

INFS 324

INDEXING AND ABSTRACTING

Session 1 – The Phenomenal Growth of Information

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Session Overview

On a daily basis information grows by leaps and bounds such that there is so much information out there to deal with. As a result of the tremendous growth of information, our present era has been dubbed the Information Age. In this Session I will discuss how and why information has been growing phenomenally in the past fifty or so years. I will provide you also some statistics of the growth in information to illustrate the daunting task an information seeker is likely to face in the absence of systems that will help him/her gain access to the right information at the right time and in the right format and place.

Session Objectives

At the end of the session, the students should be able to:

- Understand the Phenomenon of the Information Age
- Discern how information has grown over a short period of time than before.
- Identify the factors that have given rise to the tremendous growth in information.
- Acknowledge the importance of information in the world today.
- See why it is important to create systems to facilitate the retrieval of information.

Session Outline

The key topics to be covered in the session are:

- Topic One: The Phenomenon of the Information Age
- Topic Two: The Escalation of Information
- Topic Three: The Value of Information

Reading List



Topic One:

THE PHENOMENON OF THE INFORMATION AGE



The Present Era

Described as the Information Age -

- **This is because of the belief that the 21st Century society of the world is a knowledge-based one in which data, information and knowledge are integral to the existence of the human race.**
- **This information and the ability to retrieve select, evaluate, process and use it are central to the survival and success of individuals, groups, organizations and communities (Rowley and Hartley, 2008).**
- **In the world today individuals, organizations and communities are exposed to more information disseminated from a wider range of sources through a broader range of channels, many of which possess faster response and turn around times.**

The Present Era(Cont.)

- **For example:**
- **books, journals, newspapers**
- **radio, television,**
- **CD – ROMs, etc.**
- **The Internet which is a network of several computers and databases.**
- **Search engines like Google and super search engines like Metacrawler which provide users with information with a click.**

The power of Information

- Information, and by extension knowledge is reckoned as the most important possession or property that anyone can have. I am sure you have heard it said very often that “knowledge is power”.
- Power from knowledge may bring political, social or economic success. Thus in the advanced countries efforts are being made on a daily basis to exploit their knowledge assets in order to create wealthier societies and economic growth.

Done through the development of learning environments –

- schools, colleges, universities, work places and virtual learning environments;
- the development of knowledge resources
- networked access to the knowledge resources.

Need for Convenient and Appropriate Access

- Knowledge is of central significance to the development of individuals, organizations and the society at large.
- Important that information seekers have convenient and appropriate access to the best information or knowledge at the right time and in the most appropriate format.
- Achieved through information retrieval tools.
- I am going to tell you about two of the major tools that are used in the information retrieval process.
- These are indexes and abstracts. I will tell you about how these tools are created.

Need for Convenient and Appropriate Access(Cont.)

- Can you remember the first time you set foot in Balme Library? How did you feel in the face of the volumes of books you saw on shelves running along the walls? I am sure you felt lost and wondered where to begin from. Well, your experience of the Balme Library is just a fraction of what Robinson (2008) describes as the “Infosphere”.
- Now imagine the volumes of information that is churned out (produced) on a daily basis from radio stations, TV stations, educational institutions, research institutions, publishing houses, print and electronic and several other sources.

Need for Convenient and Appropriate Access(Cont.)

- I am sure you would agree with me that people who need to use information may find it difficult to locate the right information at the right time and in the right place without any mechanisms that will help in the location of the exact information that is required.
- Indexing is one of such mechanisms that are used to simplify searching for information by information seekers.
- Thus I am going to discuss the rate at which information is growing as a result of the value attached to information and some basic issues that you need to know about indexing and indexes.

Topic Two:

THE ESCALATION OF INFORMATION



Factors of Production

- In the past forty to fifty years the world has undergone dramatic changes in technology which has affected the way information is handled.
- Traditional factors of production
 - land; labour; capital; the entrepreneur.
- Information itself has come to be recognized as equally important or even more important than the traditional factors of production (Stonier, 1994).

The Information Age

- Our era has been dubbed the Information Age because of the tremendous amount of information that is generated on a daily basis.
- Thus in the world today we have to contend with so many books, so many records, so many photographs, too many newspapers, too many journals, too many CD-ROMs, too many World Wide Web sites, etc. such that no one individual can hope to read everything that has been printed.
- We live in a world of phenomenal changes in the production, dissemination and use of information.
- One can today buy a CD-ROM that contains the texts of about 2,000 books; photographs and movies are now being stored in desktop computers; laptops; smartphones etc. some scholarly journals are appearing in electronic formats only (Cleveland and Cleveland, 2013).

The Information Age(Cont.)

- We can illustrate the exponential growth of information with a simple example: The Dartmouth College in the USA opened with a library collection of less than 350 books in 1769. It took almost 200 years for the collection to reach one million in 1970. However, within a period of a little over twenty years, 1970 to 1994 the collection reached two million.
- Again in 1812 the Library of Congress in America lost its books through fire when the Capitol Hill came under British bombardment during the American war of independence. Thomas Jefferson's private collection of 6,000 books was acquired to reestablish the library. Today the collection of the Library of Congress is reckoned to be several millions.
- In the year 1450 about 100 book titles were published for that year. This number increased to 250,000 a year in 1950 that is 500 years later. Fifty years later in the year 2000, annual published books had reached one million a year (McIlroy, 2009).

The Information Age(Cont.)

- In 1996, it was reckoned that more new information has been generated in the past thirty years than in the previous five thousand years.
- Approximately 1,000 books were published internationally everyday; in the USA alone 9,600 periodical titles were published each year; and the volume of all printed knowledge doubles every eight years.
- Added to the above is the enormous amount of information in electronic formats like CD-ROMs, tapes, discs, and online through the internet (Rader, 1996).
- Currently the number of published books keeps increasing.
- In the USA alone, over 3 million books were published in 2011 alone (Bertram, 2012).

Print Book Production

UNESCO in 2015 released statistics of print book production worldwide covering 123 countries.

- China led with 440,000 new titles and re-editions in 2013.
- The USA came second with 304,912 new titles and re-editions in 2013;
- the United Kingdom was third with 184,000 new and revised books in 2011;
- Russia was fourth with 120,512 in 2013.
- India was fifth with 90,000 in 2013.
- Vietnam was 17th 24,589 in 2009.
- South Africa, the first African country on the list was 45th with 5,418 in 1995.
- Nigeria, the second African country on the list is 63rd with 1,314 titles in 1991.

Print Book Production(Cont.)

- Algeria is third in Africa and 71st on the list with 670 titles in 1996.
- Ethiopia is sixth in Africa and 93rd in the world with 240 titles in 1991
- Zimbabwe is seventh in Africa and 94th in the world with 232 titles in 1992.
- Eritrea is fourteenth in Africa and 106th in the world with 106 in 1990.
- Ghana is 18th in Africa and 117th in the world with 28 titles in 1992.
- Burkina Faso is the 23rd and last African country to be listed at 122nd in the world with 12 titles in 1996.
- Oman ends the list at 123rd with 7 titles in 1996.

Daily Growth of Information

On a daily basis information keeps growing by leaps and bounds.

- For example:

- Information produced in the year 2002 may be equated to 37,000 libraries with collections the size of the US Library of Congress.

- This translates to approximately 800 megabytes of information for each person in the world (Lyman and Varian, 2003).

- Estimated digital data produced in 2006 was 20 Exabyte (Deloitte, Touche & Tohmatsu, 2006).

- Individuals use an increasing range and number of information sending, receiving, recording, tracking and manipulation devices as well as an expanding number of information services.

- In the USA for example it was estimated that in 2004, over 60% of households had computers and more than half of all American homes had internet connectivity (US Department of Commerce, 2004).

- Over 80% of adult Americans had internet access at home or at the workplace.

New Concepts in Information Usage

These developments have given rise to such concepts as:

- **information overload** (also described as **infobesity** and **infoxication**) and information anxiety in which both information professionals and information users are concerned about access to the right information by the right person at the right time and in the quickest and cheapest manner possible.
- Information Overload has evolved into phrases like **information glut** and **data smog** (Shenk, 1997) used in describing the difficulty a person can have in understanding an issue and taking decisions because of the availability of too much information.

New Concepts in Information Usage

- The phenomenal growth in information has led to the description of the present era as the INFORMATION AGE.
- This has spawned such terms as INFORMATION EXPLOSION, INFORMATION SUPER HIGHWAY, e-GOVERNANCE, e-COMMERCE, INFORMATION BUSINESS, GLOBALIZED VILLAGE, etc. which underscores the new technologies used to manage information and thereby making it possible for people to communicate and share ideas from any part of the world within minutes.

Topic Three:

VALUE OF INFORMATION



Medieval Period

The value of information has been recognized since earlier times.

- For example books in medieval libraries were chained to reading stalls to prevent people from taking them away thereby preventing other people from benefiting from the information content of the books.
- Collecting and organizing information and making it available to people who need the information therefore has been going on for a long time.

Attitudes Towards Information

- In the past sixty years attitudes towards information have undergone a tremendous shift in the developed world.
- More than ever information has been recognized as an economic product comparable to petroleum or automobiles.
- In fact information presently is regarded as the fifth factor of production which is by no means inferior to land, labour, capital, and the entrepreneur (Aina....)
- Indeed, it may even be argued that information is the only factor of production because without information access to land, labour, capital and the entrepreneur will be difficult if not impossible to have.

The Information Business

- As far back as 1979, the information business was reckoned as a 25 billion dollar industry in the USA.
- In the U K the information industry was reckoned to be 20 billion dollars or 5% of Gross Domestic Product (GDP) in the 80s.
- UK exports of knowledge-based services increased from £50.6 billion in 1995 to £111.1 billion in 2005 representing a growth of over 100%.
- These services included business services, financial services, computer services, communication services, cultural/media services, government services, royalties and licenses.

The Information Business(Cont.)

- Knowledge-based service constituted nearly 70% of total service exports of the UK (UK Office for National Statistics, 2006).
- The information business in the U S A is now referred to as the knowledge industry.
 - comprises
 - advertising,
 - book and magazine publishing,
 - computers,
 - research,
 - government activities,
 - libraries,
 - radio and television broadcast etc.

Preservation of Information

A special characteristic of information

- Neither scarce nor depleting.
 - the more it is used and manipulated the more information is generated.
 - Only a tiny fraction of all the information generated by the knowledge industry will be used by people for purposes of study, research, decision making, entertainment, manufacturing, problem solving, communication and interpersonal relationships, citizenship, and enhancing business and professional effectiveness.
 - A large amount of the remaining information will be preserved for use as and when it is necessary.

Retrieval of Information

- Searching through this mass of information to extract what is necessary to serve the individual's need is almost impossible.
- The onus of retrieving the right information for the right person at the right time with minimum difficulty is on the professional information handlers.
- Libraries and other information management units, have, therefore, designed ways of organizing information for storage, retrieval and dissemination.

Summary

- The phenomenal growth of information poses problems of retrieval of the right information for the right person.
- As long as information continues to regenerate itself, there will be challenges for the manipulation of information.
- Hence the need for mechanisms to facilitate the search for that specific information for that specific information user.

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