Computers II Lesson 9

9.0 Managing people

The people working in a software organization are its greatest assets.

- It costs a lot to recruit and retain good people and it is up to software managers to ensure that the organization gets the best possible return on its investment.

This is achieved when people are:

- Respected by the organization
- Are assigned responsibilities that reflect their skills and experience

It is important that software project managers understand the technical issues that influence the work of software development.

- However, good software engineers are not necessarily good people managers.

- Software engineers often have strong technical skills but may lack the softer skills that enable them to motivate and lead a project development team.

As a project manager, you should be aware of the potential problems of people management and should try to develop people management skills.

Four critical factors in people management:

1. Consistency - People in a project team should all be treated in a comparable way. No one expects all rewards to be identical but people should not feel that their contribution to the organization is undervalued.

2. Respect - Different people have different skills and managers should respect these differences. All members of the team should be given an opportunity to make a contribution. In some cases, of course, you will find that people simply don't fit into a team and they cannot continue, but it is important not to jump to conclusions about this at an early stage in the project.

3. <mark>Inclusion</mark> - People contribute effectively when they feel that others listen to them and take account of their proposals. It is important to develop a working environment where all views, even those of the most junior staff, are considered.

4. <mark>Honesty</mark> - As a manager, <mark>you should always be honest about what is going well and what is going badly in the team.</mark> You should also be honest about your level of technical knowledge and willing to defer to staff with more knowledge when necessary. If you try to cover up ignorance or problems you will eventually be found out and will lose the respect of the group.

9.1 Motivating People

As a project manager, you need to motivate the people that work with you so that they contribute to the best of their abilities.

<mark>Motivation means organizing the work and the working environment to encourage people to work as effectively as possible.</mark>

<mark>If people are not motivated they will:</mark>

- o Not be interested in the work they are doing.
- o They will work slowly
- o Be more likely to make mistakes
- o Will not contribute to the broader goals of the team or the organization

<mark>From a management point of view, people working in software development organizations need to have the following needs satisfied:</mark>

- o Social Needs
- o Esteem Needs
- o Self-realization

1. <mark>To satisfy social needs, you need to give people time to meet their co-workers and provide places for them to meet.</mark>
    - o You need to arrange some face-to-face meetings early in the project so that people can directly interact with other members of the team so people become part of a social group and accept the goals and priorities of that group.

2. <mark>To satisfy esteem needs, you need to show people that they are valued by the organization.</mark>
    o Public recognition of achievements is a simple yet effective way of doing this.
    o People must also feel that they are paid at a level that reflects their skills and experience. \

3. <mark>To satisfy self-realization needs, you need to give people responsibility for their work.</mark>
    o Assign them demanding (but not impossible) tasks
    o Provide a training program where people can develop their skills
    o Training is an important motivating influence, as people like to gain new knowledge and learn new skills.

9.1 Group Organization

<mark>The way that a group is organized affects:</mark>

    o The decisions that are made by that group
    o The ways that information is exchanged
    o The interactions between the development group and external project stakeholders

<mark>Important organizational decisions for project managers include:</mark>

1. Should the project manager be the technical leader of the group?

2. Who will be involved in making critical technical decisions, and how will they be made?

3. How will interactions with external stakeholders and senior company management be handled?

4. How can groups integrate people who are not collocated?

5. How can knowledge be shared across the group?

- Group size - As a group gets bigger, it gets harder for members to communicate effectively.
    - With a group of eight members, there are 56 possible communication pathways.

- Group structure - People in informally structured groups communicate more effectively than people in groups with a formal, hierarchical structure.

- Group composition - People with the same personality types may clash and, as a result, communications can be inhibited.
    - Communication is also usually better in mixed-sex groups than in single-sex groups.

- The physical work environment - The organization of the workplace is a major factor in facilitating or inhibiting communications.

- The available communication channels - There are many different forms of communication—face-to-face, e-mail messages, formal documents, telephone, and Web technologies such as social networking and wikis.
    - As project teams become increasingly distributed, with team members working remotely, you need to make use of a range of technologies to facilitate communications.

When managing people in a group you must stress the importance of:

- The group can establish its own quality standards.

- Individuals learn from and support each other.

People in the group learn from each other. Ignorance is minimized as mutual learning is encouraged.

- <mark>Knowledge is shared.</mark>

  This helps continuity to be maintained if a group member leaves because others in the group can take over critical tasks and ensure that the project is not disrupted.

- <mark>Refactoring and continual improvement is encouraged.</mark>

  Group members work collectively to deliver high-quality results and fix problems, regardless of the individuals who originally created the design or program.

<mark>How Personality affects the group more than you think:</mark>

1. <mark>Task-oriented people</mark> - are motivated by the work they do. In software engineering, these are people who are motivated by the intellectual challenge of software development.

2. <mark>Self-oriented people</mark> - are principally motivated by personal success and recognition.
   They are interested in software development as a means of achieving their own goals. This does not mean that these people are selfish and think only of their own concerns. Rather, they often have longer-term goals, such as career progression, that motivate them and they wish to be successful in their work to help realize these goals.

3. <mark>Interaction-oriented people</mark> - are motivated by the presence and actions of coworkers. As software development becomes more user-centered, interaction-oriented individuals are becoming more involved in software engineering.