



Fall 2020 Mid-Term Assignment

Information System & Data Processing

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BSSE (6th Semester)

Question (1):

(a): Why we define different needs before taking any task, elaborate your answer.

Ans: Everything we do in our life needs decision. Decision is very important in every part of life. Everything we do may have different alternative paths. And whenever we are faced with such situation we have to choose one in all possible paths. Because any task can be done by different methods but doing it on all possible methods at the same time is a mission impossible. So therefore, we define different needs for a task to select the best option for us.

Example: If we have to go to Karachi, we are having different alternatives to reach there like:

We can use the following transport options:

- We can go there by local transport like (Bus, Coach)
- We can use personal Car
- We can use an Airline
- We can use Train

Now we are having different needs we will make a decision according to that needs. Needs are as follow we have to keep them in mind before taking decision.

- We have to reach there in minimum time as we can. So to keep this need in mind we can't use Train.
- We have no available booking for that day at any airline. So we can't use aero plain.
- We are having lot of stuff to be with us which can't get fit in personal Car. So we can't travel in car.

We are having the above needs which we have to decide on the basis of them so we can only choose bus because our stuff can't be fix in coach.

There fore we define different needs for a task.

(b): What information is required if a person is thinking to start a specific business, also discuss different sources of information.

Ans: The information we need to start a business are as follow:

1. The first thing we have to keep in mind is that what kind of business is we going to start in which area. Like will our business suites the area where we are going to start it.
2. We have to keep in mind that how much is our budget for starting our business.
3. Who are our compotators in that area and which services are they providing to there costumers.
4. One have to keep in mind that which kind of ups and downs can be there in the initial steps.
5. One have to make a decent looking office to attract the costumers and give them benefits.
6. One have to employ people who are trustworthy.

Sources of Information:

Sources of information are categorized as Primary, Secondary, and tertiary information.

Primary Source:

1. Primary sources are original materials on which other research is based
2. They are usually the first formal appearance of results in the print or electronic literature (for example, the first publication of the results of scientific investigations is a primary source.)
3. They present information in its original form, neither interpreted nor condensed nor evaluated by other writers.
4. They are from the time period (for example, something written close to when the event actually occurred.
5. Primary sources present original thinking and report on discoveries or share new information.

Examples of primary source information are:

1. Scientific journal articles reporting experimental research results
2. Proceedings of Meetings, Conferences.
3. Technical reports
4. Dissertations or theses (may also be secondary)
5. Patents
6. Sets of data, such as census statistics
7. Works of literature (such as poems and fiction)
8. Diaries
9. Autobiographies
10. Interviews, surveys and fieldwork
11. Letters and correspondence

12. Speeches
13. Newspaper articles (may also be secondary)
14. Government documents
15. Photographs and works of art
16. Original documents (such as birth certificate or trial transcripts)
17. Internet communications on email, and newsgroups

Secondary Source:

Secondary sources are less easily defined than primary sources. What some define as a secondary source, others define as a tertiary source. Nor is it always easy to distinguish primary from secondary sources.

For example,

- A newspaper article is a primary source if it reports events, but a secondary source if it analyses and comments on those events.
- In science, secondary sources are those which simplify the process of finding and evaluating the primary literature. They tend to be works which repackage, reorganize, reinterpret, summarize, index or otherwise "add value" to the new information reported in the primary literature.

Some Definitions of Secondary Sources:

1. Describe, interpret, analyze and evaluate the primary sources
2. Comment on and discuss the evidence provided by primary sources
3. Are works, which are written, after the fact with the benefit of hindsight?

Some examples of secondary sources:

1. Bibliographies (may also be tertiary)
2. Biographical works
3. Commentaries
4. Dictionaries and encyclopedias (may also be tertiary)
5. Dissertations or theses (more usually primary)
6. Handbooks and data compilations (may also be tertiary)
7. History
8. Indexing and abstracting tools used to locate primary & secondary sources (may also be tertiary)
9. Journal articles, particularly in disciplines other than science (may also be primary)
10. Newspaper and popular magazine articles (may also be primary)
11. Review articles and literature reviews
12. Textbooks (may also be tertiary)

Tertiary Sources

This is the most problematic category of all.

Some Definitions of Tertiary Sources:

1. Works which list primary and secondary resources in a specific subject area
2. Materials in which the information from secondary sources has been "digested" -Reformatted and condensed, to put it into a convenient, easy-to-read form.
3. Sources which are once removed in time from secondary sources

Some examples of tertiary sources:

1. Almanacs and fact books
2. Bibliographies (may also be secondary)
3. Chronologies
4. Dictionaries and encyclopedias (may also be secondary)
5. Directories
6. Guidebooks, manuals etc
7. Handbooks and data compilations (may also be secondary)
8. Indexing and abstracting tools used to locate primary & secondary sources (may also be secondary)
9. Textbooks (may also be secondary).

Q.2: What is organization? Explain different types of organization in detail.

Ans: Basically, an organization is group of people organized to accomplish an overall goal. Organizations can range in size from two people to hundreds of thousands -- some people might argue that organizations are even larger. Organizations have an overall goal (or mission) which is usually subdivided into various other goals (often called strategic goals) that, in total, will achieve the overall goal of the organization.

Types of Organization

Functional Organization:

A functional structure divides the organization into departments based on their function. Each is headed by a functional manager and employees are grouped as per their role. Functional managers have experience in the roles they supervise. This ensures that employees are using their skills effectively. It helps organizations in achieving their business objectives.

Employees are classified according to their function in this structure. The organizational chart for a functional structure shows the role hierarchy: for example, president, vice president, finance department, sales department, customer service, administration, etc.

Matrix Organization:

A matrix organisation is a structure in which there is more than one line of reporting managers. Effectively, it means that the employees of the organisation have more than one boss!

The matrix organisation structure is complex but helps in achieving the ultimate goal i.e. reaching higher productivity. It has various benefits. This type of structure is used in organisations which have diverse product lines and services. It breaks the monotony and gives more flexibility to the organisation. Employees work with colleagues of different departments who have their expertise in different functions. When different people from diverse departments work together, it helps solve problems in a more efficient way. It does lead to overall development of employees as each one is exposed to different functions apart from their core job. Here employees are assigned a job or a project outside their own department for a relatively temporary period. These teams are made up of people with diverse expertise who have come together and formed a team to attain a specific goal.

Strong Matrix:

In strong matrix organizations, the project manager has the authority and a full-time role. A full-time project management team will report them and they control the budget. This structure has the characteristics of a projectized organization.

Balanced Matrix:

In balanced matrix organizations, project and functional managers share the authority. The project manager has a full-time role, while project management staff will be part-time. Here, both managers control the budget.

Weak Matrix:

In weak matrix organizations, the project managers have limited authority. Their role is part-time and no administrative staff report to them. Their role is like

a coordinator or an expeditor. Here, the functional manager controls the project budget.

Projected Organization:

From the word itself: project zed—an organizational structure that focuses on projects, its process, as well as the tasks within it. Different types of management approaches have been developed for the past years in the business or tech industry. In addition, one of them is project organization. So what is project zed organization structure? How is it different from the usual functional organization structure?

In this type of setting, organizations complete their tasks and transform them into programs or portfolios, and execute them via projects. Sounds like your usual project governance, but the project manager's task is almost very different from the functional organization structure.

Composite Organization:

A composite organization blends the functional, matrix, and project zed types of organizations. A composite is just two or more models that are adapted for a special project, for simplicity, or to keep power in check. Most modern businesses are of the composite type.

Two examples to help describe composite organizations are below:

- An organization may deliver one project in a Balanced Matrix way, while another is being performed in a Functional way. They also have yet another project that is being done as Project zed.
- A Functional organization needs a small building, and the organization has the capability to construct the building itself. This would become a Composite organization because the organization creates a separate project team to complete this task.

Q.3: What are the difference between Data and Information? Give detail with proper examples and explanations.

Ans: **Data:**

Data are simply facts or figures — *bits* of information, but not information itself. When data are processed, interpreted, organized, structured or presented so

as to make them meaningful or useful, they are called **information**. Information provides context for data.

For example, a list of dates — data — is meaningless without the information that makes the dates relevant (dates of holiday).

"Data" and "information" are intricately tied together, whether one is recognizing them as two separate words or using them interchangeably, as is common today. Whether they are used interchangeably depends somewhat on the usage of "data" — its context and grammar.

Examples of Data and Information

- The history of temperature readings all over the world for the past 100 years is data. If this data is organized and analyzed to find that global temperature is rising, then that is information.
- The number of visitors to a website by country is an example of data. Finding out that traffic from the U.S. is increasing while that from Australia is decreasing is meaningful information.
- Often data is required to back up a claim or conclusion (information) derived or deduced from it. For example, before a drug is approved by the FDA, the manufacturer must conduct clinical trials and present a lot of data to demonstrate that the drug is safe.