

## Assignment no. 5

### **Aim : Technical Communication Skills.**

### **Objective :**

Understand the importance and power of good verbal and non-verbal communication.

### **Theory:**

This section provides advice on technical writing, and on giving oral presentations. Good communication skills are essential for success in your career. Every time you write or present, you have the opportunity to work on improving these skills. The points which described below is applicable to presentations of any length, ranging from a single paragraph to a long report or thesis.

### **5.1 Start with a Specification**

Technical writing is a complex skill, one that can be developed and improved over many years. Computer programming is the same: it takes a lot of experience to go from “first learning how to program” to being a good software designer.

In computer programming, it is good practice to start with a specification, a clear description of what the program is supposed to do. The same is true with technical writing and oral presentations. Write down a specification for your presentation.

- **Describe the audience:** for example “graduate students in the School of Computing”, or “readers of journal X” or “attendees at conference Y”. Describe the technical background that you expect the audience to have. The easiest situation for a presenter is when everyone has the same background. In more complex cases, the audience is mixed: some audience members know this, others know that, some are interested in this, some are more interested in that. Make a list of the concepts that you assume the audience is already familiar with, and a list of the concepts you have to introduce/explain in your writing.
- **Describe the main points to convey in the paper/presentation:** The following general questions should always be answered in any technical presentation. What area of research are you discussing? (What is the general topic of your talk?) Why should anyone care about this area of research? Provide motivation.

Once you have written the specification, you can plan your presentation (oral or written). What extra topics do you have to include, in order to be able to present the main points, given the audience background? Find a good order for presenting the topics. This is often difficult because topics are circular: it would be good for the audience to know about B when you explain A, but the opposite is also true: knowledge of A would help when you explain B.

When you are done, review your presentation, compare it to the specification. For a written report, make sure that your first paragraph touches on all the main topics, that the rest of the paper elaborates on those, and that the whole thing is readable for your “model audience”. Similarly, for an oral presentation, make sure that in your first few minutes you introduce the main topics and that you then elaborate on these, in a way that is understandable for your model audience.

## **5.2 Oral Presentation**

There are significant differences between a report of your work in an oral presentation and in a written report. An oral presentation involves face-to-face, more informal spoken communication where you only have time to inform the audience of the key aspects of your work. Do not take an oral presentation word for word from a written report!

The purpose of an oral presentation is to :

- Report key information about a technical Seminar
- Use spoken delivery techniques and visual aids to enhance communication

Keep this purpose in mind as you select information to include in your presentation. The audience is often a client, for example, if you are presenting a bridge design your audience might be the shire engineer and the local council. You want to convey your enthusiasm, your technical expertise and your professional judgment to them. Keep this audience in mind as you decide what to include in your presentation.

The key features of a good presentation are:

- A clear logical structure
- Effective visual aid and
- Good delivery techniques.

### **5.2.1 A clear logical structure**

You need to plan any oral presentation very carefully so that the information is easy for the audience to understand and to remember.

**In the introduction, make sure that**

- You give a clear statement of the purpose of the presentation.
- You provides an overview of the key aspects of your investigation.
- You outline the main sections of the presentation.
- You introduce each member of the team and outline the material that they will be covering

**In the body of your presentation, make sure that**

- You present a clear logical report of your investigation using the main sections already outlined.
- Each new speaker begins by briefly stating what their topic is.

**In the conclusion, make sure that**

- You sum up your presentation effectively.
- You give a quick summary of your major findings.
- You leave the audience with a clear take-away message

**Linking the parts of a presentation**

In a good presentation, the speaker presents the structure of the presentation at the beginning in the Introduction. The speaker then reminds the audience of the structure throughout the presentation by making clear links at the beginning of each section and then by announcing the Conclusion.

**Example 1****Introduction**

I'd like to talk today about ....

My aim today is to .....

**Outline**

I've divided my presentation into .....

**Section 1**

Let's start with .....

So that covers.....

## **Section 2**

Now I'm going to outline .....

So the key features are .....

## **Section 3/4 etc..**

That brings me to .....

## **Summary**

To sum up .....

Conclusion

In conclusion .....

## **Example 2**

### **Section 1: First, I'm going to outline my method.**

Let's start with the key features of my method. ....

Section 2: So using this method, I obtained some very interesting results.

Let's first look at the results from my survey. ....

Thus the key results were ..., .... and .....

### **Section 3: The data I gathered points to some very interesting findings.**

The first implication from my data is that .....

The second implication is .....

The third is .....

Use clear links to announce new sections of your presentation and to create a clear logical connections between the ideas within each section.

### 5.2.2 Effective Visual aids

#### **The purposes of visual aids are**

- To support and enhance the spoken message by communicating visual information in pictures, graphs and images.
- To add impact and interest to your presentation.

Use visual information wherever it helps you to communicate your message to the audience. The words on slides can also be effective prompts to what you say as well as emphasizing key points for your audience.

#### **Remember:**

- For word slides, use only key words or short phrases.
- For drawings and diagrams, clearly label them and give them titles.
- For graphs, clearly label the axes and take the audience slowly through the graph to explain what is significant in the data shown.

### 5.2.3 Delivery techniques

Try to present with a natural conversational style. You want your presentation to be interesting, convincing and professional, and you want to share your enthusiasm for your subject with the audience.

#### **Key aspects of delivery for each speaker**

- **Voice:** Keep your voice enthusiastic, loud enough and not too fast.
- **Eye contact:** Keep eye contact with the audience.
- **Stance:** Have a relaxed, natural stance.
- **Using notes:** Do not read notes or your report word for word. Just use key words and phrases as prompts.
- **Using slides:** Make sure you explain the information on each slide.

#### **Question and answer time**

There will be a few minutes at the end of each presentation for questions about your designs. Anticipate these questions and prepare answers to them.

## 5.3 Assessment Criteria

The following aspects are always considered in the assessment of an oral presentation:

#### **A. Content**

- Technically accurate.
- Logically organised with clear structure announced by first speaker and in links between speakers.

#### **B. Slides**

- Easy to read with clearly labelled diagrams.

#### **C. Voice**

- Easy to hear, confident and enthusiastic.

#### **D. Questions**

- Answered thoughtfully and accurately.

### **5.4 Good References for oral presentations**

- Mablekos, C.M. (1991) Presentations That Work IEEE, New York. Hargrave-Andrews Library 808.51 M112P
- Mandel, S. (1988) Technical Presentation Skills Crisp Publications, Menlo Park. Hargrave Andrews Library 808.51 M271T.c

### **5.5 Technical Writing**

Focus on writing a great first paragraph, and a great first sentence for all the other paragraphs. Use the first sentence of each paragraph to state the topic for that paragraph. Put extra effort into making the very first sentence of the document be informative and interesting. Aim to make your report skimmable so that a hasty reader gets the main points. These comments particularly apply to the writing of the abstract and introduction for a thesis or conference paper.

Such overview sections are often the weakest part of a document because authors write them last, when they are in a hurry. However, the abstract, introduction, figures, and conclusion are the most important part of a document: they are critical to the perception the reader will have of your work. Abstracts are commonly used as stand-alone pieces of text to represent your thesis or technical paper. Write them carefully. Writing a good abstract takes a lot of time. Show drafts of your abstract to a lot of different people, to get feedback. The abstract should be comprehensible to a non-expert, and should make a good impression on an expert in the area. The following paragraphs provide advice about writing a one-page paper summary, but much of the advice is applicable to longer documents as well. Do not use section headings in your one-page paper summary. In a document this short, section headings just cause distracting breaks in the flow of the text.

Motivate the topic, briefly convey what this paper is about, what problems it addresses, how it fits into the larger context of pattern-recognition research. Specifics depend on the paper and your reaction to it. Suppose you find the paper excellent and informative. Then you want to convey (an overview of) what you learned from it, why you found it interesting and worthwhile. Your goal in this case would be to transmit enthusiasm: after reading your summary I would know roughly what the paper is about, and why it's important, and I would be motivated to read the full paper for further details. Suppose, on the other hand, that you find the paper rather disappointing. Then your summary should convey what the general research area and general approach are, and discuss the shortcomings. This is valuable information for the reader. Depending on the paper, you might convey that "this is a promising research area, but this particular paper is poor, and (if you happen to know) a better alternative is paper X". Or you might write that "not only is this particular paper flawed, but the whole research area is fundamentally flawed because Y". Such "negative results" can be very useful, and may well suggest fruitful areas for future research.

You do not have room to discuss details of the paper. Instead, provide context, critique, analysis, and overview. If you do a good job in convincing the reader of the importance of the material, then the full details are available in the original paper. Think of yourself as an author for an Abstracts journal, which is devoted to publishing critical summaries of papers. You can refer to the journal Computing Reviews for examples; visit [www.reviews.com](http://www.reviews.com). Readers use a journal like this to scan the entries, quickly becoming up to date (in a general sense) on a large variety of topics, and with the ability to find detailed information on selected topics. There are many styles of writing reviews – read a few reviews and decide what style suits you best. Make sure that you don't attempt to include too many technical details in your review. Your job is to convey what is in the paper, without going into a lot of technical detail.

If you find the one-page limit confining, start by writing only half a page, or only three sentences. This forces you to state the most important ideas concisely. Then expand to the luxury of a whole page. The ability to write convincing summaries (for grant proposals, paper abstracts, theses, etc.) is essential in academic work. Writing a good summary is hard; the shorter the summary is, the more difficult it becomes.

Provide your own perspective on the paper, not just a summary. What are the strong and weak points of this paper? Why did you find the paper interesting? (If you didn't find anything in the paper interesting, then choose another paper!) To evaluate a paper, try to judge whether the work is theoretically sound, whether it is practical, whether it has been tested sufficiently, how it compares to competing approaches, whether you can devise improved or alternate approaches. Even if you feel under qualified to judge the research content of a paper, you should be able to form some opinions, and justify those opinions.

## **Conclusion:**

Thus,I have studied Technical Communication Skills . In that,I have learnt about-Oral Technique,Delievery techniques,assessment criteria,Technical Writing etc.