

**Meral Alakuş**

Izmir, Turkey

# In Search of Knowledge

(Tables of Contents and Indexes)

**ENDORSE.**

THE EUROPEAN DATA CONFERENCE ON REFERENCE DATA AND SEMANTICS

# Information and Knowledge (doubling until 1900)

- **Until 1900, human knowledge doubled approximately every century,**
- **By the end of World War II knowledge was doubling every 25 years, but now on average human knowledge is doubling every 13 months,**
- **Also with what comes from the “internet” will lead to the doubling of knowledge every 12 hours, (IBM) (Schilling, 2013)**
- **This fast accumulation of knowledge will change our ways of handling information management.**

# Information and Knowledge (Defined)

- Here in my presentation, I endeavor to explore the uses of two traditional tools made available to us by the publishing world: namely the “Book Index” and “Table of Contents” both included in scholarly books.
- Defined in the Webster’s dictionary, knowledge is the act and state of understanding; and what has been acquired through education and learning, through putting facts and experiences,
- “Information” implies facts and data concerning a specific subject of study.

# Management of Knowledge

- Management of “Information or Knowledge” starts with organizing the content or putting it together into a well designed, comprehensive and organized structure,
- “Information Management and/or Knowledge Management” are used in library literature, both meaning as “Content Management,”
- Information professionals are to make this knowledge (whether organized or unorganized) available to those who seek.
- What is now called “Knowledge Management,” in its simplest forms, is in fact Knowledge Organisation Systems (KOS); after all, they are the “*contents list and the index*”. (Vickery, 2008)

# Sources of Knowledge and Information

- Sources of knowledge and information are included in books, journals, thesis, documents, reports or any other written and recorded work in print, or in other formats or online records ready for use of the researcher as well as the general user,
- Since now there are versatile forms and formats of materials, print, non-print, or online, where information and knowledge are recorded, the endeavor for search will be going on and will continue so, into the future...

# ***“Accessing Sources”***

***(in different areas and in different formats)***

- **Accessing information and knowledge has always been a problem to solve for people, going back to hundreds and thousands of years,**
- **From the times of Callimachus (B.C. 260-240) of Alexandria Library in Egypt who classified books according to their subjects,**
- **To the times of King Wen (B.C. 1150) in China who designed for his book an index/contents table,**
- **To our times when there are different sources and formats for providing information and knowledge for people with different interests and under different circumstances, there will have to be different systems applied for managing knowledge and information.**

# Book Searching: Title Page

## (Identity Record of Books and Documents)

- The main purpose here is to deal with one general source of knowledge – the Book! in print or online.
- *First to check is the “Title Page”* of a book, of a thesis, report or any other written and recorded work puts down the identity of this unique material,
- *Title Page* comes in the first section, at the very front of the book and displays the Metadata Items necessary to find the book: such as the author(s), or the editor’s names; the title, series name, publisher, publication place and date,
- Subject headings are usually added on the verso, to help for guiding researchers to other materials of same subject, possibly kept together on the shelves,
- Title Page by itself is not enough to evaluate the content.

# Book Searching: Table of Contents

- **When users get the subject classification number for the book, they want to see the inside of the book,**
- **According to a study made in 1990, the users indicated that they are attempting to find out if that book actually treats the subject in which they are interested at all, or in any significant way; it showed that going to the shelves and looking at the table of contents and the index, they can make a decision if the book is useful for them or not, (Belkin et al.)**
- **Therefore, table of contents can be interpreted as hierarchical taxonomies and be defined as: “... a kind of controlled vocabulary in which each term is connected to a designated broader term at the top, with all other terms that are listed under the top level term, are organized into a large hierarchical structure. (Hedden, 2010)**



# Book Searching: Indexes

- **Indexes are defined according to their functions, e.g. “Geographic indexes, Name indexes, Legal Case indexes, Title indexes, Scientific Name indexes, First-line indexes, Author indexes, Chemical indexes, Numeric indexes, Melodic indexes, Citation indexes.” (Leise, 2008)**
- **The keywords and names are taken from the content exactly as they are represented ,**
- **There may be one straight alphabetical index for keywords and names, etc. or separate indexes for each according to functions, as needed in the book,**
- **When needed, “see” references are used between related terms, where it becomes possible to go to the specific pages where these relationships are mentioned.**

# Book Searching: ToC vs. Indexes

- **Table of Contents help retrieving similar books through using chapter titles as keywords or as subject headings for more specific topics in similar books,**
- **TOC is a list of the chapters, under which subsections are given at the front of a book**
- **It also allows readers to go directly to a specific section/subsection of an on-line document,**
- **Whereas an Index is ‘an alphabetically or otherwise ordered arrangement of entries, different than the order of the material in the indexed document’. An index takes the researcher to the exact information in books**

# Tables of Contents vs. Indexes

- **One other important advantage of Table of Contents and Back of the Book Indexes would be using both Content topic terms and the Index keywords for retrieving books, which describe the book exactly with the same descriptors and names used by the author,**
- **This would be much better than using general subject headings from Thesauri or from standard Subject Headings Lists,**
- **These words/terms taken from Contents pages and the Index will retrieve more books with similar descriptors possibly used by other authors,**
- **In selecting books, Table of Contents will be a guide to explore the content of the book and review**
- **Next step is to refer to the book index to find out specific information, e.g. “names and/or topics” of interest, if mentioned in text .**
- **Index makes it possible to find the names and terms NOT mentioned in ToC s.**

# Tables of Contents vs. Indexes

## (E-books & Online Solutions)

- Both the Table of Contents and the Index will be available online with the e-text,
- For printed books, the solution will be by attaching the “table of contents” and “index” pages in full to the bibliographic entry, e.g. also by providing complete metadata information necessary for search. (Leise, 2008)
- It is asserted that online catalogs increase searching power and is further suggested ways of enhancing online catalog records by adding more subject headings, providing special thesaurus terms, updating and distributing online versions of the LC Subject Headings (LCSH), browsing by classification, exploring better user interfaces, (Mandel and Herschman)
- Further study of the relation between the bibliographic records and actual subject searches is needed.

# Technology as a Solution (1)

## (in Search for Knowledge)

- **There is the need for including content-enriched access to electronic information: “*With the continuing increases in computer processing and storage capabilities, the barriers to and benefits of electronic access to more information content are becoming serious issues in information science research...*” (Van Orden, R)**
- **The practice of classification has been used in libraries for almost 150 years and taught as an academic subject in LIS programs since Melvil Dewey (1851–1931)**
- **But the outlook for the future is now fundamentally challenged by digital technologies at both the practical and at the theoretical levels. (Hjørland, B.)**
- **It is also important that indexing should be done by subject specialists in their own fields, specially in an age when information is growing and branching out so fast.**

# New Perspectives

- **Considering the growth of knowledge during the course of the last century, arranging books by size, seemed to be quite a logical system, since libraries are searching ways of gaining more free space in their buildings,**
- **In a few big libraries with over two million books in their collections, they have already started keeping the books according to their sizes and putting them in different boxes or bins – as recently being practiced in USA, Canada and Europe.**
- **Two problems arose as a result: 1) how will the users approach the books if they are no longer arranged on shelves?**

# Technology as a Solution (2)

## (Approaching the Source of Knowledge)

- **And 2) “ what if libraries of the future won’t have any shelves to browse, and library books didn’t have any call numbers? But then what do we need classification for?” (Nancy Humphrey)**
- **With online bibliographic information, it is possible to find the location for the book – number of the bin, level of storage, accession number of the book, etc.**
- **Automation will help by physically approaching the printed books and materials stored in special boxes or bins where they are kept in big libraries, which will be done with the ASRS system,**
- **Then it is time to depend on technology again to solve the problem with the system called ASRS – Automated Storage and Retrieval Systems, and approach the book, document, etc.**

# Content Management vs. Technology

- **This is also the time when librarians will have to be more careful and meticulous about various subject indexing formats and decide how well these can be applied for knowledge, (Humphreys, 2013)**
- **Missing a small piece of information for research might sometimes cost much more than the cost of human contribution for indexing the subject,**
- **Relying only on automation to retrieve information, some will be lost, Remember!**  
    **"Important information will no longer be made retrievable. Instead, information will become important simply because it is retrievable!" (Evans, R, 2002).**
- **People are more and more dependent on technology, but technology cannot fully accomplish the work done by people: the ratio is 85-15% in favor of the people,**



# Information and Knowledge (expectations for future)

- **The domain of Information Management will be one of the most important fields of study for many years to come,**
- **It is obvious that managing knowledge will be the most crucial and foremost problem people will have to deal with,**
- **It will also prevail as one of the most significant disciplines when considered it as a means for preventing culture decline and creating a more “just society” in the near future.**
- **Nations which cannot propagate their accumulated scientific and cultural knowledge may find themselves in a state of austerity and in economic despair, compared to those which continue can enrich their existing their information treasure. The wealth and power of nations will depend on their ability to preserve and regulate knowledge.**

THANK YOU!

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