Indexing and Abstracting

Types of Indexes and Abstracts

Kuang-hua Chen
Department of Library and Information
National Taiwan University
khchen@ccms.ntu.edu.tw

Types of Indexes

- Alphabetical Index
- Author Index
- Book Index
- Citation Index
- Classified Index
- Coordinate Index
- Cumulative Index
- Faceted Index
Types of Indexes (Continued)

- First-line Index
- Hypermedia Index
- Internet Index
- Multimedia Index
- Periodical Index
- Permutted Title Index
- String Index
- Word Index

Alphabetical Indexes

- The arrangement of an index in alphabetical order is the most common method.
- The arrangement of subject heading, cross-references, and qualifying terms are also alphabetical.
- The major drawbacks are
  - Problem of synonymy
  - Scattering of entries
Author Indexes
- Consist of people, organizations, corporate authors, government agencies, universities
- Authors can be used as an indirect subject approach
  - Authors are strong indicators of subject content (Cleveland 1976)
- Rules for author indexes
  - The number of names allowed for each document
  - Use of full name or initials
  - Use of common names

Book Indexes
- List of words, generally alphabetical, at the back of a book
- Giving a page location of the subject or name
- Books without index are incomplete
Citation Indexes

- A citation index consists of a list of articles, with a sublist under each article of subsequently published papers that cite the articles
  - Author index
  - Subject index
- A cited paper has an internal subject relationship with the papers that cite it

Example of Citation Indexes

- Arts & Humanities Citation Index
- Science Citation Index
- Social Science Citation Index
- CSSCI
- CSCD
- THCI
- TSSCI
中國科學引文索引

引文著者①
  • 引文名稱③ [引文類型④] - 出版年, 卷 (期): 起始頁
  來源文章著者⑤ 來源期刊⑥ - 出版年, 卷 (期): 起始頁

例:
王建生
  • 化學研究- 63, 4 (1): 54
  張一凡 催化學刊- 94, 5 (2): 30

①引文著者項：引文第一著者姓名，汕头著者和匿名著者引文此項不著录。
②引文標識符：引導每一篇被引文獻。
③引文名稱項：引文所在期刊刊名或書名，其它類型引文此項不著錄。
④引文類型項：引文類型注釋，引文類型包括期刊文章、圖書、會議文獻、學位論文、報告、專利、標準和其它。引文類型為期刊文章時，此項省略。
⑤來源文章著者項：來源文章第一著者姓名。
⑥來源期刊項：來源期刊刊名，刊名超過 6 個漢字時，只取前 6 個漢字，省略部分用 "..." 表示。

中國科學引文索引 (Continued)

引文著者
  • 引文名稱[引文類型]- 出版年, 卷(期): 起始頁
  來源文章著者 來源期刊- 出版年, 卷(期): 起始頁

例:
王建生
  • 化學研究- 63, 4 (1): 54
  張一凡 催化學刊- 94, 5 (2): 30
 Classified Indexes

- Its contents arranged systematically by classes or subject headings
- It is important for scientific purpose
- Layman find classified indexes difficult to use
- The indexes are very valuable in the appropriate environment
Coordinate Indexes

- Coordinate indexes allow terms to be combined or coordinated
- Combine two or more single terms to create a new class
**Cumulative Indexes**

- A Combination or merging of a set of indexes over time
- Apply to journals and to large, important works and are published as separate volumes
- Cumulative indexes are complex and usually are done by teams of indexers
- Require a good deal of editing because of duplications, terminology changes and a need to adjust the depth of indexing

**Faceted Indexes**

- (activities and operations)
  - (business and management operations)
  - (communications activities)
  - (computer operations)
  - (educational and psychological activities)
  - (general activities)
  - (information and library operations)
  - (socioeconomic activities)
  - (technical and manufacturing operations)
  - (buildings and facilities)
  - (communications media)
  - (document types)
  - (by availability, access, organization)
  - (by information content, purpose)
  - (by medium, physical form)
  - (fields and disciplines)
  - (hardware, equipment, and systems)
First-line Indexes

- Applied to poems
- All the words in the first line of a poem are listed in their alphabetical order
- Another interesting example
  - First-line index for music

Miscellaneous Indexes

- Hypermedia Indexes
  - Allows users to thread their way to what they want through electronic nodes and links between those nodes.
  - Much more transparent to the user
  - Someone have to make indexing decisions in establishing these nodes and connections

- Internet Indexes
- Multimedia Indexes
Multimedia Indexes

- Open problem?
- New challenge

Periodical Indexes

- Individual indexes
  - Particular journal
- Broad indexes
  - A group of journals
Permuted Title Indexes

- Title index works well for highly specific searching
- Permuted title word indexes are created by systematically rotating information-conveying words in the title as subject entry points into the index

String Index

- An indexer first constructed a title-like phrase
- This string was then coded according to a set of rules, using operators and codes
- All strings would be in normal syntactic form, connected by appropriate prepositions and conjunctions
String Index (Continued)

- PRECIS system
  - Each string consisted of three parts: the lead; the qualifier; display
    - Lead. Qualifier
    - Display
  - “A document on the evaluation of the professional education of nurses”
    - Example taken from Indexing from A to Z, p.453
      - Nurse
        - Professional education. Evaluation
      - Professional education. Nurses
        - Evaluation
      - Evaluation. Professional education of nurses

NEPHIS System

- Lead term. Context
- “A document on the use of numerical data in the humanities and in the social sciences”
- @Use?of<Numerical <Data>>? in Humanities? And <Social Sciences?>>
  - Data. Numerical -. Use in Humanities and Social Sciences
  - Humanities and Social Sciences. Use of Numerical Data
  - Numerical Data. Use in Humanities and Social Sciences
  - Social Sciences and Humanities. Use of Numerical Data
Word Index

- Individual names and word in documents
- Bible concordance

Abstract

- Abstract
  - The ancient peoples attached content abstracts to papyrus rolls
- Summary
  - Runners returned from battle with summaries of the events
Classify Abstracts by Function

- Indicative Abstract
- Informative Abstract
- Critical Abstract

Classify Abstracts by Method

- Excerpt-based abstract
- Generation-based abstract
Classify Abstract by Use

- Discipline-oriented abstract
  - Is written for a specific area of knowledge
- Mission-oriented abstract
  - Is written to support application activities
  - Is defined in terms of an assignment rather than a subject area
- Slanted abstract
  - User-oriented

Classify Abstract by Author

- Author
- Subject area expert
  - e.g. Excerpta Medica
- Professional abstractor
Structured Abstract

- Use predefined template to store abstract in a structured form
- Sample predefined template
  - Background
  - Aim
  - Method
  - Results
  - Conclusion

Indicative Abstracts

- Also known as descriptive abstracts
- Contain significant information and specific data
  - “The number of onions grown in California was determined and reported in this article”
- Is shorter, is written in general terms, and does not give a progressive account of the paper’s development
- Is never expected to replace the paper itself
- Shows the purposes and the results of the paper
Informative Abstracts

- Try to present as much quantitative and qualitative data as possible
- Is the most useful for documents reporting on experimental investigations
- Is the skeleton of the document itself with all the flesh missing
- Cover four essential points
  - Objective and scope of the work
  - Methods used
  - Results
  - Conclusions

Critical Abstracts

- A critical abstract makes a value judgment or editorial comment
- Editorial or abstract
- An idea in a few abstractors
  - Good abstract avoids the bias and personal viewpoint of critical comment
- Critical abstract can be a powerful tool
  - Heavily quality filtering
  - Used to general papers with broad overviews
Educational Administration Abstracts

- Abstract Numbers: In bold, for handy reference
- Subject Classifications
- Descriptors: In bold; identify subject immediately
- Alphabetical-by-Author Citations: Complete bibliographic details
- Abstracts: Concise summary of contents
- Cumulative Indexes: The fourth issue each year prints the cumulative author and subject indexes for the year, along with a current "Source List."