

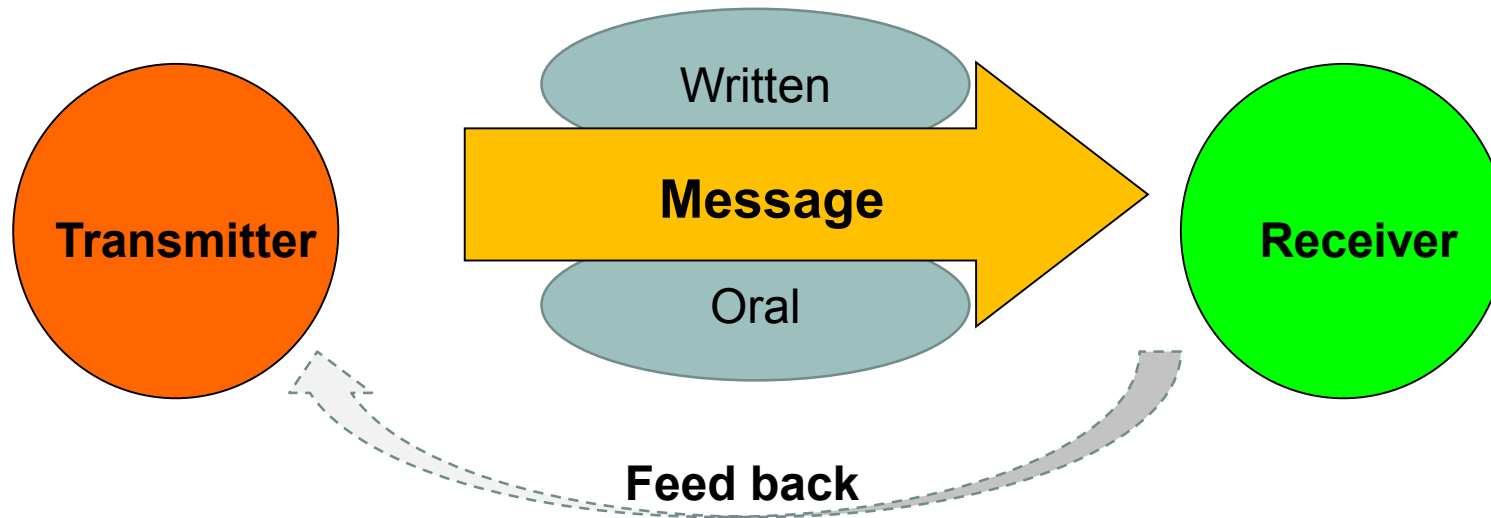
Engineering Future (Communication Skills)

Chapter 9

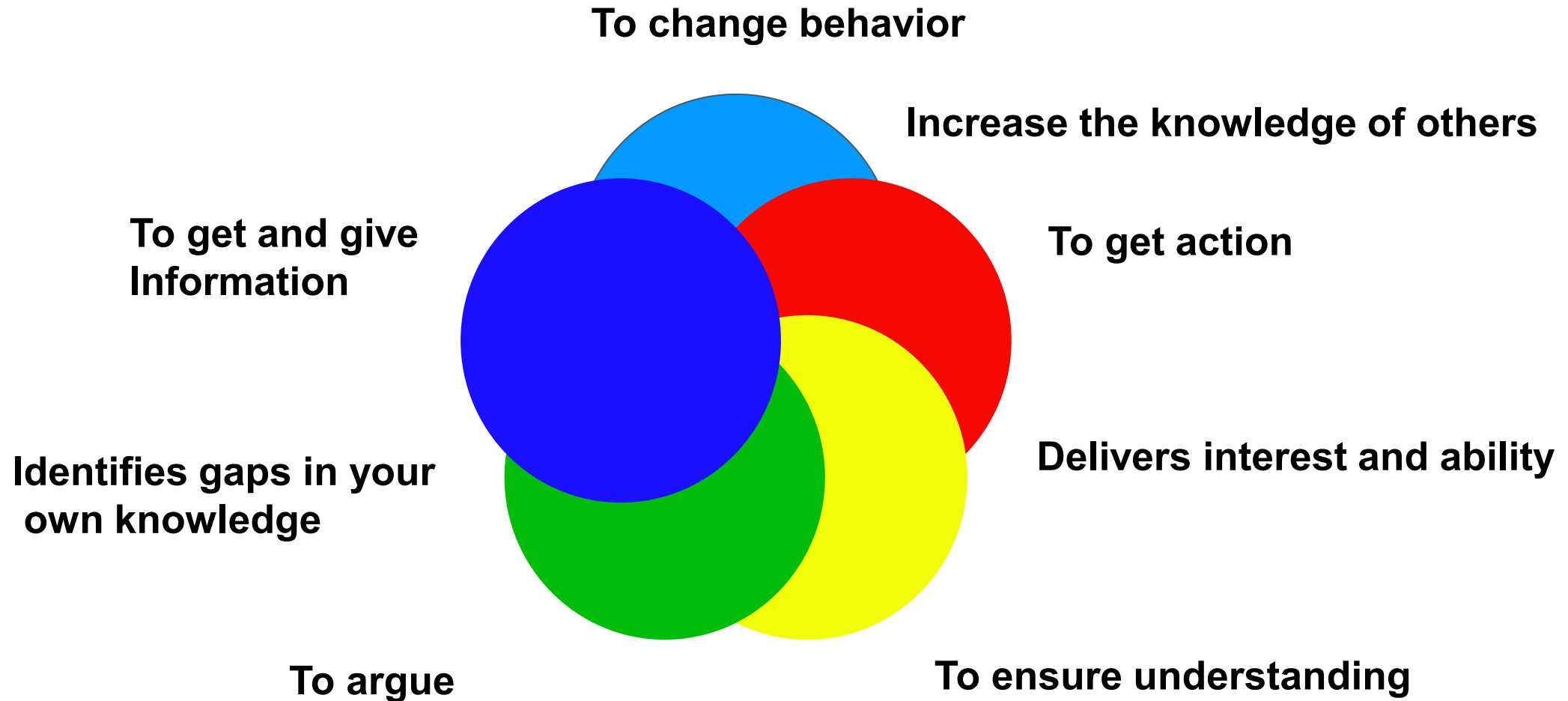
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What is “communication”?

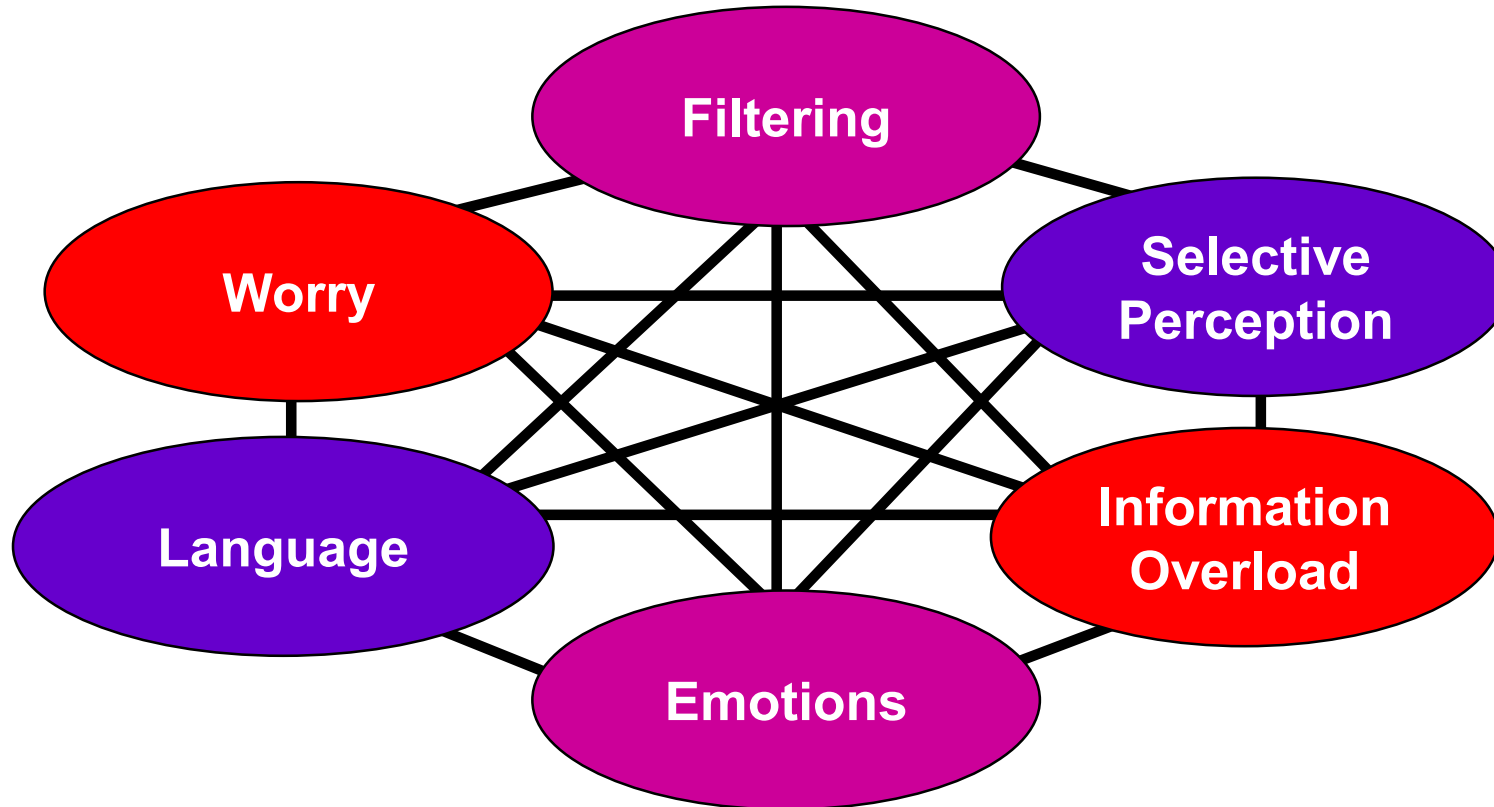
- Latin “*communicare*” - “to share, inform; join, unite, participate in.
- A process by which information is exchanged between individuals through a common system of symbols, signs, or behavior
- Process of Communication



Why Do We Communicate?

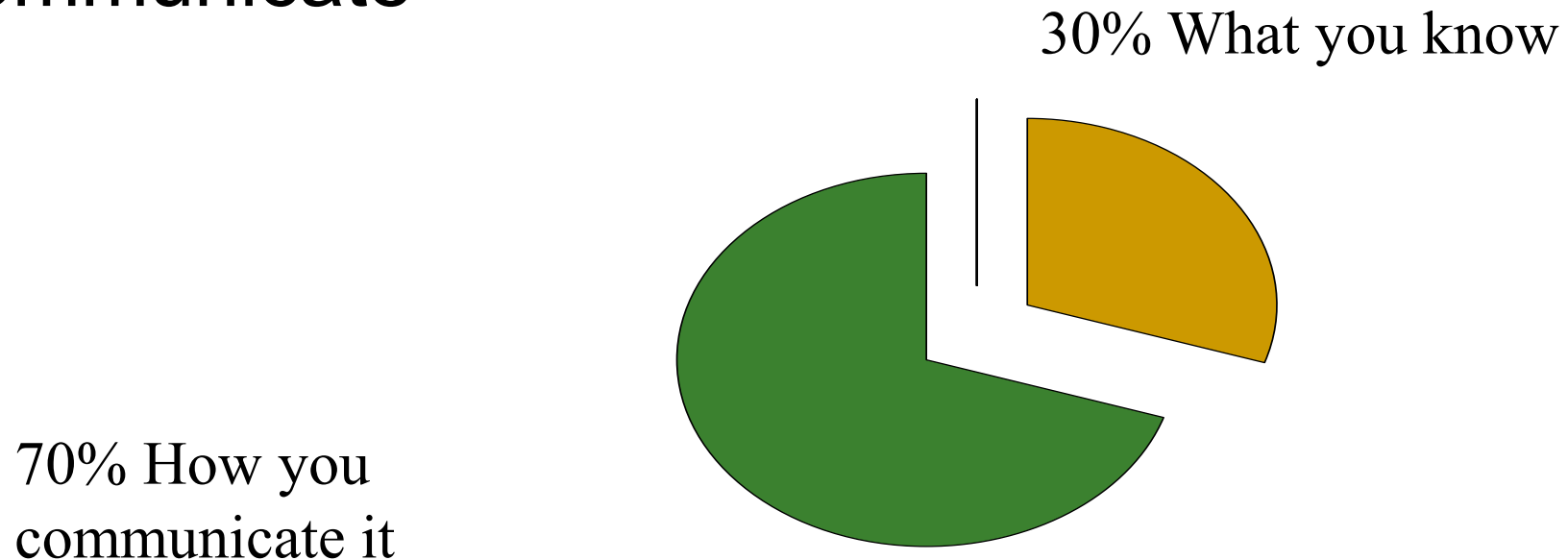


Communication Barriers



Critical success factor for life

The majority of your perceived ability comes from how you communicate



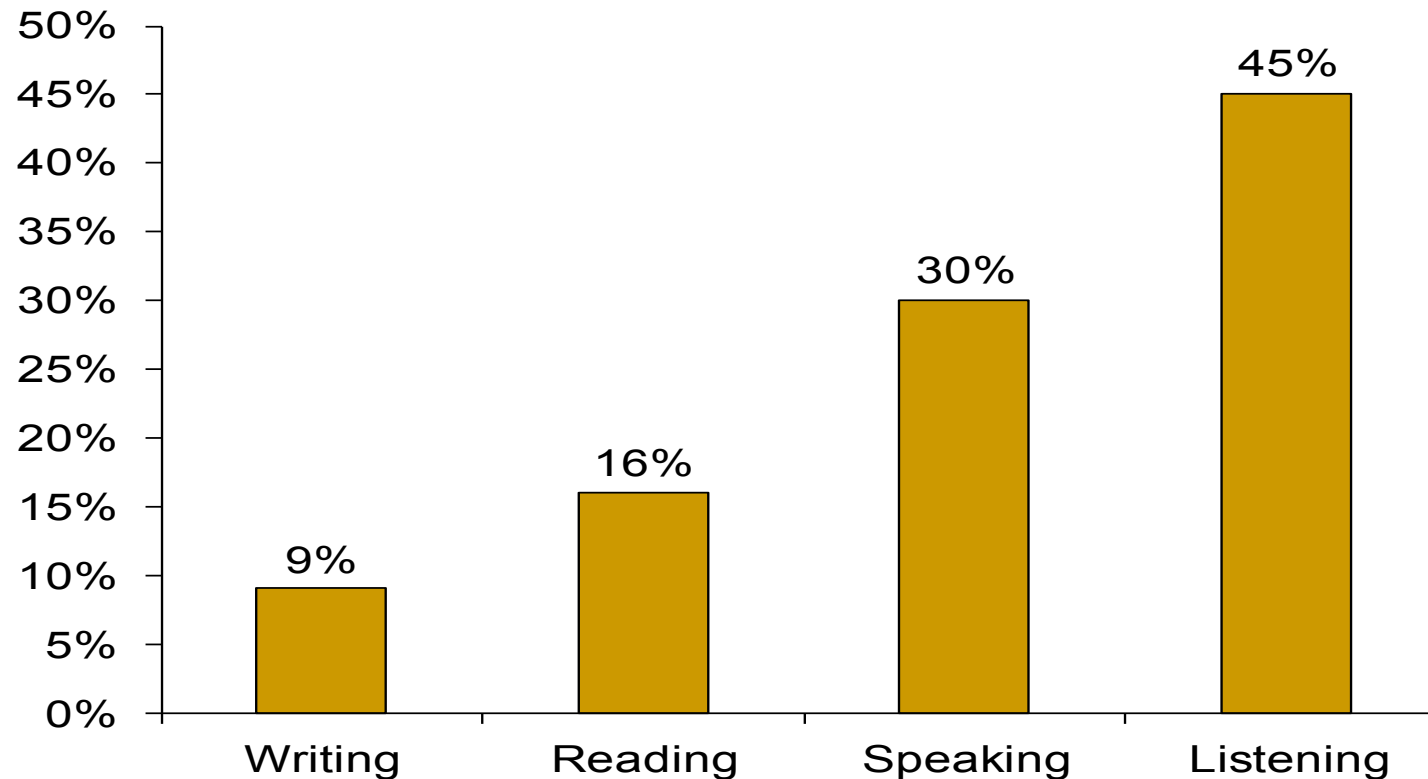
Steps to Enhance Communication Skills

- Speak with precision and directness.
- Enhance your vocabulary.
- Use appropriate language.
- Avoid making people defensive.
- Talk to people yourself, not through others.
- Avoid information overload.
- Validate your assumptions.
- Resolve problems when they arise.

Tips to Improve Your Communication Skills



Communication Statistics



In Face-to-Face Situations

- 7% of the message comes from words
- 38% of the message comes from tone of voice
- 55% of the message comes from body language

On the Telephone

When you are not face-to-face with a person, body language cannot play a role in the message sent.

However, the tone of voice is especially important.

- 13% of what we hear comes from words
- 87% of what we hear comes from tone of voice

WRITING SKILLS

When you write, consider the following:

- ◉ Prepare well in advance
- ◉ Who is the readers?
- ◉ What format is required – essay or report or reflection on experience?
- ◉ Academic conventions – referencing and plagiarism
- ◉ Don't leave it till the last minute



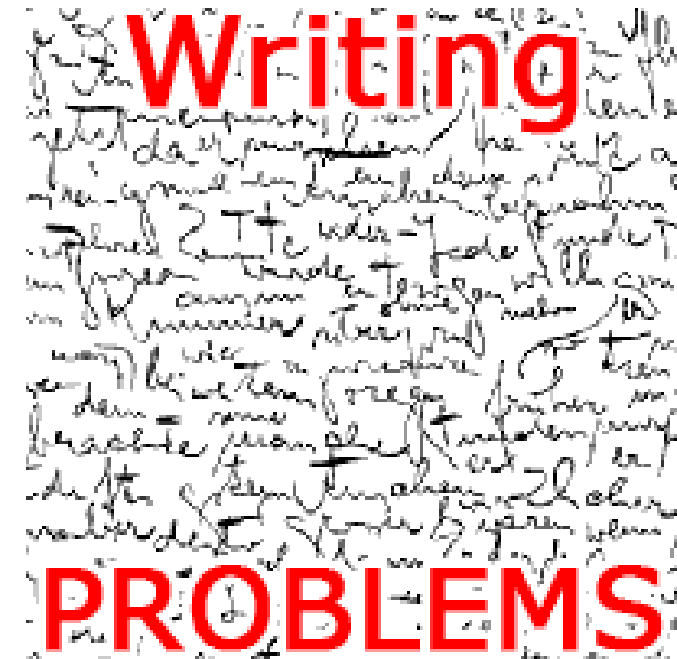
STEPS IN WRITING

- Preparation and planning
- Drafting
- Re-drafting and polishing
- Editing and proofreading
- Reflecting on feedback



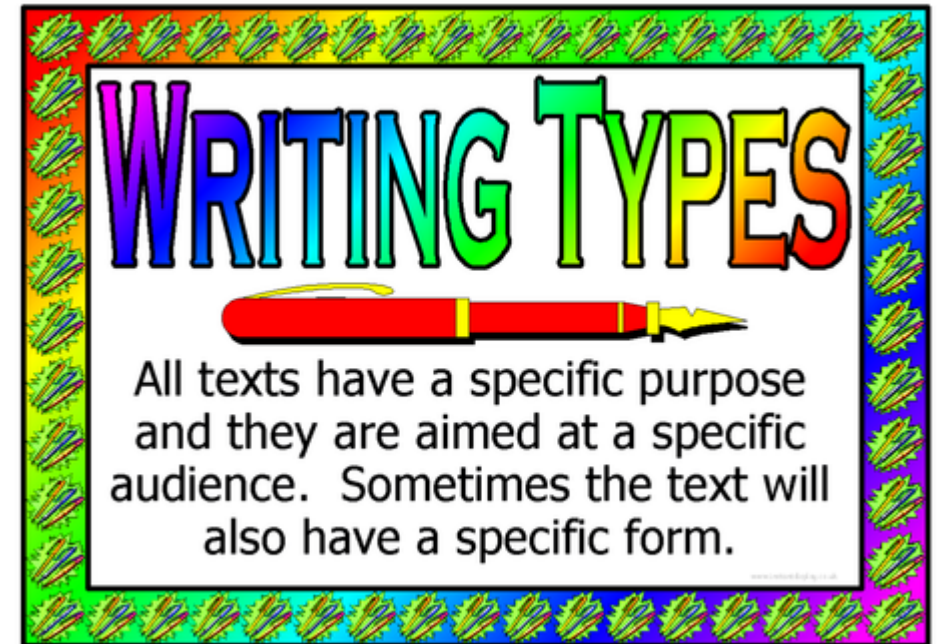
Writing common problems

- Poor Organization
- Spelling and capitalization
- Grammar and punctuation
- Misused words
- Redundancy
- Unclear positions and statements
- Lengthy paragraphs
- Lengthy sentences
- Passive vs. active language
- Inappropriate tone



Basic Engineering Writing Types

- Technical Report
- Resume
- Cover Letter
- Thank You Letter
- E-mail



Technical Report

Should include:

☐ Title

☐ Summary of what will be discussed (abstract) should be about 300-500 word and answer the following five questions:

- What is the problem?
- Why it is important?
- What is the methodology?
- What is the findings?
- So what?

☐ Table of Contents

☐ Introduction

☐ Procedure

☐ Results and Analysis

☐ Discussion

☐ Conclusions

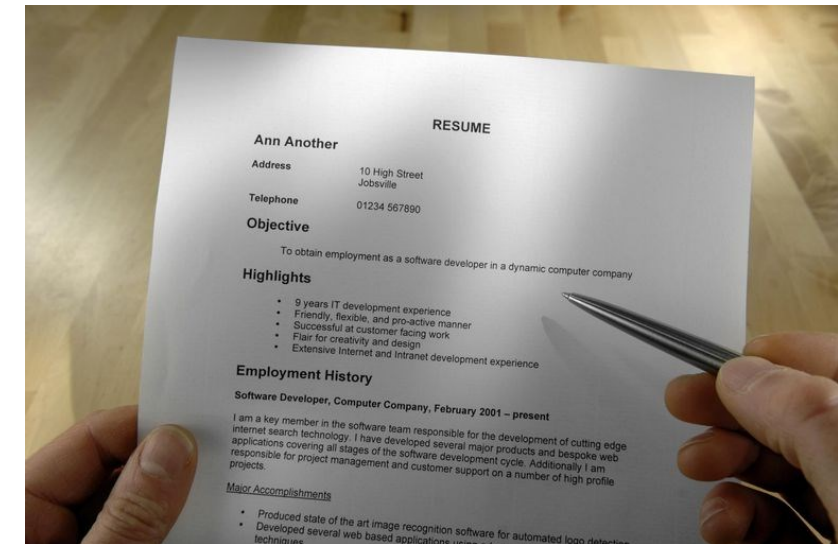
☐ References

☐ Appendices



Resume

- One of the most important documents you will ever create. It sells you and your qualifications.
- Your resume should include the following:
 - Personal information, such as name telephone number, address email...
 - Objective
 - Education information, such as your degrees, your school, graduation date and your grades.
 - Work Experience information, such as your jobs titles (list most recent first), the companies for which you worked, the dates and your responsibilities.
 - Training courses.
 - Activities.
 - References



Cover letter

- Cover letters is important when you attempt to apply to job, they sent along with resumes and transcripts, they cover your other materials.
- This one page document introduces you in a professional way to your employer, it should include the following:
- The date, your address and phone number and the name and address of person to whom you are writing.
 - 1st paragraph the reason you are writing the letter, the source of your information about employer, and what you like to do for employer (Position).
 - 2nd paragraph a brief discussion of your resume, hitting the highlights.
 - 3rd paragraph current information which may not be appropriately included in your resume.
 - 4th paragraph summary paragraph in which you thank the reader for his consideration in advance.



Thank You Letter

- After interviewing for new job, you should send Thank you letters to individuals who interviewed you. You should not wait more than 48 hours to send them.
- They should include
 - 1st paragraph thank the interviewers for their time, and restate your interest in working for the company.
 - 2nd paragraph briefly restate your qualifications, this is the time to address any positive qualities you may failed to mention during the interview.
 - 3rd paragraph close the letter with final thank you and express your interest to hear back from the interviewer.



E-mail

- Grammar, spelling, and punctuation are important
- Should include a subject
- Alternate contact
- Not secure
- Sometimes unreliable
- Check and think before you send



Oral Communication

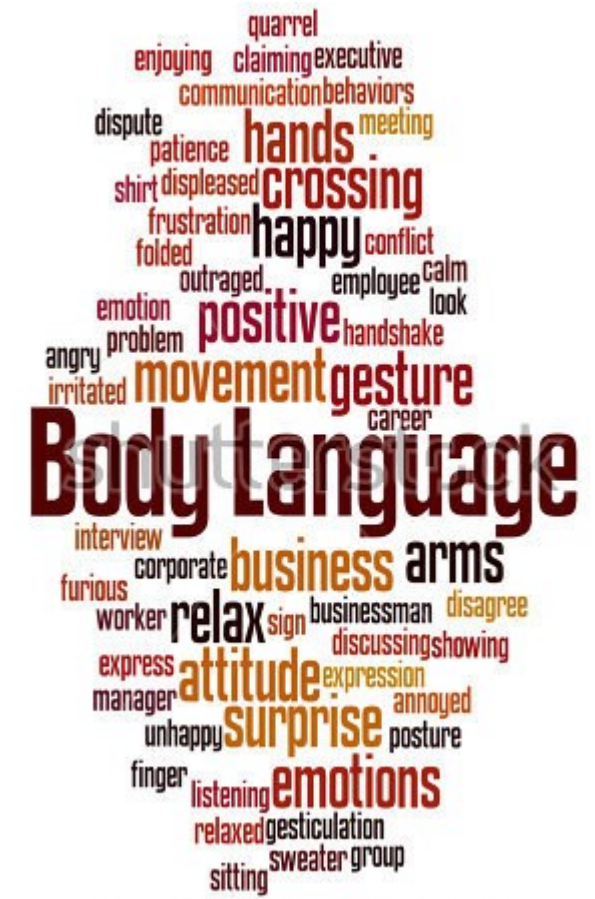
- “Although he could boast of a **PhD** in his field, he was a poor communicator. He showed dozens of transparencies crammed with complex equations and text descriptions. He delivered, at times read, his narration in a monotone tone addressed to the screen, oblivious to us, the audience. I tried not to, but **I fell asleep.**”
- Present communication on a level that you believe will be easily understood by whomever is to be receiving your communication
- Don't use big words if a smaller, easier-to-understand word will be sufficient.
- Preparation is the key to successful oral presentation, you need to do the following:
- Identify your purpose and audience.
 - Gather then organize your information.
 - Practice your presentation
- Are you nervous?
 - The first 15-30 second are critical (Do memorize your first and last few sentences)
 - Do divert your nervous energy into helpful gestures and movements, do not repress your nervousness
 - Don't speak too rapidly



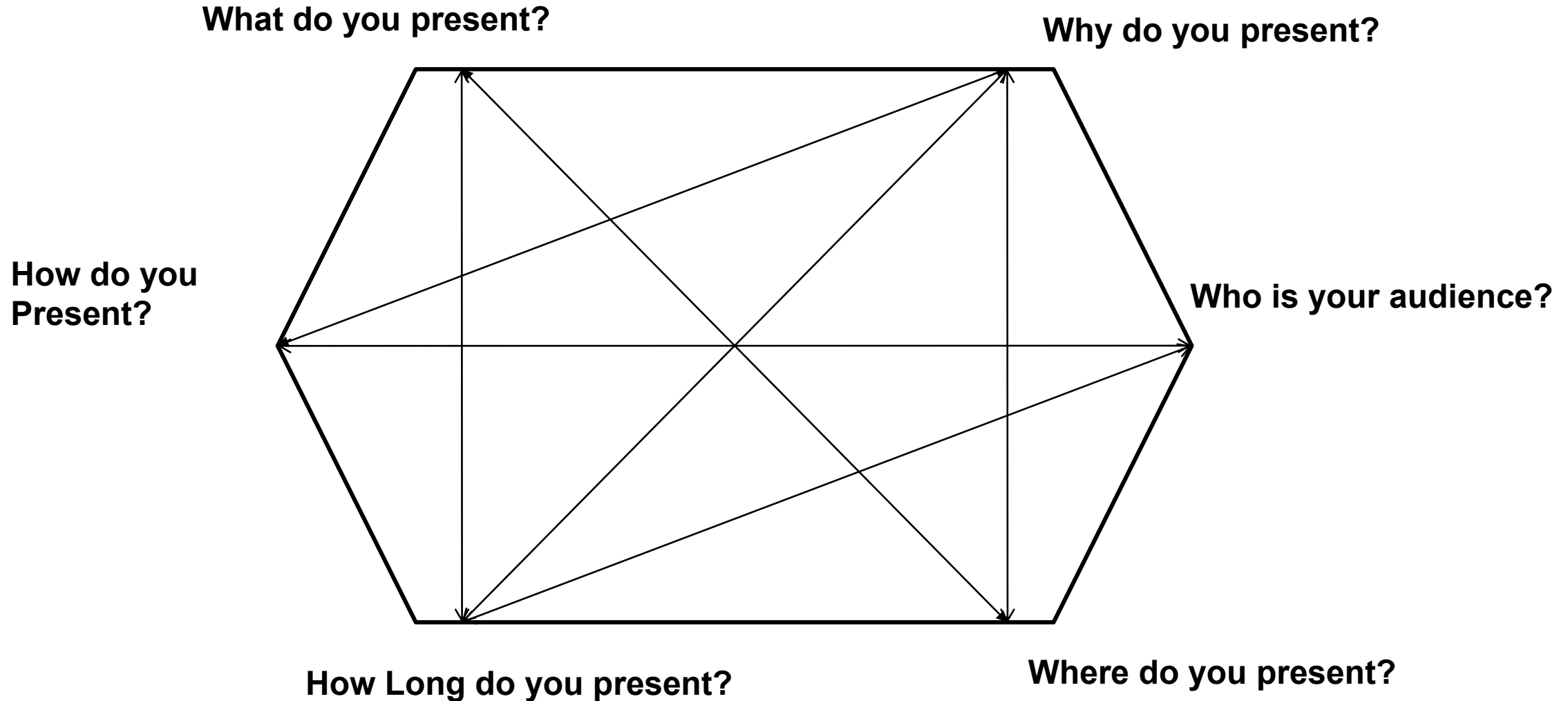
TYPES OF BODY LANGUAGE

REMEMBER THAT YOU ARE DEALING WITH “PEOPLE”

- ◎ (P)OSTURES & GESTURES
 - How do you use hand gestures? Stance?
- ◎ (E)YE CONTACT
 - How's your “Lighthouse”?
- ◎ (O)RIENTATION
 - How do you position yourself?
- ◎ (P)RESENTATION
 - How do you deliver your message?
- ◎ (L)OOKS
 - Are your looks, appearance, dress important?
- ◎ (E)XPRESSIONS OF EMOTION
 - Are you using facial expressions to express emotion?



Planning Your Presentation



Prepare Your Presentation

- Present one central idea per slide.
- Be as brief as possible.
- Font size is important (18-32 point).
- Slides do not need to be complete, the speaker can add details.
- Use high contrast colors.
- Use graphs or charts instead of tables
- “Tell them what you’re going to tell them, tell them, then tell them what you told them”.
- Use slide numbers.
- Do not read from slides

