System Analysis Design

Chapter 3

Information Gathering

Daffodil International University

Learning Goals

❑ **Strategy to gather information for computerization.**

❑ **Various sources of information.**

❑ **Methods of searching for information.**

❑ **Interviewing techniques to gather information from line managers to top management.**

❑ **Methods of consensus for formulating requirements.**

Information Gathering Strategies

❑ **Identify Information Sources.**

❑ **Evolve a method of obtaining information from the identified sources.**

❑ **Use Information flow model of organization.**

Information Sources

❑ **Users of System.**

❑ **Forms and Documents used in the organization.**

❑ **Procedure manuals, rule books etc.**

❑ **Reports used by the organization**

❑ **Existing computer programs(If Any).**

Continue…

- ❏ **Interviews are very important.**

- ❏ **Use organization chart.**

- ❏ **Understand the importance of the people who operate the system-Clerks,Line managers.**

- ❏ **Gather information from Middle level persons who have lot of experience**

- ❏ **Gather both qualitative and quantitative information & Observe how the organization works.**

Information Gathering Tools

- ❑ **Review of Literature, Procedures and Forms.**

- ❑ **On Site Observation.**

- ❑ **Interviews and Questionnaires.**

Review of Literature, Procedures and Forms

❑ **Who uses the forms?**

❑ **How important are they to the user?**

❑ **Do the forms include all the necessary information?**

❑ **What items should be added or deleted?**

❑ **How many departments receive the existing forms? Why?**

❑ **How readable and easy to follow in the form?**

❑ **How does the information in the form help other users make better decisions?**

On Site Observation

❑ **What kind of system is it? What does it do?**

❑ **Who runs the system? Who are the important people in it?**

❑ **What is the history of the system? How did it get to its present stage of development?**

❑ **What kind of system is it in comparison with other systems in the organization?**

❑ **Is it a fast paced or slow system to external crises?**

Problems in On Site Observation

❑ **Intruding into the user's area often results in adverse reactions by the staff, therefore adequate preparation and training are important.**

❑ **Attitudes and motivations cannot be readily observed.**

❑ **Observations are subject to error due to the observer's misinterpretation.**

❑ **Unproductive, long hours are often spent in an attempt to observe specific one time activities or events.**

<u>Interviews</u>

❑ It is a face to face interpersonal role situation, in which a person called the interviewer, asks questions to another person, designed to gather information about a problem.

❑ **Advantages of Interview:**
   ❑ It is a superior technique used for exploring areas.
   ❑ It offers better opportunity to evaluate the validity of the information gathered.
   ❑ The interviewer can observe not only what they say and how they say.
   ❑ It is an effective technique for eliciting information about complex subjects.
   ❑ Many people enjoy being interviewed, regardless of the subject.

Interviews

❑ **Drawbacks of Interview:**
  ❑ long preparation time

Planning an Interview

❑ Make a list of people to be interviewed and in what order

❑ Plan and note down a list of questions to be asked

❑ Plan several interviews with same person- mainly to clarify doubts

❑ Interview groups as appropriate

Interviewing Technique

❑ **Make appointment.**

❑ **Assign time.**

❑ **Read background material.**

❑ **State purpose of interview.**

❑ **Be punctual and pay attention to what user says.**

Continue…

❑ Obtain both quantitative and qualitative Information

❑ Discriminate between essential and appropriate requirements

❑ State what you understand and get it confirmed

❑ Do not extend interview

❑ Summarize information gathered and get it checked by the interviewee

Use of Questionnaires

❑ Questionnaires useful for statistical data collection

❑ Useful when large number of persons have to respond

❑ Make questionnaires short

❑ Design questionnaires by enumerating objectives and data needed to meet the objectives

❑ Several follow-ups/personal interviews may be required to get questionnaires back from respondents

Advantages of Questionnaires

- ❑ **It is economical and requires less skills to administer than the interview.**

- ❑ **A questionnaire can be administered to large number of individuals simultaneously**

- ❑ **Questionnaires ensure uniformity of questions**

- ❑ **In a questionnaire respondents give opinion without fear**

- ❑ **Respondents have time to think the questions over and do calculations to provide more accurate data**

Types of Interviews and Questionnaires

□ **The Unstructured Alternative**

□ **The Structured Alternative**

The Unstructured Alternative

- It is a relatively nondirective information gathering technique.

- It allows respondents to answer questions freely in their own words.

- The responses are spontaneous rather than forced.

- System analyst should encourage the respondent to talk freely

The Structured Alternative

❑ **The questions are presented with exactly the same wording and in the same order**

❑ **Questions may be either closed or open ended.**

❑ **An open ended question requires no response direction or specific response**

Closed Questions

❑ **Closed questions are those in which the responses are presented as a set of alternatives. There are five major varieties:**

- **Fill in the blanks:**
- **Dichotomous (yes/no type) questions:**
- **Ranking scales questions**
- **Multiple choice questions**
- **Rating scales questions**

Information Gathering other Methods

- ❑ **Existing system(If any)**
- ❑ **Systems in similar organization**
- ❑ **Observe workflow in workplace**
- ❑ **Case repository in own organization**