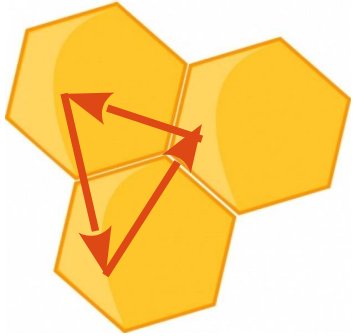
Technical Communication for Computer Engineers
Lecture 1 plan

- What and why technical communication.
- Course structure.
- Assessment.
- In-class essay.
- Peer-review exercise.



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Lectures:
Mondays 1.30pm
EEB 5107

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Wednesdays 1.30pm-5pm
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Course summary:
Practice with technical documents
Practice with presentations
Communicating technical info
Workshopping & peer-review

Factors to consider

(Beer & McMurrey)

1. Engineers write a lot.
2. Engineers write many kinds of documents.
3. A successful engineering career requires strong writing skills.
4. Engineers can learn to write well.

Why **not** study communication?

"I'm just going to be a programmer".

Then you will be doing: Stakeholder management, client training, customer contact, functional specs, technical specs, negotiation, staff training, system design documents, user documentation, progress reports, briefings, project coordination, etc...

Why **not** study communication?

"I'm just going to be an academic".

Then you will be doing: Paper writing, project proposals, project presentations, seminars, lecturing and training, tutorial documents, mentoring, publicising, poster design, collaboration, etc...

Why **not** study communication?

"I'm going to make my own business".

Then you will probably be doing: Marketing material preparation, applications for credit, advertising for employees, liaising with customers, documentation, stakeholder briefings, project management, specification documentation, constant email and letter communication, etc.

Why **not** study communication?

"I am already very good at it".

- Well done! Then you will find this course easy.
- There is always room for improvement.

Why **not** study communication?

"It wouldn't help me".

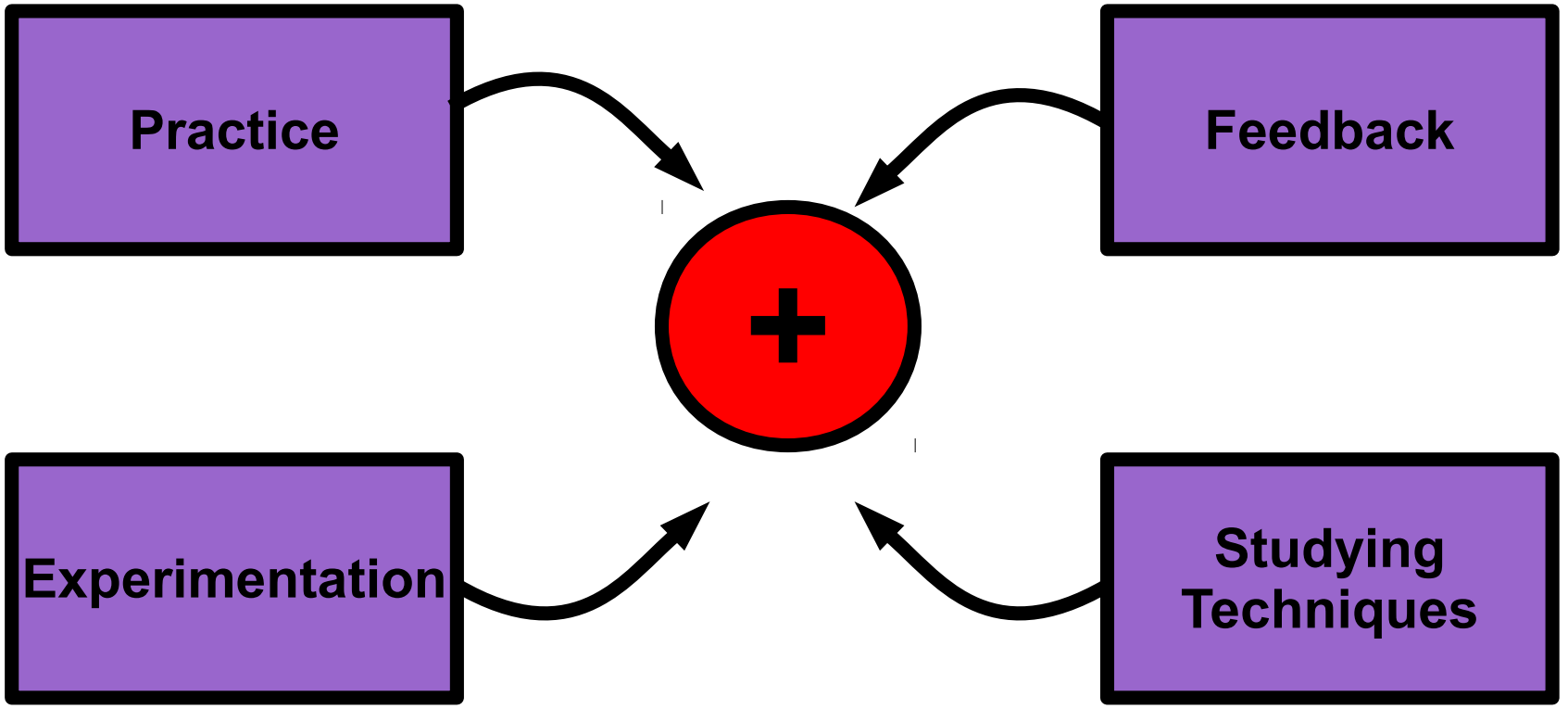
Actually it can.

Communication is a set of skills.

They can be developed.

Like football ;)

A blueprint for improving communication skills



The value of **practice**

- Self-awareness.
- Freeing your high-level cognitive capabilities.
- Fluency.

The value of **experimentation**

- Gain knowledge of what works.
- Discover new techniques.
- Develop a personal style.
- Make practice fun.

The value of **studying techniques**

- Incorporate new ideas into your practice and experimentation.
- Learn from experienced people.

The value of **feedback**

- Learn how to evaluate your work.
- See yourself from another perspective.
- Focus on the end-result: the audience.

Margaret Attwoods 10 tips for writers (of fiction) Numbers 1-3

1 - Take a pencil to write with on aeroplanes. Pens leak. But if the pencil breaks, you can't sharpen it on the plane, because you can't take knives with you. Therefore: take two pencils.

2 - If both pencils break, you can do a rough sharpening job with a nail file of the metal or glass type.

3 - Take something to write on. Paper is good. In a pinch, pieces of wood or your arm will do.

http://www.theguardian.com/books/2010/feb/22/margaret-atwood-rules-for-writers

Why is this course in English?

- Two birds with one stone.
- English vs Turkish:
  - Conventions, expectations, vocabulary are different.

Scope of this course

- Written communication.
  - Common Document Types.
  - Format and Detail.
  - Style and Voice.
- Spoken communication.
  - Presentation skills.

BLG374E is run according to "workshop" concept

- Each week in-class:
  - Some lecturing.
  - Some workshopping.

Workshopping concept

- Bring your draft work.
- Peer evaluation.
  - Giving feedback well.
  - Taking feedback well.
- Discussions.

Requirements

- Attendance:
  - >70% = 10 classes attended.
  - Participation a requirement.
- Exams:
  - None.
- Quizzes:
  - None
- Assignments:
  - Many.

Workload

- ECTS Credits: **3**
- Total workload:

  3 x 25.5 = 76.5 hours
- Weekly workload (14 weeks):

  76.5 / 14 = 5.5 hours.

  = 2 hours in-class +

  3.5 hours preparing documents or presentations.

Planned Assessments

(assignments and projects only)

Week Due	Assignment Name	Weight
1	Short analysis essay	REQ
3	CV & Coverletter	10%
4	Market Survey E-Mail	5%
5	Annotated Bibliography	5%
6	Proposal (group)	10%
7	Tutorial (group)	15%
8	Progress Report (group)	5%
11-13	Presentations (group)	30%
13	Report (group)	20%

Textbook

David Beer, David McMurrey (2009).
A Guide to Writing as an Engineer.
3rd Ed. Wiley: New Jersey, USA.

Also In library.

Preliminary Dates

- **Week 1:**
  - Monday 10 Feb 1.30pm **Class.**
    - Lecture: Intro to communication, writing and engineers.
    - In-class essay.
    - Lecture: Peer-review and proof-reading techniques.
  - Monday 10 Feb 3.30pm **Assignment Due.**
    - Paper: In-class essay.
- **Week 2:**
  - Monday 17 Feb 1.30pm **Class.**
    - Lecture: Guidelines for good writing.
    - Lecture: Letters, memos, email, CVs and coverletters.
- **Week 3:**
  - Monday 24 Feb 1.30pm **Class.**
    - Lecture: Email, market surveys, managing impressions.
    - Workshop: CV & cover-letter.
  - Monday 24 Feb 9:00pm **Assignment Due.**
    - Electronic: CV & cover-letter.

Preliminary Dates

- **Week 4:**
  - Monday 3 March 1.30pm **Class.**
    - Workshop: Email market survey.
    - Lecture: Appendices, references and information search.
  - Monday 3 March 9:00pm **Assignment due.**
    - Electronic: Email market survey.
- **Week 5:**
  - Monday 10 March 1.30pm **Class.**
    - Workshop: Annotated bibliography and index.
    - Lecture: Common document types I.
  - Monday 10 March 9:00pm **Assignment Due.**
    - Electronic: Annotated bibliography and index.

Preliminary Dates

- **Week 6:**
  - Monday 17 March 1.30pm **Class.**
    - Workshop: Proposals.
    - Lecture: Instructional documentation.
  - Monday 17 March 9:00pm **Group Assignment Due.**
    - Electronic: Proposal.
- **Week 7:**
  - Monday 24 March 1.30pm **Class.**
    - Workshop: Instructional documentation.
    - Lecture: Common document types II.
  - Monday 24 March 9:00pm **Group Assignment Due.**
    - Electronic: Usage Instructions/Tutorial.

Preliminary Dates

- **Week 8:**
  - Monday 31 March 1.30pm **Class.**
    - Workshop: Progress report.
    - Lecture: Graphics & charts.
  - Monday 31 March 9:00pm **Group Assignment Due.**
    - Electronic: Progress Report.
- **Week 9:**
  - Monday 7 April 1.30pm **Class.**
    - Workshop: Presenting Quantitative Data.
    - Lecture: Speaking skills.
- **Week 10:**
  - Monday 14 April 1.30pm **Class.**
    - Workshop: Speaking & presenting.
    - Lecture: Report writing.

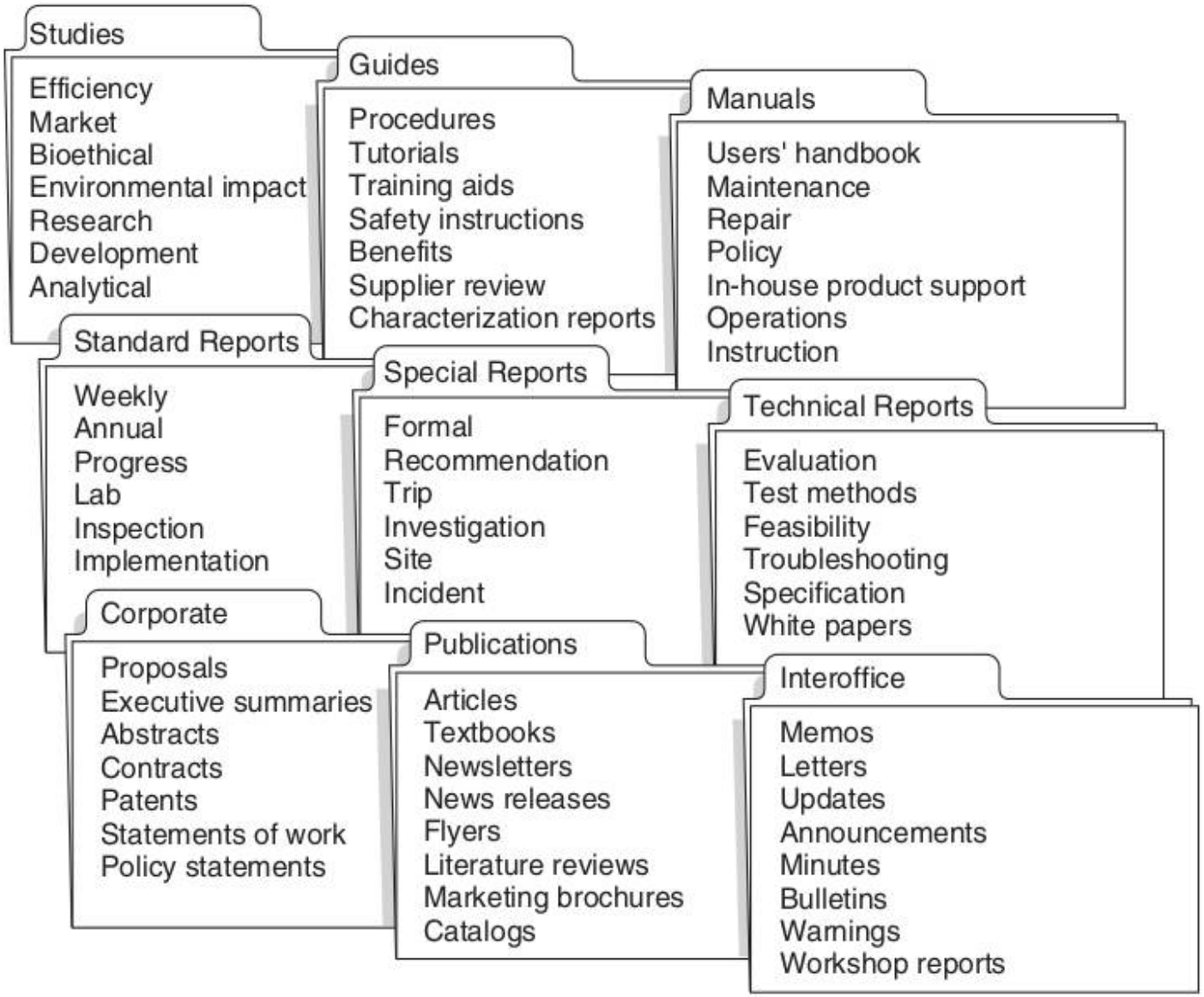
Preliminary Dates

- **Week 11:**
  - Monday 21 April 1.30pm **Class.**
    - Presentations (set 1).
- **Week 12:**
  - Monday 28 April 1.30pm **Class.**
    - Presentations (set 2).
  - Monday 28 April 9:00pm **Group Assignment Due.**
    - Electronic: Report.
- **Week 13:**
  - Monday 5 May 1.30pm **Class.**
    - Presentations (set 3).
  - Monday 5 May 9:00pm **Group Assignment Due.**
    - Electronic: Slides.
- **Week 14:**
  - Monday 12 May 1.30pm **Class.**
    - Workshop: Review.

Kinds of technical communication

- Written:
  - Formal.
  - Informal.
- Spoken:
  - Formal.
  - Informal.

Kinds of writing



Source: Beer & McMurrey

Communication for engineers: The aims

- Communicate the message.
  - Eliminate barriers to communication.
    - Ambiguity.
    - Confusion.
    - Loss of meaning.
  - Imagine you are the reader.
    - This is a skill too.
- Manage impressions.
  - The message can be discarded and the messenger too.

In-class assignment

- Hand-written essay.
- Write your name and SID on every page.
- Topic: "***What is to be gained from a university education?***".
- (or a topic of your choosing).

Peer-review process

Two people involved:

- Writer/speaker.
- Reviewer.

Peer-review process

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Peer-review process

Writer/speaker:

- Produces work.
- Asks for feedback.
- Expects some criticism.
- Decides which is good feedback.
- Revises accordingly.

Peer-review process

Reviewer:

- Reads/listens to the full work.
- THEN:
  - Summarises it.
  - Mentions most important issues.
  - Is constructive:
    - Says **why**.
    - Tries to give suggestions/solutions.
    - Is specific.
  - Remembers to point out the positive bits too.

Good vs bad feedback

The text:

The system is intended to function at payload of 5 tons. For this purpose we will make it strong big system.

Bad feedback:

- What you wrote is silly.
- I like the grammar.

Correct but pedantic feedback:

- You should write "**a** payload".

Good feedback:

- The passage starts with a clear requirement (5 tonne payload) which sets the context well but it is unclear what is meant by "strong" and "big" in this context. Perhaps work on clarifying.
- "Ton" could be ambiguous in the US. Perhaps write "metric tons" or "tonnes".

Feedback exercise

BLG374E Tech. Comm. Eng.

- **Process summary:**
  - Read the whole work before writing.
  - Write the name and ID of the reviewer.
  - Write a summary of the main ideas given.
  - Write about the biggest issues first.
  - Be specific.
  - Be positive.
- **Sample questions to answer:**
  - Organisation:
    - Is the objective of the work made clear?
    - Are transitions abrupt or smooth?
    - Do the introduction and conclusion match the main ideas?
    - Is it easy to follow the flow of ideas?
    - Do different ideas get muddled together?
    - Is the order of the ideas/paragraphs sensible?
  - Support:
    - Are the main ideas developed/explained?
    - Is the support for the ideas persuasive?
    - Is the connection between the main ideas and their support clear?
  - Mechanics:
    - Is the spelling correct?
    - Is the grammar good – are there ambiguities or is it difficult to understand?
    - Does the punctuation introduce ambiguities or slow down the flow of reading?
    - Did the writer put their name and ID on the page?
  - Revision suggestions:
    - How would you revise this work if it were your own?

http://writing.colostate.edu/guides/page.cfm?pageid=886

Your feedback for me

- I welcome feedback from students.
- Actually, I do.
- Really.