

I. INFORMATION AND TECHNOLOGY

INFORMATION:

- Knowledge derived from study, experience, or instruction.
- Knowledge of specific events or situations that has been gathered or received by communication; intelligence or news.
- A collection of facts or data: *statistical information*.
- The act of informing or the condition of being informed; communication of knowledge:
- Computer Science Processed, stored, or transmitted data.
- A numerical measure of the uncertainty of an experimental outcome. (math.)

TECHNOLOGY:

- The application of science, especially to industrial or commercial objectives.
- The scientific method and material used to achieve a commercial or industrial objective.
- Electronic or digital products and systems considered as a group.

ETYMOLOGY:

Greek *tekhнологia* , *systematic treatment of an art or craft*

INFORMATION TECHNOLOGY:

Information technology (IT), as defined by the Information Technology Association of America (ITAA), is "the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware." (Wikipedia)

IT deals with the use of electronic computers and computer software to convert, store, protect, process, transmit, and securely retrieve information. (Wikipedia)

Information Technology (IT) also known as Information and Communication(s) Technology (ICT) and Infocomm (in Asia) is concerned with the use of technology in managing and processing information, especially in large organizations.

II. ROLE OF INFORMATION TECHNOLOGY IN BUSINESS

Information technology is all about storing, manipulating, distributing and processing information. Over the past few years, IT has replaced the conventional modes of businesses with innovative technological tools. In addition to the increased output and efficiency, IT has introduced new concepts such as e-commerce.

Today, in many industries, IT enables some businesses to differentiate themselves from their competitors. Those companies that leverage IT for competitive advantage often differ from their competitors in two ways with respect to their IT organizations: they view IT as a strategic business enabler instead of as a cost center, and they work to maximize the efficiency of their IT operations so that they can focus their resources on providing value to the business and respond to today's environment of rapidly changing business conditions.

A. Productivity

- Technological applications, such as relational database technology, computer-aided designing, word processing, spreadsheets and other software programming, increase productivity of businesses.

B. Significance

- Business corporations maximize their commercial advantage by making the right use of IT tools. For instance, Michael Dell, founder of Dell Inc., introduced the online selling concept for personal computers. Today, customers around the globe order Dell products from the comfort of their homes via the Internet.

C. Monitoring

- IT is used for monitoring areas of the company that are not utilizing resources efficiently. For instance, Dell made use of real-time inventory and supply monitoring to produce only that number of computer systems that were demanded by Dell customers, reducing the cost of overproduction.

D. Business Performance Management

- According to bestpricecomputers.co.uk, BPM is defined as a management culture, which helps businesses to optimize their performance by analyzing processes using applications like OLAP (Online Analytical Processing), and EIS (Executive Information Systems).

E. E-commerce

- E-commerce is buying and selling services and goods over the Internet. Online operations reduce the time and personnel required for business processes. It also reduces costs in areas like labor, document preparation, telephoning, and mail preparation.

III. Value of Information and Information Services

1. Good Information Reduces Costs

Reducing costs is a primary concern for transportation agencies.

2. Information Saves Time

Quality information saves time in numerous ways--by avoiding duplicative efforts, stopping unproductive activities, modifying design approaches, or correcting bad information.

3. Information Improves Decision Making

Within the highly decentralized transportation community, knowing what other organizations have done or how they have confronted similar challenges is invaluable when making technical or policy decisions.

4. Information Yields Customer Satisfaction

Although many organizations cannot quantify the value of information or information services, the perceived value among users is high. Users discuss value in terms of whether, and to what extent, the information provided meets their expectations and needs.

IV. Significance of Information Technology in Business

Information technology has a significant role in almost all areas of business. In fact, nowadays, almost every kind of business has IT as one of its main components-- in office applications, account software and other applications used in specific sectors.

A. Communication

- Most businesses use emailing as one of their primary modes of communication. IT also provides means of instant messaging through Internet.

B. Organization

- The Internet has enabled business executives to hold conferences in real-time environment. Different IT tools are also used for sharing documents and managing spreadsheets.

C. Research

- A number of organizations and companies use information technology to facilitate research and surveys.

D. Software Technology

- For most of the business companies, applications like MS Word, Power Point, Excel and Project and graphic applications such as Photoshop play a key role in executing different tasks. Additionally, software programs such as ERP (enterprise resource planning) allow firms to integrate different business operations such as resource management, supply forecasting and so on.

E. Databases

- Many companies collect and store data, which can be accessed and processed anytime. Some of the popular databases include MS SQL Server and Oracle Database.

F. Online Training

- Training remained a key concern of many businesses. With the help of IT, businesses have managed to reduce their training costs significantly with the introduction of online training systems.

V. IMPACT OF TECHNOLOGY IN OUR DAILY LIVES

1. Technology is a major cultural determinant, no less important in changing human lives than philosophy, religion, social organization or political systems.
2. Technology is an important change in civilization.
3. The Advent of technology has a great impact in human civilization, it automate almost all human needs. The impact of technology in our lives can be categorized in good and bad.
4. Good Impact of Technology
 - a. it expedite human work with less effort in time.
 - b. it saves life in its many ways.
 - c. It makes distance reachable in shorter time.
 - d. It provides every information.
 - e. It works beyond human physical capabilities.
 - f. It plays as an important need in order to survive life in more efficient way.
 - g. It improves less-developed countries.
5. Bad Impact of Technology
 - a. it promotes sedentary type of lifestyle which is unbeneficial to physical health.
 - b. it influence people to rely too much on its capability.
 - c. It contributes irreversible ecological damage and widely fluctuating employment patterns.
 - d. It sometimes create problems to human lives and nature.
 - e. It can cause damage and even death.

VI – A. Some of the advantages of information technology include:

Globalization - IT has not only brought the world closer together, but it has allowed the world's economy to become a single interdependent system. This means that we can not only share information quickly and efficiently, but we can also bring down barriers of linguistic and geographic boundaries. The world has developed into a global village due to the help of information technology allowing countries like Chile and Japan who are not only separated by distance but also by language to shares ideas and information with each other.

Communication - With the help of information technology, communication has also become cheaper, quicker, and more efficient. We can now communicate with anyone around the globe by simply text messaging them or sending them an email for an almost instantaneous response. The internet has also opened up face to face direct communication from different parts of the world thanks to the helps of video conferencing.

Cost effectiveness - Information technology has helped to computerize the business process thus streamlining businesses to make them extremely cost effective money making machines. This in turn increases productivity which ultimately gives rise to profits that means better pay and less strenuous working conditions.

Bridging the cultural gap - Information technology has helped to bridge the cultural gap by helping people from different cultures to communicate with one another, and allow for the exchange of views and ideas, thus increasing awareness and reducing prejudice.

More time - IT has made it possible for businesses to be open 24 x7 all over the globe. This means that a business can be open anytime anywhere, making purchases from different countries easier and more convenient. It also means that you can have your goods delivered right to your doorstep with having to move a single muscle.

Creation of new jobs - Probably the best advantage of information technology is the creation of new and interesting jobs. Computer programmers, Systems analyzers, Hardware and Software developers and Web designers are just some of the many new employment opportunities created with the help of IT.

VI – B . Some disadvantages of information technology include:

Unemployment - While information technology may have streamlined the business process it has also created job redundancies, downsizing and outsourcing. This means that a lot of lower and middle level jobs have been done away with causing more people to become unemployed.

Privacy - Though information technology may have made communication quicker, easier and more convenient, it has also brought along privacy issues. From cell phone signal interceptions to email hacking, people are now worried about their once private information becoming public knowledge.

Lack of job security - Industry experts believe that the internet has made job security a big issue as since technology keeps on changing with each day. This means that one has to be in a constant learning mode, if he or she wishes for their job to be secure.

Dominant culture - While information technology may have made the world a global village, it has also contributed to one culture dominating another weaker one. For example it is now argued that US influences how most young teenagers all over the world now act, dress and behave. Languages too have become overshadowed, with English becoming the primary mode of communication for business and everything else.