

# INFT 3800

# Professional Practice in IT

Sem 1, 2021

LECTURE NOTE – WEEK 6

Dr. Teuku Geumpana  
University of Newcastle

# Leader responsibilities & Organizational Communication

- Leadership theories
- Effective Leadership
- Authentic Leadership Practice
- System Thinking Practice
- Leadership in professional practice
- Leadership & design thinking
- Leadership in community of practice (CoP)
- Communication skills for IT professionals
- Research investigation and Referencing

# Leadership theories

- Leadership can be defined as collective ethical actions which influence and direct the performance of others towards the achievement of common goals.
- Implies thinking of future, influencing, persuading, changing minds, doing what those above and below may consider unacceptable, taking calculated risk, having the confidence and ability to speak out etc.

# Leadership theories

- Leadership is a skill comprised of many traits and qualities.
- Some of the qualities include vision, mission, values, commitment, motivation, and consensus building.
- An important purpose of leadership is to provide vision, direction, and motivation for a team of individuals to accomplish a mission.

# Leadership theories

- Leadership theories: how and why certain people become leaders.
  - The earliest theories focused on character and personality of successful leaders.
  - The recent theories focus on what leaders really do rather than distinctive qualities or traits.
- Trait and character: leaders are born; charisma, initiative, honesty & integrity, flexibility, creativity etc.
- Three major leadership theories; great man, trait & charismatic.

# Leadership theories

- Leadership theories that focus on character and personality

Theory	Summary
Great Man	Leadership is directly dependent on who an individual is rather than what he knows or what he can do. Eg. Alexandre the Great, Abraham Lincoln, Martin Luther King Jr.
Trait	People are born with particular traits that make them better suited to become leaders. Its argument is how two individuals with similar traits could end up in completely divergent leadership position.
Charismatic	One`s ability to influence hearts and souls of others, perform miracles or predict the future.

# Leadership theories

- Modern leadership theories are centred on the levels of skills, as well as the situational adaptability of the individual leading (Mabugat, 2018).
- Behaviours can be learned, the good tasks to meet certain goals
- To achieve particular performance standard with focus on meeting the needs of everyone involved, rather than traits only.
- Four modern leadership theories; contingency, situational, transactional and transformational.

# Leadership theories

- Leadership theories that focus on what leaders learn, do and achieve.

Theory	Summary
Contingency	There is no single style of leadership that is universally effective.
Situational	Leaders should not utilize a single style of leadership but should rather lead according social and environmental factors such as the capabilities of those who follow.
Transactional	Leaders exchange rewards for employees` compliance also known as management theories.
Transformational	To create a clear structure of what is expected, and also the consequences (rewards vs punishments) fr meeting or not meeting these expectations.



# Leadership theories

- Several theories help explain how workers are motivated and provide ideas for how to increase motivation in the workplace.
- Help improve management of organizations by increasing employee retention rates
- Improve workers productivity.

# Effective Leadership

“An effective boss is someone who doesn’t have to boss around to be effective”

(Jag Randhawa)

Effective leaders pay attention to three balanced areas of need:

1. Task
2. Need
3. Individual

Leaders must recognize all three equally.

# Effective Leadership

- Three overlapping area of leadership

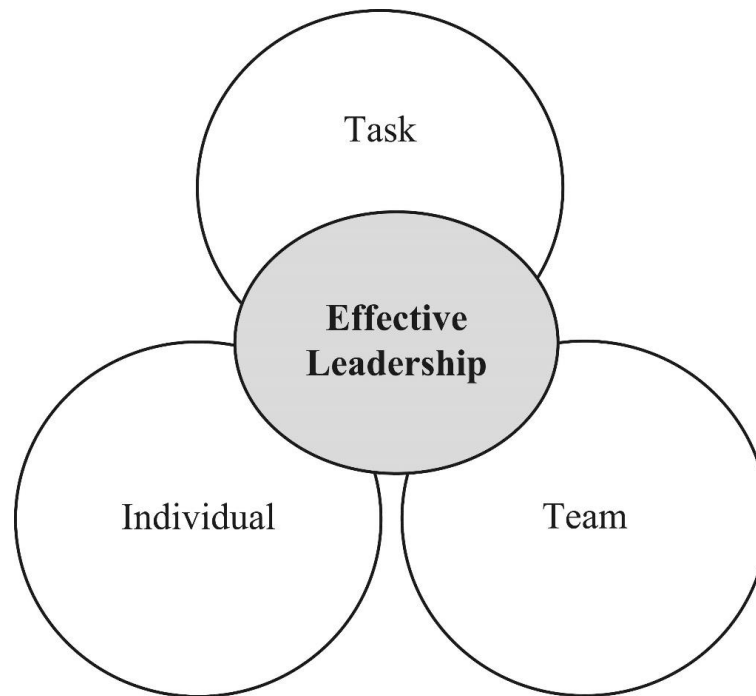


Figure 1. Area of leadership

# Effective Leadership

- Task includes:
  - Goal-setting
  - Achieving
  - Methods
  - Process
- Team includes:
  - Building and maintaining
  - Effective interaction and communication
  - Clarifying roles
  - Team morale
- Individual includes:
  - Attention to development
  - Behaviour
  - Feelings

# Effective Leadership

- Effective leaders are able to:
  - Create an environment that will encourage all the members of their team to develop their skills and imagination so that they can contribute to the common goal and vision of the organization.
  - Know how to listen, to know the needs of the individuals in the team.
  - Place team members in the roles that are best for their skills.
  - Be at the forefront to lead and guide teams throughout the whole process
  - Take the risks that others are not willing to take.
  - Channel the energy and professional potential of co-workers to achieve objectives.

# Authentic Leadership Practice

- Of all principles that support sustainable leadership, Authenticity is one of the most important.
- Authentic means genuine and original
- It is defined as a process that draws from both positive psychological capacities and a highly developed organizational context promoting positive behaviours and fostering positive self-development.
- Real leaders spend more time listening than talking.

# Authentic Leadership Practice

- Four task of authentic leadership:
  1. **Confidence:** linked to work performance; satisfaction, goal setting, feedback etc.
  2. **Hope:** The combination of agency (the will) and the pathways (the ways); goal-directing, planning.
  3. **Optimism:** attribute the success to internal causes.
  4. **Resilience:** Ability to withstand or recover quickly from difficult conditions.

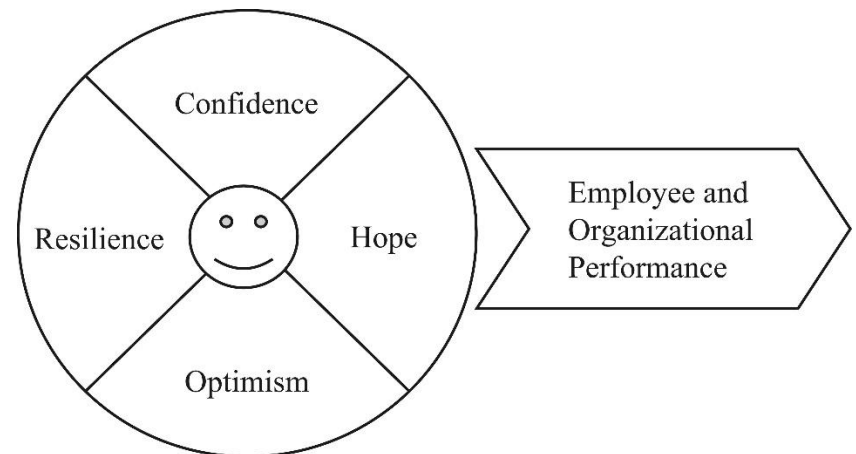


Figure 2. Authentic leadership

# System Thinking (ST) Practice

“System thinking provides the more holistic way to view the problems”

(Pearl Zhu, 2016)

## Why ST?

- It is a thinking approach that may help leaders identify and remedy complex problem by understanding not only the full extend of the problem but the reasons of the problem.



# System Thinking (ST) Practice

## How to practice ST?

- Three characteristics of ST include:
  - A consistent and strong commitment to learning
  - A willingness to challenge one`s own mental model; accepting one`s own role in problems and being open to different ways of seeing and doing
  - Always including multiple perspectives when looking at a phenomenon
- Leaders may practice ST by following the path towards ST

# System Thinking (ST) Practice

- Path towards ST

Understand the levels and causes of organizational complexity

Manage anticipative and participative learning

Manage dynamic complexity

Understand, balance, and reinforce feedback

Understand delays

Figure 3. Path towards ST

# Leadership in professional practice

- To prepare for leading opportunities, professionals should understand the principles of leadership and be able to practice them as their careers advances.

“Engineers need to be, like anybody else in business, proactive and somewhat outgoing. And the need to reach outside technical areas. Mainly, engineers need to be good communicators, because there is no point in achieving an engineering breakthrough; having new idea; if you cannot get your colleagues excited about it.”

(Robert Lutz, Former president and vice chair of Chrysler Corp)

# Leadership in professional practice

## Leadership for technical managers

- Computing specialist are no longer only involved with the technical project details but must also understand the broader picture, as they are often acting as team leaders.
- Effective leadership consist of capabilities and values that transform technical people from individual contributors into those who can lead teams to manage a complex multi disciplinary product.
- Effective managers are capable of employing a blend of supervisory and technical skills in the direction and wrap-up of complex projects.

# Leadership in professional practice

## Management vs Leadership

- It is useful to distinguish between management and leadership behaviours.
- The manager`s job is to plan, organize and coordinate.
- The leader`s job is to inspire and motivate

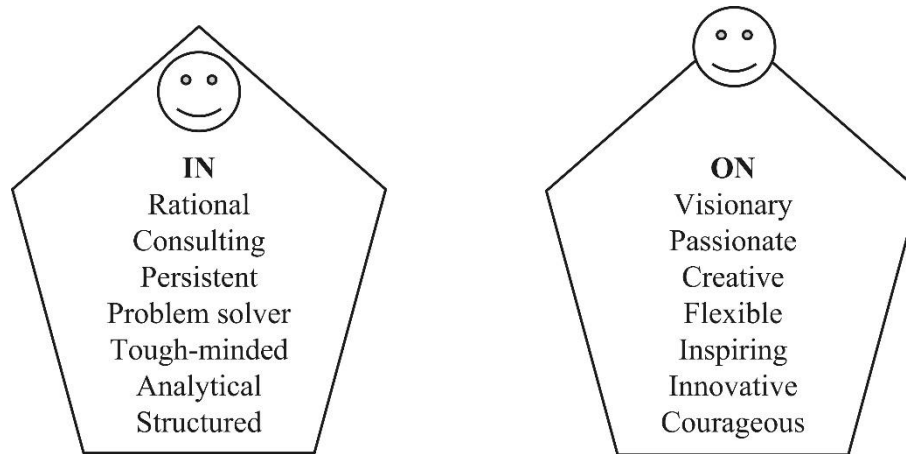


Figure 4. Elements of both management and leadership

# Leadership & design thinking

- Design Thinking is about building a questioning mindset to grow conversation and challenge assumptions between designers and leaders.
- As part of design thinking process, questions can help one understand a situation and get beneficial insights.
- Foster creativity and innovation within an organization and can help teams unite and connect.
- Communications with end users are very important, since observations of the responses of individuals yield valuable signs for new products and services.
- Eg. Tesla, Apple, Microsoft, Amazon and Google innovate continuously and connect with customer needs and emotions to create exciting products and services.

# Innovation leadership practice

- Innovative leadership is the ability to think differently and motivate others to create new and better ideas to move towards positive result.
- Two approaches:
  1. To bring new thinking and different actions to how to lead, manage and go about work.
  2. Not just hiring a few creative outliers, but learn how to create a climate where others apply innovative thinking to solve problems.

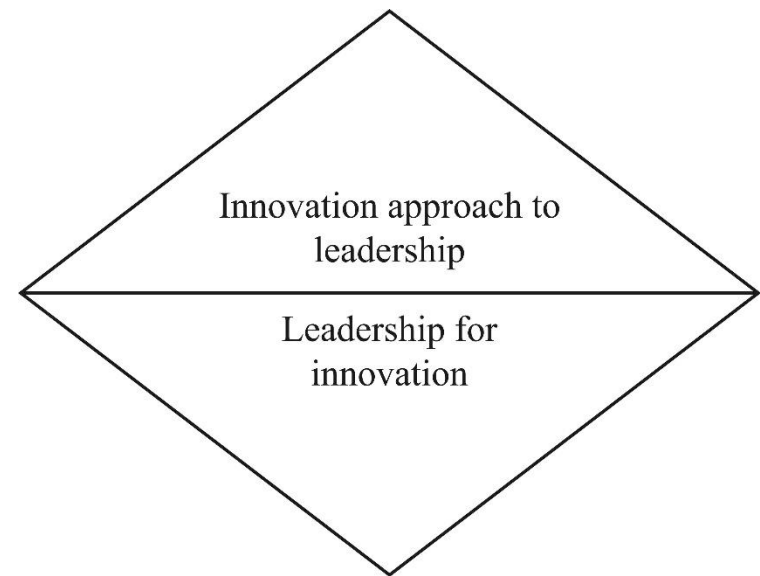


Figure 5. Approach to innovation leadership

# Leadership in community of practice (CoP)

- CoP is focused on collective responsibility for learning and translating this to performance.
- Practice is considered to be a set of frameworks, ideas, tools, and information.
- A meaningful performance governed by social rules and norms.

“Coming together is a beginning, keeping together is progress; working together is success”

(Edward Everett Hale)



# Leadership in community of practice (CoP)

- To build a community Wenger et. Al (2002) presented a structure that can be represented by three concentric triangles.

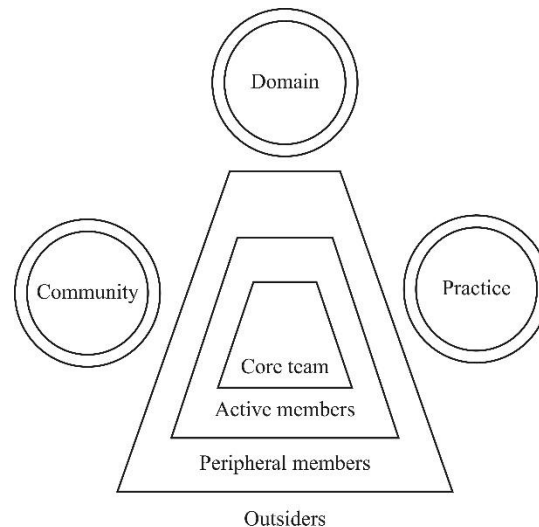


Figure 3. Structure of CoP

# Leadership in community of practice (CoP)

- CoP must have three traits;
  - Domain (shared area of interest)
  - Community (group of individuals who care about the domain to participate in regular interaction)
  - Practice (shared knowledge, experience and techniques)
- In CoP, individuals come together based on a common interest or passion in a disseminated leadership model.

# Communication skills for IT professionals

- An article published by Kelly Service; a US based consulting company on workforce solutions, mentioned the communication skill that an IT professional must learn:
  - An IT professional will be in contact with business people, it is important to take a “business first” approach to what you want to communicate.
  - How to use terminology and examples that are relevant to business people

# Communication skills for IT professionals

- Do`s:
  - ask whether the person has any knowledge of the subject you want to discuss.
  - use business examples to explain technology.
  - explain what the business benefits are.
- Don't`s:
  - assume a business person knows any IT terminology.
  - focus on complexity.
  - forget to learn business terminology.

# Research investigation and Referencing

IT professionals also worked in the area of research.

Types of studies used to do research:

- **Reporting:** provides account or summation of data
- **Descriptive:** answers who, what, when, where and sometimes how questions
- **Explanatory:** theory based answering why and how questions
- **Predictive:** theory based attempting to predict future events

# Research investigation and Referencing

Different styles of research:

- **Applied Research:** more directed to provide the base for immediate managerial decisions
- **Pure Research / Basic Research:** more directed to solve theoretical problems and paradoxes

Is research always problem based? **YES!**

# Research investigation and Referencing

We have a Problem => How can we solve it?

- Research Questions
  - What things can be done or can be considered ?
- Investigative Questions
  - What do we need to know to choose the best path?
- Measurement Questions
  - What should be asked/observed to get information for a decision?
- => Decision

# Research investigation and Referencing

## Research Process:

- Formulate the research problem
- Choose a research design
  - What kind of study do you want to conduct?
- Determine the sampling design
- Determine whether Pilot testing is required
- Do the Data collection
- Analysis and Interpretation
- Reporting



# Research investigation and Referencing

## Analysis and Reporting

- Data analysis
  - Reporting the results (generic broad areas)
  - Executive summary
  - Overview of the research
  - Implementation strategies for the recommendations
  - Technical appendix

# Research investigation and Referencing

## Purpose of a Research Proposal

- To present the question to be researched and its importance
- To discuss the research efforts of others who have worked on related questions
- To suggest the data necessary for solving the question

# Research investigation and Referencing

## Research Ethics

- The goal is to ensure that no one is harmed or suffers adverse consequences from research activities
- Issues Related to Protecting Participants:
  - Informed consent
  - Debriefing
  - Right to Privacy/Confidentiality
  - Data Collection in Cyberspace

# Research investigation and Referencing

## Ensuring confidentiality

- obtaining signed non-disclosure documents
- restricting access to participant identification
- revealing participant information only with written consent
- restricting access to data instruments where the participant is identified
- non-disclosure of data sub-sets.

# Research investigation and Referencing

## Ethical Issues related to the Client

- Sponsor non-disclosure
- Purpose non-disclosure
- Findings non-disclosure
- Right to quality research

## Ethics Related to Sponsor

- Sometimes researchers will be asked by sponsors to participate in unethical behaviour.

# Research investigation and Referencing

## Ethical Issues related to Researchers and Team Members

- Safety
- Ethical behaviour of assistants
- Protection of anonymity

# Research investigation and Referencing

## Academic Reports

- Prefatory Items

- Title page
- (Executive summary)
- Table of contents

- Introduction

- Problem statement
- Research objectives
- Background

- Theory section

- Literature review
- Theory development

- Methodology

- Sampling design
- Research design
- Data collection
- Data analysis
- Limitations

- Findings

- Analysis
- Results

- Conclusions

- Summary conclusions
- Recommendations

- Appendices

- Bibliography

# Research investigation and Referencing

## Research Referencing

- Referencing, also called citing, is a formal way to acknowledge the sources you have used for your research.
- Referencing is an essential part of university writing and academic integrity. Using other's work, data, or ideas without due referencing will put you at risk of a serious academic misconduct---plagiarism.



# Research investigation and Referencing

- Some referencing styles in practice:
  - Common style for engineering: Harvard, Chicago, UoA Engineering Numbered Style.
  - Business and Economics: APA
  - Creative arts and industries: APA, Chicago, Harvard, MLA
- More about research for IT professionals will be discussed in INFT6800 – Professional practice in IT (Postgraduate degree). Textbook used; *Business Research Methods* (4th edition) by McGraw-Hill Higher Education.
- More about referencing can be found at <https://www.newcastle.edu.au/library/learn/referencing#ref>

# Summaries

- What are the three leadership theories that focus on character and personality?
- What are the leadership theories that focus on what leaders learn, do and achieve?
- What is the different between management and leadership?
- What is System Thinking?
- How to practice System Thinking?
- How to communicate as IT professionals?
- What are research processes and what are the purposes of research proposal?
- What is research ethics?
- List all types of researches!

# Next Week

- Happy Semester 1 Recess!
- When you return in Week 7:
  - Quiz 3
  - Discussion on Assessment IV

# Next Week

- Creativity and Innovation
- Invention vs innovation
- Incremental vs radical
- Disruptive vs sustaining
- Paradigm of innovation
  - Process innovation
  - Product/service innovation
  - Social innovation
- Innovation practice:
  - Closed innovation vs open innovation
  - Technological vs social innovation

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