

# FIT5122 Professional Practice

## A. Structured Communication – Meetings (Week 2)

### 1. What is a meeting and what purpose does it serve?

Meetings are formal or informal gatherings of people. A meeting takes place whenever two or more people meet in order to communicate. They may be subject to conventions or a system of rules or completely without ceremony.

#### **Formal meetings (High Structure)**

- Have rules and regulations that provide framework
- Allow all members to participate
- Interactions are limited by formal procedures
- Focus is on the leader who manages the meeting and the discussion

#### **Informal meetings (low structure)**

- Held with clients to gather information requirements or at work to exchange information
- Help to solve problems and to make decisions and set goals
- Involve task oriented group participation, feedback and interaction
- They lead to the final decision and action

#### **Organisation Meetings – structure vs. power**

- High power concentration: decision making power is held by one or a few individuals
- Low power concentration: decision making power is among organization staff, board members or shareholders
- While understanding what goes on in meetings, we need to consider power along with structure

### 2. How are meetings helpful? What are some of the dynamic arenas?

- Information is shared
- Decisions are made
- Actions are planned and taken
- Problems are solved
- Group morale is boosted
- Communication quality and quantity are maximized
- Satisfaction, rapport and synergy are experienced

### 3. What are some of the benefits of a well-run meeting?

- Gather requirements effectively
- Planning strategies
- Providing and clarifying information
- Encourages problem solving
- Coordinating efforts
- Motivating and helps to build a team
- Allows for exchange of ideas
- Evaluating performance
- Giving and receiving feedback

#### 4. How to prepare for a meeting?

##### **WHY – is the meeting really necessary?**

clarify its purpose, like could be: Information sharing, decision making, symbolic or social

##### **WHO – who should be there?**

Certain meetings will have board members, shareholders, etc.

For people who just need information, it can be disseminated via agenda or minutes rather than being invited.

Also consider, who should be there to:

- Provide information
- Offer advice
- Offer specialized expertise
- Authorize action

##### **WHEN – it depends on the audience**

Community/public meetings can be held in the evening

Organization meetings must not be held too early since people may not be fully awake or too late since they may be tired.

Long meetings are not advisable, best practice is around an hour to 90 minutes based on agenda.

##### **WHERE – consider territorial and non-verbal aspects**

Managers office vs. meeting room in organisations or an external neutral location altogether

Seating arrangements must also be considered.

##### **WHAT – plan or agenda must be developed**

#### 5. Why are seating arrangements considered for a meeting?

Venue and seating are important. Having people sit at a table creates formality and all are at an equal height.

Physical factors must be considered:

- Line of sight: can everyone see everyone else?
- Acoustics: can everyone hear everyone else?

The physical layout and where people sit relative to each other can symbolize power dynamics. For example:

- Long rectangular tables are traditional and focus on power
- Round table are ideal and everyone can see each other's actions and reactions.
- Oval tables are difficult to make and is the ideal design compromise
- Square tables are ok but corners could be a problem if the table is too large

#### 6. Explain an agenda

An agenda is a plan for a meeting. It provides a timetable with contents for the meeting. Normally, the person calling for a meeting will prepare the agenda and suggest the length of the meeting.

#### 7. Explain minutes

The minutes are the record of what actually went on at the meeting. The minutes should be detailed enough to be understood by all parties of what was said or meant. Vague minutes are of no use at all and also. Also minutes with a word by word blow of what was said are not recommended either.

Minutes can also be in the form of a sound recording but permission from all members is required. The good aspects of a sound recording are that they include everything said that may have not been understood the first time. Although, something not understood should be clarified at the meeting itself. The bad aspects of a sound recording are putting members on a tear guard and making them conscious. This makes the meeting more formal and may not render true information.

Minutes include:

1. Name of meeting
2. Date & Time
3. Attendance & Apologies
4. Numbered Items
5. Action after each item
6. Closing time

## 8. How to have a successful meeting? (Hints for effective meetings)

1. Prepare for the meeting
2. Define the reason
3. Select the participants
4. Provide sufficient notification
5. Prepare a practical agenda and follow it
6. Arrange suitable venue
7. Follow proper procedures
8. Keep proper records through minutes
9. Provide prompt feedback to all participants
10. Prepare an action list
11. Follow up to all stakeholders before next meeting

## 9. What are the responsibilities of a chairperson?

Chairpersons are not necessary for all informal meetings that involve 2-3 members. But in formal meetings, they are invaluable. It is very challenging and rare to find someone who can perform all the responsibilities of a chairperson well. Below are some of the roles and duties that a chairperson may need to perform:

- Check if quorum is present, if necessary
- Declare meeting open
- Welcome members and introduce visitors
- State aims of business
- Indicate order of agenda
- Indicate time for each item
- Prioritize items
- Confirm previous minutes and approve if correct
- Guide and allow discussion for each item
- Control moving, seconding of motions and amendments
- Provide feedback and briefing where necessary
- Appoint sub-committee members
- Make an action list
- Confirm members to take action
- Close meeting

## 10. What are the responsibilities of members?

- Members have to do the right thing by participating in the meeting. A chairperson cannot solely achieve a productive meeting, rather the members have to equally contribute towards the results. Some preparation that can be done by members:
  1. Read agenda, minutes of previous meeting, any reports circulated prior to the meeting
  2. Know how to conduct yourself
  3. Practice general courtesy and good meeting manners
  4. Arrive on time
  5. Follow agenda
  6. Avoid interruptions
  7. Avoid distractions
  8. Don't interrupt others speaking
  9. Let the chair run the meeting
  10. Contribute appropriately
  11. Be engaged

## 11. Name some team decision making strategies

- Supporting the leader
- Voting
- Common consensus
- Brainstorming

## 12. How to communicate at meetings?

High level communication between members is required to enable decision-making and effective exchange of ideas.

- Members as well as the chairperson need to create a positive atmosphere, support and encourage contributions, reconcile disagreements and reduce tensions
- Be willing to negotiate, modify position and admit errors
- Encourage and facilitate discussion and contributions by listening, giving feedback, motivating others, influencing opinion, etc.
- Avoid defensive roles, blocking ideas, being rebellious, etc. This will lower the performance.

## 13. What are some barriers to effective communication?

- Poor verbal skills
- Inappropriate non-verbal behavior
- Ineffective listening
- Unwillingness to contribute ideas
- Unwillingness to use power and implement decisions

## 14. What are the outcomes of a successful meeting?

1. Provide prompt feedback to all participants
2. Prepare an action list
3. Follow up to all stakeholders before next meeting

Some other points to follow after a meeting:

1. Complete and confirm minutes
2. Follow up on action items
3. Make sub-committees if required
4. Track progress
5. Keep stakeholders informed

## 15. What are some of the challenges in a student meeting?

- Tend to be different as to a business meeting
- Member responsibilities vary
- Roles are switched so everyone develops skills
- Meetings are more effective as roles are taken, example, a chair to facilitate the meeting, secretary to note minutes and a timekeeper to follow agenda.

## 16. Summarize how to run an effective meeting.

- Determine the purpose of the meeting
- Recognize difference between a formal and informal meeting
- Identify roles of chairperson, secretary and members
- Plan and distribute agenda
- Arrange venue appropriately
- Conduct a structured meeting using standard conventions
- Use good communication skills to run meeting smoothly
- Use problem solving strategies
- Record decisions clearly
- Follow up on action list prior to next meeting
- Dress appropriately, arrive on time and make a good first impression
- Expand and answer questions clearly rather than waffling
- Appear enthusiastic and confident

## B. Structured Communication – Oral Presentations (Week 2)

### 17. What are some of the advantages and disadvantages of oral presentations?

Advantages:

- Spontaneous communication with audience
- Can be supplemented by visual/audio materials
- Can control audience engagement

Disadvantages

- Difficult for people who are not spontaneous
- Public speaking skills required
- Limited time and limited audience

### 18. What are the principles of effective oral presentations?

#### a) Focus on main points

- Decide what the main points are
- Highlight the points in the – introduction and summary
- Continuously refer back to highlights
- Don't swamp audience with unimportant points

#### b) Make presentation easy to follow

- Content: Organise content into logical structure
- Voice: Be audible and articulate well
- Non-verbal: use body gestures to aid communication
- Visual: use few and legible words, pictures are recommended

#### c) Make the presentation interesting

- Content: choose interesting content for audience
- Voice: show energy and intonation (good tone with voice modulation)
- Non-verbal: show movement and energy
- Visual: use color, animation and pictures to create interest
- Engage the audience and make it interactive

### 19. What is the importance of audience in oral communication?

- Audience is the biggest contributor to success of a presentation
- Understand who is talking what to whom and fine tune the presentation – make the right emphasis based on content being delivered
- Audience feel more comfortable and connected when clear roles are given – set a context at the beginning
- Audience feel more comfortable when they know what to expect – give frequent indications of direction of the presentation

### 20. How can presentation stress be managed?

Plan and rehearse the presentation:

- Compose the full text of your presentation
- Dress as you would for the presentation
- Rehearse at the presentation venue
- Use audio visual aids that would be used at the actual presentation
- Record presentation and play it back to analyze performance
- Rehearse in front of a mock audience
- Arrive early to setup for the presentation

## 21. Explain some Do's and Don'ts for technical aspects of presentations?

### Notes

- Using notes is alright as long as you don't read from it
- Notes are recommended rather than turning around and reading from the screen all the time

### Dress code

- Appropriate for the audience and venue
- Being too formal rather than too informal is preferred

### Microphone

- Good for projecting voice without having to strain
- Especially important for women, as higher pitched voices start sounding shrill
- Attached microphones are recommended since they allow you to move around and use hand gestures easily
- Practice is required to make sure volume level is right and there is no feedback

### Logistics

- Timing is very important in presentations, never rush or go overtime
- Ensure use of all technology is smooth and slick
- It is fine to drink some drink or water available for the speaker, especially if your mouth is dry
- Be composed and pose a serious manner while waiting

## 22. Explain some best practices for student project presentations.

### Decide your approach first. Would you:

- Present your project as complete package
- Present some highlights of your project if work is still in progress

### Present about your project

- Don't spend too much time on background
- The amount of time spent on doing the project is not necessarily proportional to the time in delivering the presentation

### Understand that presentation is different from writing

- You have the same information but need to select an approach for presentation
- Never read out your report but rather narrate and break it down for your audience

## 23. Explain some best practices for group presentations.

### Presentation is important

- Prepare an outline and be clear who is talking about what
- Better to distribute slides rather than themes or categories

### During the presentation

- Introduce everyone to the audience at the beginning and explain the outline for who is doing what
- Make a good introduction to the next speaker and possibly the topic

### After the presentation

- Compliment each other even though the presentation may have not gone as planned

## 24. Evaluate the presentation in terms of context/preparation and content.

**Introduction** – Tell them what you are going to tell them

**Content** – Tell them

**Conclusion** – Tell them what you told them

### Context

- Identify the objectives
- Conduct research
- Create a background
- Compose a message
- Follow up

### Content

- Relevance and specificity
- Conclusiveness
- Appropriate length and timing
- Appropriate format and presentation (technical and behavioural)

## C. Interpersonal Communication (Week 2)

### 25. What is communication and what are some of the types?

Communication is the process by which people exchange information or express their thoughts and feelings in order that other people can understand. Communication is important because if not done properly can often cause misunderstanding.

#### **Types of Communication**

- Intrapersonal
- Interpersonal
- Team
- Organisational
- Public/media
- Intercultural

### 26. Explain INTRApersonal communication skills.

Intrapersonal communication skills can be defined as processes that help, but sometimes also distort or block, communication messages within an individual.

When you think, you use intrapersonal communication. You initiate, receive, and process messages within yourself. You are playing both the roles of: sending & receiving. Human growth depends on this internal communication. Through it you know yourself and develop your self-concept, self-determination, and self-motivation.

Intrapersonal skills are the foundations of a successful career. This is emotional intelligence, the ability to know, understand and manage your own emotions.

### 27. Give the importance of emotional competency for developing INTRApersonal communication skills.

Emotional competency is the personal and social skills that lead to superior performance in the world of work. The concept encapsulates the following:

#### **1. Personal competence: how we manage ourselves**

- Self-awareness: knowing one's internal states, impulses and resources
- Self-regulation: managing one's internal states, impulses and resources
- Motivation: emotional tendencies that guide or facilitate achievement of goals

#### **2. Social competence: how we manage relationship with others**

- Empathy: awareness of others' feelings, needs and concerns
- Social skills: adeptness at inducing desirable responses in others

### 28. Explain INTERpersonal communication skills.

Interpersonal communication skills can be defined as processes that help, but sometimes also distort or block, communication messages between individual.

It is the process of sending and receiving information between two or more individuals.

Interpersonal communication occurs when two or a few people talk face to face. Conversations, dialogues, and small group discussions are interpersonal exchanges. Each person also operates interpersonally during the exchange. Thus, an exchange with just two people involves at least three communication elements – the unique thinking done by each person and the overriding process created by the interpersonal exchange.

Some of the essential interpersonal communication are as follows:

1. Assertiveness
2. Listening
3. Questioning
4. Feedback



## 29. Give the importance of assertiveness as an interpersonal communication skill.

Assertiveness is getting what you want from others without infringing on their rights.

Communicating with appropriate assertiveness enables one to be effective in:

- Giving and receiving compliments
- Making requests: asking for favours or help
- Initiating and maintaining conversation
- Standing up for your legitimate rights
- Refusing requests
- Expressing personal opinions, including disagreement
- Expressing justified annoyance, displeasure and anger

## 30. What are some of the verbal skills that can help us be more assertive and hence communicate more effectively?

### 1. Saying NO

- Use a firm voice and be politely say no without strain

### 2. Dismissing and redirecting to get a conversation back on track

- Example – this feature was not stated in the initial project requirements

Dismiss – If this feature is highly required, we can re-evaluate the current project schedule and see if we could fix it in this project

### 3. Questioning to prompt awareness

- Example – Have you noticed whenever you talk to Gail, she is scared of you?

Questioning – If you observe Gail's body language next time, you will find that she behaves like a small child being scolded by her parents.

### 4. Fogging

- Is to calmly acknowledge that others criticism may well be justified. When others lash out, instead of connecting with something solid, they find it is like punching fog.

**Gail:** You've mucked it up again? Are you completely useless?

**Weng:** Yes, you're right. I do appear to have got it wrong. [Fogging]

### 5. Forcing a choice

**Gail:** POD, can you get the quizzes online ASAP? I need them for my 11am lecture

**POD:** You wanted me to setup a video for azure so that the class could look at it.

*Which would you like me to finish first? [Forcing a choice]*

### 6. Broken record

- Repeat calmly, again and again what we want, without getting upset, so that we can achieve our primary objective, without getting side-tracked or provoked

### 7. Ask for specifics

**Gail:** Your performance out there was pathetic!

**Harnam:** Can you tell me specifically what I did you found pathetic? [Ask for specifics]

### 8. Workable compromise

**Gail:** Alright, if you won't do it, I'll do it myself!

**Weng:** No, don't go away mad. I said I couldn't do it now. *I can do it at 9am or in about 40minutes. This means that it will be ready for your presentation at 11.00. Will this help? [Work compromise]*

### 9. Threat

- Use it as a last resort and ensure that you are able to carry out any threats you make
- Appropriate to make others aware of the consequences of their actions
- Provide a better outcome to give the other person an option!

## 31. What can be achieved by listening and why is it a vital skill at the workplace?

Listening is important in both professional and personal situations because it:

- Allows us to get the full picture
- Let's us learn and survive
- Let's us discover the truth
- Let's the other parties solve their own problems
- Allows us to cope with distractions and de-stress
- Will probably mean the other parties will listen to us
- Can give us an unfair advantage over others



### 32. What is listening responsiveness associated with and how can you develop good listening skills?

**Listening responsiveness** is associated with

- Head nods
- Forward-leaning posture
- Body oriented towards speaker
- Eyebrow raises
- Smiling
- Direct eye contact
- Making appropriate “friendly grunts” (“uh-huh”, “mmm-hmm”)

**Good Listening Skills can be developed by**

The right to remain silent

- Concentrate and pay attention to the others even if they are boring!
- Don't have to interrupt in the mistaken belief that silence signifies agreement
- Ask for clarification (e.g. of jargon or acronyms) without fear of looking foolish

### 33. What are some of the barriers to effective listening?

- **Subject changing:** listener shifts into speaking mode, rerouting the conversation
- **Daydreaming:** allows the speaker's words to trigger off an associated thought, drifts off, losing track entirely of what the speaker is saying
- **Distracted:** unlike the Daydreamer, gives the outward appearance of following the conversation, but is in fact drawn by more interesting things happening elsewhere
- **Just give me the facts:** feels that anything non-factual is irrelevant and thereby misses entire dimensions of meaning (e.g. non-verbal)
- **Mind-reading:** reads too much meaning into speaker's words and non-verbal behaviour (direct opposite of JGTF)
- **Rehearsing:** looks track through concentrating too hard on a rebuttal, or planning witty or profound responses
- **Comparing:** occurs when listener is insecure, competitive, envious or jealous. Loses track because is continually comparing their situations e.g. “I make more than that”
- **Push my buttons (PMB):** when listener loses their cool and objectivity when certain topics are broached (e.g. crime, abortion, terrorism, taxation, politics...)
- **Stereotyping:** Similar to PMB, but here ignores words being said because don't like some aspect of the speaker that doesn't have much to do with what they are saying
- **Quick fix:** the listener has the solution to everyone's problems, so they cut the speaker off to tell them what to do.

### 34. Explain active listening?

Active Listening is a communication skill that requires concentration, attention and a minimum verbal response to help speaker articulate his or her thoughts

- Clarify the speaker's meaning
- Check the accuracy of what the speaker has said
- Summarise what the speaker has said
- Acknowledge what the speaker has said, without making any kind of commitment
- Open a door, prompting the speaker to continue

### 35. What is achieved by questioning and why is it a vital skill at the workplace?

Questioning can be used not only when you are the Listener but also when you are the Speaker. Effective Questioning is knowing the different types of questions that can be asked, and matching them to the situations we find ourselves in and the personalities with whom we interact.

#### **Types of Questioning**

- Straightforward probe
- Reflective
- Open
- Leading
- Closed
- Rhetorical
- Objective criteria
- Stupid
- Testing
- Trick compliment
- Softening up
- Back on Track
- Hypothetical
- False dilemma

### 36. What is achieved by feedback and why is it a vital skill at the workplace?

Feedback is advice, support and critique provided in response by one person to another.

Feedback is not a code word for punishment, but should include praise, compliment and reward. Feedback should be:

- Fair
- Accurate
- Specific
- Formally structured
- Solution oriented
- Focused on behaviour, not personality

### 37. Explain intercultural communication

The process of sending and receiving meaningful & unambiguous information between two or more individuals from different cultures.

Culture refers to the relatively specialized lifestyle of a group of people – consisting of their values, beliefs, artifacts, ways of behaving, and ways of communicating

Members of a particular race / country are often taught similar beliefs, attitudes & values, but within any large culture there will be enormous difference.

#### **Improving Intercultural Communication**

- Prepare yourself
- Reduce uncertainty
- Active Listening, perception checking, being specific, seeking feedback
- Recognise differences
- between yourself and the culturally different
- Within the culturally different group
- In meaning
- Adjust your communication
- Recognise culture shock

## D. Intercultural Communication (Week 8, 10)

### 38. Explain good communication and its concepts

Good communication means different things to different people in different situations. To communicate well you need to understand that there are underlying principles and depending on various aspects including the situation, how you communicate might need to change.

You cannot assume that communicating the same way for everyone, for every message and in every situation will be the same. For effective communication you will need to understand and consider these principles.

In organisations, one can think that communication is just information passing from one area to another. It is something that happens along with project management, planning and so on.

However, you should consider that communication is about how people manage meaning. This is not the same. We have to consider whether what is perceived to have been heard is what was intended. It is not just an extra thing to do but is necessary for every interaction.

Basic communication concepts are as follows:

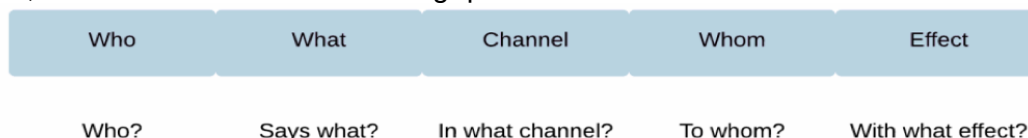
- Transmitter: Who is communicating?
- Content: What are they saying?
- Structure: How are they delivering what they say?
- Audience: Who are they delivering to?

We mostly tend to focus on the second aspect of communication – the content. By actively focusing on other aspects, we can become more effective communicators.

### 39. Mention and expand some of the formal communication models.

#### 1. Lasswell's Model

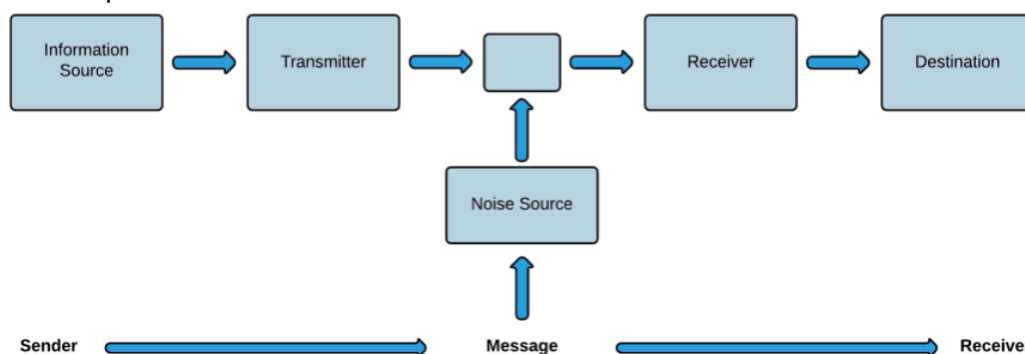
Harold Lasswell developed an influential communications model, suggesting that to understand or craft a communication, we should answer the following questions:



Each of these relates to a different aspect of the communication, allowing distinct focus on the transmitter; content; medium; audience and outcome of a communication, respectively.

#### 2. Shannon-Weaver Model

Claude Shannon and Warren Weaver (1963) published a mathematical communications model, which introduces the concept of 'noise' in communications.



In this model, the 'noise' which may disrupt the communication occurs in the channel – so it may be viewed as technical. But we can also consider 'noise' as growing out of semantic issues or other communications issues.

So generally, the model consists of a sender, a message, a channel where the message travels, noise or interference and a receiver.

#### 40. How does intercultural communication benefit multicultural teams?

Intercultural communication fosters teamwork. It helps teams to understand each other's cultural differences, and to communicate effectively without misunderstanding. With successful intercultural communication, teams understand the influence of culture on peoples' behavior and communication tendencies. This enhances teamwork, as colleagues respect one another's cultural background, unique talents and capabilities, which is key to the smooth running of business. Since teams are aware of their colleagues' cultural influences, intercultural communication eliminates stereotyping -- a danger to effective communication and team work.

#### 41. What is the importance of cross cultural awareness in organisations?

With the globalization of business, increased diversity in the workplace and multicultural emphasis in society, cultural awareness has become one of the most important business tools in almost every industry. Understanding the cultures of those around you will enhance communication, productivity and unity in the workplace. Formal cross-cultural awareness training is very helpful for problem solving on multicultural business teams, but there are several cultural awareness techniques you can use.

##### **1. Cultural Knowledge**

One of the easiest ways to understand your multicultural coworkers is by researching cultures on your free time and increasing your cultural knowledge. Reading books and searching the Internet are the most accessible sources of relevant information. Although you might not ever put to use most of the knowledge you accrue, you will still be able to better understand those you work with and international clients.

##### **2. Put Cultural Knowledge to Use**

If you learn something interesting about a coworker's culture, ask about it or mention it in a relevant situation. This might seem uncomfortable at first, but your coworkers will recognize your effort to educate yourself. Using acquired information as it comes up will serve to break down multicultural barriers, help everyone on your team to be more comfortable around each other and teach others about different cultures.

##### **3. Listen Up**

Effective listening is something that most cultures have in common. Listen to your coworkers actively, displaying positive body language and affirmation during the listening process. Listening intently allows you to read between the lines, pay attention to the way your coworkers say things and ask questions if anything is unclear. They will recognize your willingness to listen and appreciate being asked to explain an unclear point.

##### **4. Overcome Stereotypes**

Stereotypes and preconceived ideas are difficult to overcome, especially if they have been part of your thinking since childhood. Educate yourself about as many different cultures as you can and treat everyone the same. Your knowledge of their culture will give you the confidence you need to overcome the stereotypes that have been engraved in your memory. This newly found knowledge will replace your negative stereotypes with positive knowledge.

## E. Organizational Communication (Week 9)

### 42. What is an organization and what is organizational communication?

An organization is comprised of communication units in hierarchical relations to each other and functioning in an environment. The organization behaves as a single unit, regardless of size and diversity. It has a clearly identifiable purpose and the people who work in that organization share that purpose and work cooperatively to achieve the goal. Members of the organization place the interests of the organization ahead of their own individual interests.

Organizational communication is the exchange of oral, non-verbal and written messages among people working to accomplish common tasks and the organization's goals.

It takes place at different levels:

- People at the same organization level
- People at different organizational levels
- Members of an organization and external partners
- Members of an organization and customers

### 43. What are the factors used to describe organizational characteristics?

#### 1. Function

- Why does the organization exist?
- What product or service does it offer?
- How does it interface with clients, customers and suppliers?
- What is the size?
- What is the structure for management and control?
- How is the decision making? – centralized, formalized and complete?

#### 2. Information Use and flow

The functions of an organization affect the information use and flow. Information is crucial in every organization. Much of your work as an IT professional will concern organizing how information is created, managed and used within organizations.

- Type of information
- Volume and complexity of information
- Who accesses what information
- Importance of information to survival of the organization

### 44. Define organization goals and objectives.

Goals are basically what organizations plan to achieve. They are statements made about the future of the business and represent their aspirations for it. Although it does not specifically say how they meet their goal. Objectives are operational statements describing what an organization will do to achieve the goals. They are exact steps the organization will take to reach its goals. They are written without emotion and are typically measurable and quantifiable. They are also realistic and attainable and have an associated timeline. Together they help to summarize the organizations reason for existence and provide a measure of organizations effectiveness.

#### 45. Why are goals usually visible to the public as mission or vision statements but objectives are usually given limited access?

An organization's goal or mission is the reason behind its establishment, what it is meant to do or produce. In short, why it exists. Objectives are statements of broad intent that often arise out of mission statements. Once an organization has developed its mission statement, its next step is to develop the specific objectives that are focused on achieving that mission. Objectives are the specific measurable results of the initiative. An organization's objectives offer specifics of how much of what will be accomplished by when.

Once objectives have been determined, several strategies are developed as a general course for meeting the objectives taking into account the current situation and available resources. For example, an organization determines that an overall objective is being cost-effective. To target specific costs in the organization, it develops a strategy of training and asks each department to implement the strategy by examining its use.

It is clear that goals help define the direction that a business will take and is therefore visible to the public while objectives can be motivational to members of the organizations to provide a sense of achievement by meeting those objectives. Hence objectives are given limited access to the public.

#### 46. Give two types of organizational functions.

##### 1. Primary functions

- Directly related to goals/objectives
  - Retail organization: sales function, financial management, etc
  - Sporting organization: competition scheduling, venue booking, etc
  - Research organization: information management, financial control, etc

##### 2. Support functions

- Maintaining the functioning of the organization itself
  - Human resources, Building facilities and services, office services and supplies, etc

#### 47. What is organizational structure and why do IT professionals need to understand it?

An organizational structure defines how activities such as task allocation, coordination and supervision are directed toward the achievement of organizational goals. It can also be considered as the viewing glass or perspective through which individuals see their organization and its environment.

Organizational structures, functions, tasks and information are closely bound to the IT systems and technologies that support them, making it important for IT professionals to understand them.

- Related to the way that work is allocated among members
- Choice of structure facilitates achieving goals effectively

#### 48. What are the 3 common organizational structures?

##### 1. Functional / Hierarchical structure

Groupings based on functions performed like people, resources, activities and tasks managers responsible for department of specialists. It is suitable when in-depth knowledge about functions is needed. There is low reliance on co-ordination between departments and there are few well defined products.

##### Benefits:

- Continues to build expertise in personnel

##### Drawbacks:

- Response to change or opportunity can be slow
- Departments have narrow view of goals and objectives
- Decisions pushed by management hierarchy making for heavy loads

##### Communication Channel:

- Defined and rigid, clear and precise
  - Upward channel – via manager
  - Downward channel – direct information to staff you manage
  - Horizontal channel – some communication with staff reporting to same supervisor
- Trend to flattening hierarchical structures has resulted in increased communication between management and workers

## 2. Divisional structure

The divisional structure is a type of organizational structure that groups each organizational function into a division. These divisions can correspond to either products, services, projects or geographies. Decision making is centered in divisions.

### Benefits:

- Flexible and able to respond to change and opportunity
- Groups are smaller and functions are coordinated in groups
- Divisions have broader views of goals and objectives

### Drawbacks:

- If poor communication, conflicts and incompatibility of products may arise
- Duplication and under-use of expertise or resources
- Example: McDonalds, Apple

### Communication Channel:

- Hierarchical communication cause problems, example: how do accounts in each division communicate?

## 3. Matrix structure

Groupings report horizontally and vertically. Horizontally – by product, project or location and vertically by function or division. It is suitable for rapidly changing business environment.

### Benefits:

- employees build functional and product skills

### Drawbacks:

- potential for confusing power relationships
- outstanding communication skills needed by managers
- needs all staff to be good communicators

### Communication Channel:

- multiple reporting lines can create difficulties
- multiple products needing complex servicing

## 49. Explain formal communication methods?

Systematically set up for messages through defined relationships related to organisational structure

### Downward communication

- Communication flow down through the organisation
- Contents: e.g. employee handbook, instruction manuals, newsletters, policy and procedures
- Typically concerns what to do, how to do it
- Plus announcements of management policies
- Need feedback to confirm that the message has been received and more importantly has been understood.

### Upward communication

- Communication/information moves up to a person at higher level.
- Generally the same path as the downwards communication, but not same kinds of messages.
- Method – meetings, suggestion boxes, reports, questionnaires, interviews

### Horizontal Communication

Communication flows between people at the same level of an organisation

### Difficulties:

- 'speak different languages'
- can sometimes be threatening as superior not involved

### Advantages:

- fosters a co-operative environment, and a communication culture Some approaches that encourage this type of communication
- Teamwork, discussion forums



## 50. Explain informal communication methods?

- Interpersonal communication between members of the organisation – the grapevine’ “informal communication system, flourishes in a knowledge vacuum”
- Not under control of management
- Not a permanent structure Content includes:
  - o personal information (gossip chain)
  - o organisational information (cluster chain )
  - o correct and incorrect information

Management may tolerate this or try to control it or suppress it, but it always exists. Timely, good quality and open communication is critical to controlling the grapevine.

### Problems with upward comms:

- block communication path (especially bad news)
- lack of opportunity to communicate upwards other than with your immediate supervisor
- supervisor does nothing about information provided
- poor communicators – do not bother saying anything

### Problems with downward comms:

- Information overload – too much
- Loss of information – too little
- Delays in receiving information – too late
- Has the message been received?

## 51. What are the types of rumour/ gossip?

- Bogey / anxiety
- Anticipatory
- Aggressive
- Pipe dream / wish fulfillment

## 52. Explain writing as a means of communication?

- It tends to be one-way communication with limited feedback
- You don't often know if your message has been ignored or went to a bin straightaway
- You don't know if the message confused your reader, or the message made the reader offended etc.
- Effectiveness of writing depends on the readers' ability to comprehend the contents of writing (especially with people who do not have IT background)
- It tends to remain as it was
- Writing can be both records and evidence

## 53. What is the difference in Messages vs. Documents?

### Messages:

- Come *with* or *without* attached documents
- Are open-ended, and usually have initiatives.
- More immediate communications through letters and e-mails
- E.g. Dealing with individual cases, making an appointment, sending off the documents, checking everyone's availability, etc.

### Documents:

- It has self-sufficiency (i.e. it is 'closed')
- Formalised, not because of its styles, but because of its purposes
- E.g. Proposal, progress reports, project reports, etc. It is sent off or delivered with an accompanied message or cover letter

#### 54. What is the 5 step approach to professional communication?

1. Identify the objectives
  - a. Assess the situation carefully
  - b. Identify long term and short term objectives
  - c. Separate personal agenda from organizational benefits
2. Conduct research
  - a. Know the context well
3. Create a background
  - a. Frame and understand participants in the situation
4. Compose a message
  - a. Choose appropriate means of communication – written, verbal, etc
  - b. Handle the situation, not the people
5. Follow up
  - a. Ensure communication achieved what you wanted

#### 55. State some general rules for composing a message?

- Clearly state who's writing for whom
- Clarify what the document is all about
- Detail the information in a clear, concise and conclusive manner
- Make initiatives for the readers
- End the message "nicely" (will depend on recipient(s) and your relationship with them)

**(read sample question from Week 9 notes)**

#### 56. Explain internal correspondence?

- It can be somewhat informal and often will be very concise correspondence.
- Your manager has to read in his/her tight schedule, so be efficient.
- There is no definite style to follow. It is a typical example of 'what works well is the best'.
- The emphasis is more on the aspect of 'giving and sharing the information' and it aims:
  - o to establish a consensus between your manager and yourself and/or within the team, and
  - o to clarify and re-affirm that everyone involved have the same understanding on the project.
- There are some 'formal' internal correspondence, but you can treat those as if they are external correspondence.

#### 57. Explain external correspondence?

- It can vary from a brief e-mail message to a substantial document
- Your writing/contribution will become the 'face' of your organisation.
- It is thus written in a very formal/stylised format and presentation.
- It also aims at establishing and consolidating the relationship between your organisation and the other party.
- Any external correspondence will function like a contract. The relationship will be officially initiated and based on this correspondence.

## 58. Describe Fax, Memo and Letters?

In terms of composition of a message, the basic approach remains the same, but there are some differences in format.

### **Facsimile/fax**

Almost obsolete! Still used sometimes (?) to send copies of

- non-electronically processed documents
- or to send documents instantly to a place where the Internet are not easily available

You attach cover letters, then basic approaches remains the same as any other means.

- Often companies have their own templates
- Gradually disappearing as scanning/communication technology develops (e.g. Monash Clayton, fax number results in scanned document sent to email address)

### **Memorandum ("Memo")**

- Often half-way between message and document
- Contains information that are important and worth being kept as written records, but cannot be classified like reports or proposals.
- A useful way to 'formalise' what was discussed or said or happened.

### **Letters.** – Typical types:

- Cover letter of a document
- Business letter
- Reference letter

## **F. Working in Teams and Conflict Management (Week 3)**

### 59. What is a team and why is teamwork required in the workplace?

Team is a number of people consciously working together to achieve a common objective. TEAM = *Together Everyone Achieves More*

Teamwork is a required skill to succeed in the workplace.

- The capacity for co-operation and teamwork was ranked 2nd in the top ten most desired skills of IT graduates in terms of importance.
- Approximately 70-82% of US companies use the team concept, making it one of the most commonly required skills in the workplace
- Synergy occurs, that is, a team's performance is greater than sum of its equal parts.

### 60. What are some positive outcomes of teamwork?

- Increased creativity, problem solving and innovation
- Higher quality decisions
- Improved processes
- Increased quality and productivity
- Improved communication
- Reduced turnover and absenteeism and increased employee morale

### 61. What are some limitations of teams?

- Illusion of invulnerability
- Rationalisation
- Belief in inherent morality
- Stereotyping Opponents
- Direct pressure to conform within group
- Self-censorship

## 62. What are possible solutions to enable better teamwork?

- Examine alternatives, generate contingency
- Appoint a devil's advocate
- Increase group size,
- Remove physical isolation
- Facilitate organizational graffiti (anonymously input unpopular ideas and heresies)
- Eliminate competition with other groups (Break down 'us-and-them' mentality)
- Make confronters into heroes (Instead of shooting messengers, reward them.)
- Create multiple affiliations (Have group members report to more than one boss)
- Defer finality in decisions (Have a second-chance meeting)
- Manage impact of high-status members.
- Social loafing: "the tendency of some group members to put in less effort if they believe that their underperformance will not be noted – the phenomenon of one group member getting a 'free ride' while others do the work"

## 63. What are the advantages of teams?

### 1. A different management style

Taylorism: employees are selfish, sullen, lazy, stupid

Human Relations: employees are collaborative, responsive, well-meaning, creative.

Team approaches often draw on this.

### 2. A variety of team models.

Work teams can vary considerably in structure, purpose, and duration.

Structure: Self-managed ↔ structured leadership

Purpose: Function-oriented ↔ project-oriented

Duration: Limited ↔ ongoing

### 3. Better performance

Self-managing work teams can lead to:

- o reduced absenteeism
- o increased productivity
- o increased employee satisfaction, morale, and cohesiveness
- o a multi-skilled workforce
- o increased flexibility in work practices
- o decreased need for managers

### 4. Tapping employees' knowledge, commitment and communication what characterises an effective team?

- Shared goals and supportive environment
- Emphasis on learning (and space for mistakes)
- Participation in decision making
- Open communication
- Differences 'are recognised and handled'

## 64. What are the disadvantages of teams?

### A covert form of control:

- using employees' desire for less direct control from above as a way of making them work harder

### A means to secure employee knowledge and compliance on the cheap:

- using employees' desire to express their creativity for the organization's benefit

### A distraction from an organization's real problems:

- sometimes can be used to direct focus of attention away from broader questions of direction and purpose

**Teams fail in the absence of clear goals, support, the ability to take risks**

## 65. Can organizations afford to let teams run themselves? If so, what are the implications for managers?

A self-managed team is a group of employees that's responsible and accountable for all or most aspects of producing a product or delivering a service. Traditional organizational structures assign tasks to employees depending on their specialist skills or the functional department within which they work.

A self-managed team carries out supporting tasks, such as planning and scheduling the workflow and managing annual leave and absence, in addition to technical tasks. Management and technical responsibilities are typically rotated among the team members.

Although self-managed teams are autonomous in terms of how they manage and carry out their work, they still require guidance from leaders within the organizational hierarchy. External leaders provide the link between the wider organization and the self-managed team, empowering the team and advocating on its behalf. External leaders may struggle to find the appropriate balance in their leadership style: Their own managers may expect them to be more hands-on, while the team may resist perceived interference.

## 66. What are the advantages of teams in IT? Why do we need teams for software development?

- Range of Skills
- Shorter "time-to-market"
- Increase in quality (others can check)
- More effective (by using specialists)
- Most software products are too large for a single developer in the given time frame

The productivity increase depends on whether the process is parallel or sequential

## 67. What is Brooks' law?

Brooks' law states that 'adding personnel to a late software project makes it later'.

If the task can be divided into subcomponents – parallel software development is possible.

But due to the dependencies between tasks, there must be sequential development, which takes more time.

## 68. Name and explain some programming team models?

### **Chief programmer model (1970s)**

- Hierarchical model
- Chief programmer – decision maker  
having the best technical skills and making the decisions
- Communications go through the chief programmer.

### **Democratic team**

- Decentralized – with no leader, everyone equal.
- Higher communication overhead (everyone has to communicate with everyone else)
- Difficult decision-making
- Many student teams try to be democratic, but it rarely works well!

### **Modern programming team**

- Hierarchical
- Technical lead

### **Extreme Programming Teams**

- Agile Development
- Pair programming – where all code is written by two programmers sharing a computer.

## 69. Understanding teams

### **Formal norms: An explicit rule-governing behaviour**

"Formal norms are those rules that are explicit in the way they define the group's behaviour", and tend to be official - they are prescribed by the organisation, and can probably be found in written form.

### **Informal norms: An implicit rule-governing behaviour**

"Informal norms are implicit in the way they define the group's behaviour", and tend to be unofficial - they tend to have developed over time within a group, and probably will not be found written down anywhere.

## 70. What are some team roles?

- Task-related: focuses on content of the meeting
- Maintenance-related: relates to the process of how the group works together
- Defensive: protects the group from anxiety
- Dysfunctional: hinders/undermines the team's progress

## 71. List and describe briefly Bruce Tuckman's stages of team development.

Understanding team development can help us determine just what is happening in a team, especially when it is not going too well.

### **Bruce Tuckman's stages of development**

1. Forming
2. Storming
3. Norming
4. Performing
5. Adjourning (Reforming)

#### **Forming:** Initial stage, Team formation

The initial stage of team development during which individuals have not yet gelled together. Everybody is busy finding their place in the team, sizing each other up, and asking themselves why they are here!

#### **Storming:** Challenge each other, Conflicts arise

People begin to see themselves as part of a team. However, at this stage they may challenge each other, and the team leader, about such things as what the team is doing, and how things should be done. As the stage title suggests, conflict and confrontation typify this stage, as differences surface. This may result in some loss of performance or focus on the task.

#### **Norming:** Conflict resolution, Establish ground rules, Togetherness

This is the phase where team members start to come together, developing processes, establishing ground rules, clarifying who does what, and how things will be done. This phase is characterized by a growing sense of "togetherness".

#### **Performing:** Synergy focus on both team and tasks

This is the final stage where increased focus on both the task, and on team relationships, combine to provide synergy. Performance is delivered through people working effectively together.

#### **Mourning or Adjourning:** team disbanded, long-term relationship may form

## 72. Analyze Bruce Tuckman's stages of team development?

The value of Tuckman's model is that it helps us understand that teams evolve. It also helps us to consider how they may encounter different problems at different stages of their development. One limitation of the model may be that it makes team building appear too linear and sequential. Although it's a useful analytical tool, remember that some teams may "loop" around in their development.

Not all groups or teams go through each stage. They may revisit a stage or skip one or more stage completely. Many groups are 'immortal' — that is, the group lives on, even though membership may change. Some groups may never reach stage 5, or may be in stage 5 and not know it.

Groups may, in fact, move back and forth between different stages. Sometimes groups self-destruct before reaching stages 3–5. Sometimes groups have no storming phase at all. That is, there is little or no conflict because cooperative spirit is greater than adversarial behaviour and/or rules/norms are already in place to regulate behaviour.

For example, not all teams evolve smoothly through Tuckman's stages but may yo-yo between norming and storming until they either begin to function, or are disbanded! Regardless of limitations, all well-conceived models can be useful in helping us to understand and better manage our circumstances. Not all teams reach stages 3 and 4

### 73. How are teams effective?

Teams succeed when they have a clear plan to achieve shared goals and have clear roles

- effective communication processes and an effective leader
- an optimal team size – 6 to 10 members
- effective team members who
  - o are not individually focused
  - o are content and process oriented
  - o can handle conflict and are great communicators
  - o excellent interpersonal and technical skills
  - o open, trusting relationships with each other
  - o accountability to the organisation
- reward structures that are team based
- An effective leader is one who can
  - o challenge the process
  - o inspire a shared vision
  - o enable others to act
  - o model the way

### 74. What are the different styles of leadership?

- Authoritarian
- Democratic
- Laissez-Faire

### 75. Why are teams ineffective or why do they fail?

Teams fail when

- not enough time
- not enough resources
- ineffective resources
- no management support
- technological challenges
- team issues – personality, team experience

### 76. What are some common problems teams face?

#### 1. Internal reasons

#### Personality types

Some advocates of team approaches suggest that internal group dynamics may create problems. Many such writers place considerable importance on identifying — and balancing — different personality 'types' within a team.

For Belbin (1981), successful teams are those that know how to mix and match different personality types, including:

- o The Monitor-Evaluator: may provide good overview of various options facing group, but not be able to excite others into action
  - o The Team Worker: helps keep group together, but can be indecisive
  - o The Plant: is creative, but may not communicate well, or attend to details
  - o The Company Worker / The Implementer: practical thinker whose perceived lack of enthusiasm for radical thinking may frustrate other team members
- Each 'type' has strengths & weaknesses.

The Myer-Briggs Type Indicator (based on dichotomies) is another well-known instrument. Dimensions are:

- Extraversion (**E**) -(**I**) Introversion
- Sensing (**S**) -(**N**) Intuition
- Thinking (**T**) -(**F**) Feeling
- Judgment (**J**) -(**P**) Perception



## Time management

One of the biggest problems with any extended project is time management.

## Hidden agendas

Foy (1999) has suggested that a number of 'counter-Belbin' personality types can also be found within some teams:

- The Hijacker
- The Loose Cannon
- The Passenger
- The Sponge

## 2. External reasons

But it would be simplistic to suggest that teams fail only because of the team members themselves. By no means are all problems facing work teams internally generated.

Difficulties may arise due to:

- Lack of resources
- Poor communication and coordination with other teams
- Lack of support within the broader organization

## 77. What are the common solutions to solve team problems?

### 1. Shared goals

A group of people can be described as a team if they all have committed to a set of shared values and objectives, together with an acceptance of how those objectives are to be met. In other words, they are not only in agreement as to where they are going but also on how they are to get there.

### 2. Motivation

'Think of some fun ways to remind people this is a YES team. For instance...

- a. Put up large coloured notice where the team meets which just says YES!
- b. 'Write YES on a stack of post-it notes and stick them on phones, people's notepads, chairs and computer screen, or go the whole way and print some.

### 3. Clear decision-making structure

### 5. Planning

- o Defining and analysing the problem
- o Establishing criteria for a solution
- o Proposing possible solutions
- o Evaluating possible solutions
- o Selecting a solution
- o Plotting a course of action

### 6. Realistic expectations

Can individual and team goals be reconciled? Can we survive (in) teams without engaging in self-flagellation? Is there a place for 'leadership'?

## 78. Explain 7 basic approaches to team decision-making?

Robbins & Finley identify 7 basic approaches to team decision-making:

- Consensus
- Majority rule
- Minority rule
- Averaging  
'Averaging is the epitome of compromise; it is how our esteemed Congress decides: team members haggle, bargain, cajole, and negotiate an intentional middle position. Usually no one is happy with the result except the moderates on the team.'
- Expert
- Authority rule without discussion
- Authority rule with discussion

### 79. What are virtual teams?

A work group whose individual members are located in widely dispersed locations. Traditionally teams or groups have involved face-to-face interactions but virtual teams are becoming more likely in an outsourced IT environment.

- How well team members can communicate via technology
- Dealing with different cultures and different time zones
- Virtual workers may “over-communicate”, sending messages through multiple channels, leading to message overload
- Is the team self-managed, or is leadership required?
- Are human communication and social interaction enriched or impoverished by virtuality?

There may be multiple types of virtual communication, for example workers in the same physical workplace may mainly communicate via technology (e.g. email and voicemail). Even though seemingly expensive, having virtual team members meet face-to-face physically at least once will allow them to establish communication norms.

### 80. What causes conflict?

- Scarce resources
- Adversity
- Faulty communication
- Perceived differences
- Biology
- Environment
- Health

### 81. What are the misconceptions regarding conflict?

- Conflict is inherently bad and unhealthy
- Conflict is always a matter of right versus wrong
- Conflicts are always a result of clashing personalities
- Only happens in a crisis situation
- Most conflict resolve themselves over time
- People usually know when they've upset someone else
- Dealing with conflict is not your responsibility

### 82. What is the conflict iceberg?

- Mistrust
- Previous experiences
- Attitude
- Assumptions
- Failed communication
- Unequal power/control

### 83. How can we deal with conflict?

- Determine the root cause
- May be lots of reasons
- Take action to manage the conflict based on what you found
- First we vent our emotions
- And then resolve the issues
- After venting out
  - o Check whether everyone is ready to move to resolving the problems
  - o Anything else?
  - o Is that all?
  - o What do you need to move forward
  - o Under what conditions would you move forward

#### 84. Why do we need to vent out our emotions first?

- to encourage
  - o Listening
  - o Paraphrasing
  - o Appreciating others' ideas
  - o Building on other's ideas
  - o Inviting critiques of own ideas
- to control
  - o Interrupting people in mid-sentences
  - o Not acknowledging the ideas that others have put on the table
  - o Criticizing other's ideas as opposed to giving them useful feedback

#### 85. Why do we need to resolve issues?

##### **Participants' Behaviour**

- to encourage
  - o Openness to alternative solutions
  - o Dealing with facts
  - o Staying calm and friendly even in the course of disagreements
- to control
  - o Pushing own ideas, ignoring others' inputs
  - o Getting defensive when own ideas are analysed
  - o Blocking alternative suggestions
  - o Using feelings to force a decision

#### 86. What are the approaches to manage conflict?

- Negotiation/Interpersonal Skills/Group management skills
- Contact and communication
- Apology / Forgiveness
- Mediation
- Formal authority
- Collaborating helps people to work together to find the best solution for everyone

#### 87. What do agile team leaders require?

- Prioritization of functionality
- estimation of requirements
- determining how much work a team can get done in an iteration
- the definition of done.

#### 88. What is the difference in Agile Team Leader vs. Traditional Team Leader?

Two principles supporting this:

§ Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.

§ The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.

So leadership to focus on teams is very different from the command and control style of traditional methodologies.

### 89. What are I statements?

- 'I-statements' contribute to effective communication and effective conflict resolution
- Your statements can alienate people from us because their experience may not be the same as ours
- When we state something about a situation as a fact rather than acknowledge it as our own experience, it implies we are powerless to have any influence over our responses to the situation.

- 'You can't talk to them.'
- 'Those kinds of people will never change.'
- 'My boss is a bully'

Can become...

- 'I find it difficult to talk to them'
- 'I seem to get the same reaction from them whenever we meet up.'
- 'I feel intimidated in the presence of my boss.'

All of these allow for a review of our own responses to the situation that exists

Start by identifying your feelings- mad, sad, frustrated, etc.

**I feel ...**

- State the reason you feel this way or what happened that led you to those feelings.

**When ...**

- Try to identify the reason you the person s actions led to those feelings for you.

**Because...**

- Let the person know what you want instead. **I would like...**

**Nothing is fixed and unchangeable.**

## G. Professional Issues – Quality and Reliability (Week 4)

### 90. What is reliability and what does IT reliability depend on?

The ability for the system to deliver the functionality that is required and expected over the period of time that it is expected to operate.

Hardware, software and data are system components that contribute to reliability. If a system is unreliable in any of these areas then it is an unreliable system.

IT Reliability depends on:

- System users
- IT professionals like designer, developer, maintenance personnel
- You as professionals will contribute towards successful IT systems. In many cases, the locus of responsibility sits **with you**.
- You will design IT systems to enable success, that are robust in the face of future changes.
- And you will consider, social, ethical and professional issues pertaining to those systems and their use

### 91. What are the causes for lack of reliability?

- Communications (or lack of them) with the stakeholders
- Failure to understand complexity of design problem
- Failure to design so that system “fails gracefully” (Often because the possibility of failure is never really considered)
- Failure to test thoroughly
- Failure to configure and install properly
- General professional incompetence

92. Unreliable systems can cause a disaster. Give some examples.

### 1. Medical

#### Life support systems

- Accuracy and reliability critical for patient health.

#### Patient record systems

- Doctors need details available for diagnosis and treatment.

### 2. Airline

#### Flight control systems

- Accurate control of aircraft, health and safety.

#### On board computers

- Health and safety of staff and passengers, flight navigation.

#### Airline booking systems

- Ability to book tickets, avoid double booking

### 3. Banking

#### Customer account systems

- Accurate record bank accounts.

#### Stocks and shares

- The stock market buys and sell shares.

#### Online banking

93. Explain safety critical systems and mission critical systems.

#### Safety critical systems

A life-critical system or safety-critical system is a system whose failure or malfunction may result in one (or more) of the following outcomes: death or serious injury to people, loss or severe damage to equipment/property. environmental harm.

e.g. Computer based systems used in avionics, chemical process and nuclear power plants. A failure in the system endangers human lives directly or through environment pollution.

#### Mission critical systems

A mission critical system is a system that is essential to the survival of a business or organization. When a mission critical system fails or is interrupted, business operations are significantly impacted.

Add examples

94. How have you ensured reliability in your FIT 5120 I.E. systems. Describe all processes that you consider you have used that would improve the quality and reliability of your application.

- Communicate well (all stakeholders) – efficiently/ exactly, properly (does iterative development help here?)
- Testing – everything – from analysis through to possible integration testing at the end of development
- Better (more effective) and thorough methods of analysis
- Better (more effective) and thorough methods of design
- Better (more effective) and thorough methods of building
- Adhering to professional standards
- Systems maintainable
- Ensure adequate training of stakeholders, if they input to the system

Add more context from your project experience for quality and reliability.

## H. Professional Issues – Ethics (Week 5, 6, 7)

Please read the 6 moodle PDF documents for the following information: (this is a potential exam section for 20-30 marks)

1. Intellectual Property
2. Why does IP exist and how is it different from threat of real property
3. Types of IP
  - a. Trade Secrets
  - b. Copyright
  - c. Patents
  - d. Trademarks
4. Challenges to IP Rights
5. Computer related liability problems
6. Basic concepts – responsibility, accountability and liability
7. Non-Disclosure Agreements (NDAs)
8. Non-compete clauses
9. IP Symbols
10. Corporate ownership
11. Copyright creep
12. Exceptions to copyright
13. Alternatives to copyright
  - a. Open Source Software (OSS)
  - b. Creative Commons (CC)
  - c. GNU Project
14. Open Data (may not come)
15. How does location tracking threaten privacy?
16. 5 moral dimensions of the information age
17. Technology trends that raise ethical issues (may not come)
  - a. Profiling
  - b. NORA
18. Challenges and Technical solutions to privacy (high chances)
  - a. Cookies
  - b. P3P standard
19. Code of Ethics
  - a. Many think a computer related career is a profession. List 6 attributes that describe a profession linking (or otherwise) whether a computer related careers fulfils those requirements.?
  - b. A.C.S. is a professional society that is concerned with computing in Australia. What is its role?
  - c. Why are codes of principles and ethics developed and promoted by professional associations?