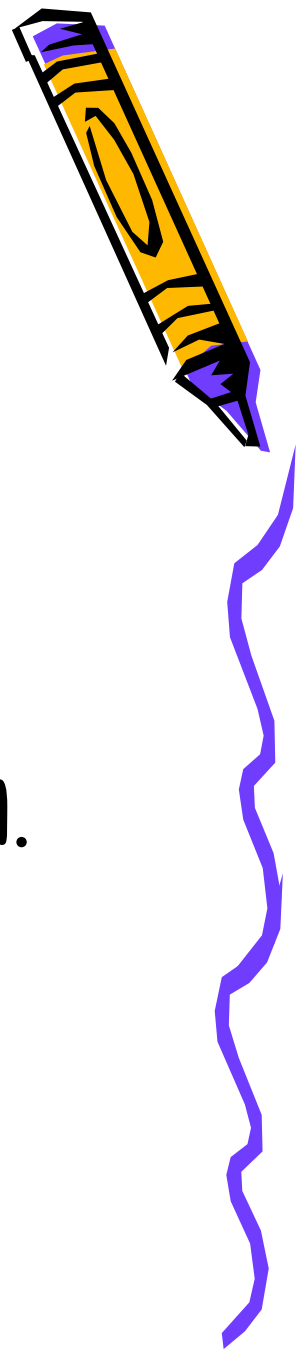
Improve Your Communication Skills



- Regardless of what business you are in - a large corporation, a small company, or even a home-based business - effective communication skills are essential for success.
- you should have a better understanding of how to communicate effectively - to individuals and groups, via spoken communications, written communications, and even electronic communications.



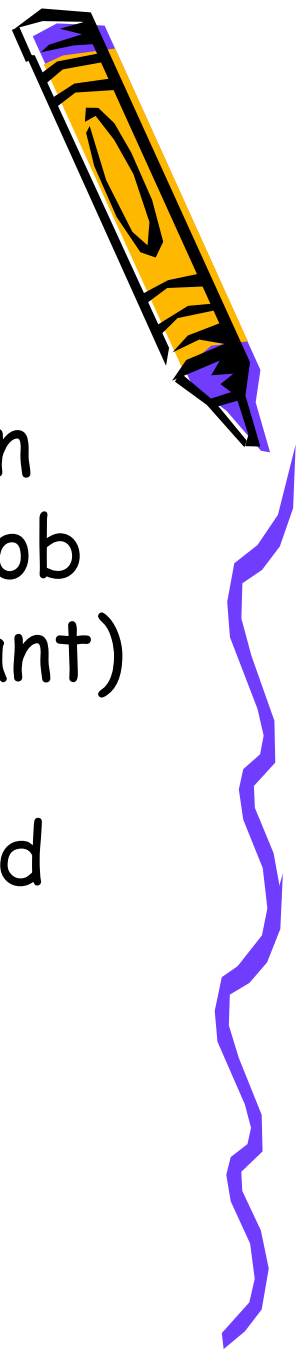
Communication Skills:



- ☐ ORAL
- ☐ WRITTEN
- ☐ ELECTRONIC COMMUNICATION.



The frequency of technical communication



- The actual amount of time spent on communication tasks varies from job to job. Gilbert (Industrial consultant) estimates that a junior engineer spends 20% of his time writing, and 20% talking.



Oral: Better Public Speaking & Presentation



- Ensure Your Words Are Always Understood.
- to ensure that your verbal messages are understood time and time again.
 - Keep the message clear
 - Be prepared
 - Keep the message simple
 - Be vivid when delivering the message
 - Be natural
 - Keep the message concise



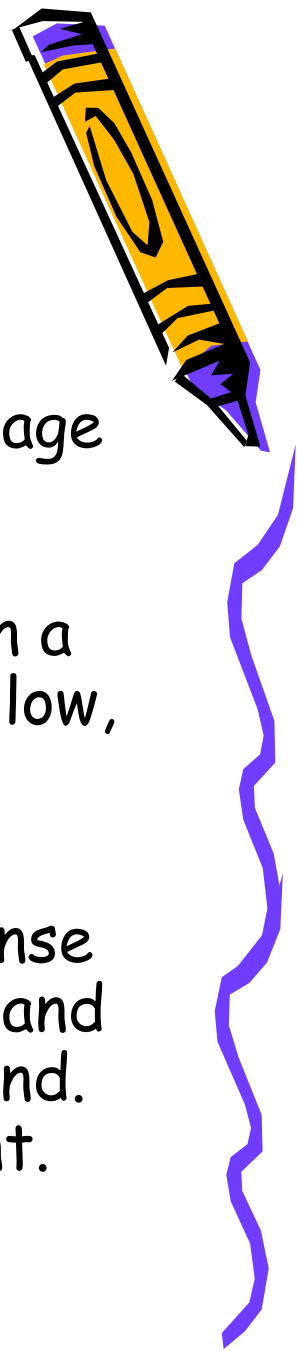
Being prepared: Guidelines for Thinking Ahead:



- Ask yourself: **Who? What? How? When? Where? Why?**
- **Who** are you speaking to? What are their interests, presuppositions and values? What do they share in common with others; how are they unique?
- **What** do you wish to communicate? One way of answering this question is to ask yourself about the 'success criteria'. How do you know if and when you have successfully communicated what you have in mind?



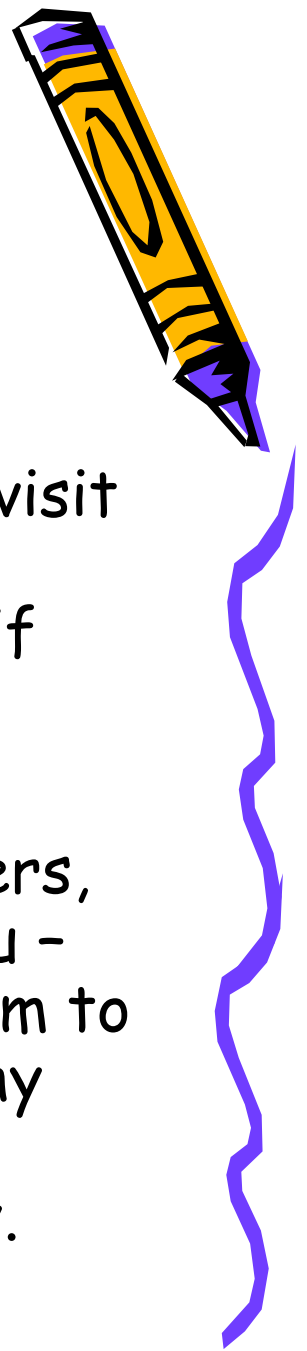
Being prepared: Guidelines for Thinking Ahead:



- **How** can you best convey your message? Language is important here, as are the nonverbal cues discussed earlier. Choose your words and your nonverbal cues with your audience in mind. Plan a beginning, middle and end. If time and place allow, consider and prepare audio-visual aids.
- **When?** Timing is important here. Develop a sense of timing, so that your contributions are seen and heard as relevant to the issue or matter at hand. There is a time to speak and a time to be silent. *'It's better to be silent than sing a bad tune.'*



Being prepared: Guidelines for Thinking Ahead:



- **Where?** What is the physical context of the communication in mind? You may have time to visit the room, for example, and rearrange the furniture. Check for availability and visibility if you are using audio or visual aids.
- **Why?** In order to convert hearers into listeners, you need to know why they should listen to you - and tell them if necessary. What disposes them to listen? That implies that you know yourself why you are seeking to communicate - the value or ~~worth~~ or interest of what you are going to say.



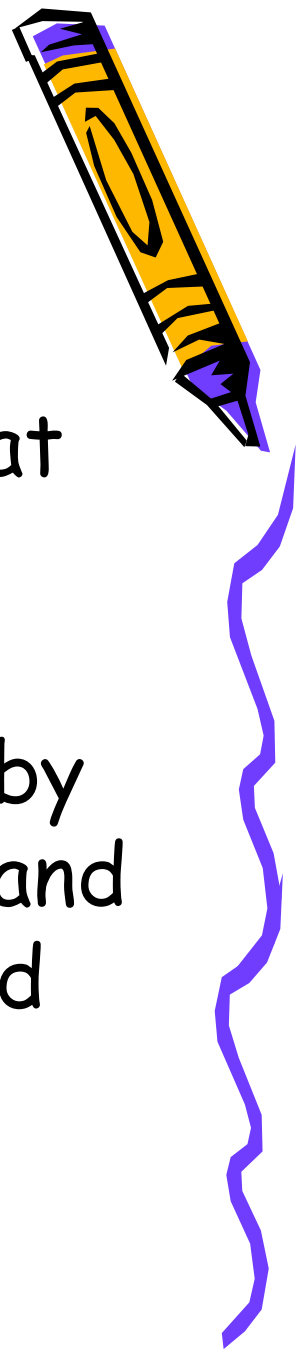
To sum up:



- Be concise. Be brief. Use short words and sentences. Where appropriate, support these with short, easy-to-understand examples, which help demonstrate your message.



Technical Writing:



- Technical writing is the writing that displays a relatively low level of abstraction.
- Technical writing must be precise by using definition, description, data and analysis, photographs, diagrams and charts, and often specialized language.

