Indexing and Abstracting

Lecture 04 -- Types of Indexes and Abstracts

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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
- Permutated 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
  ②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

①引文著者項: 引文第一著者姓名，著者為著者和匿名著者引文此項不著錄。
②引文名稱項: 引文名稱的期刊刊名或書名，其它轉引引文此項不著錄。
③引文類型項: 引文類型注釋，引文類型包括期刊文章、書籍、論文集、專利、標準和其它。引文類型為期刊文章時，此项省略。
④來源文章著者項: 來源文章第一著者姓名。
⑤來源期刊刊名: 來源期刊刊名，刊名超過6個字數時，只取前6個字數，省略部分用“…”表示。

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

(Continued)
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

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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)
Faceted Indexing

- Analytic-synthetic processing
- Pre-coordinated

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

- A vital channel for science and all scholarship
- 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
- Drawbacks
  - Titles may not accurately reflect content
  - Limited number of terms in titles
  - Lack of vocabulary control
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
  - Coverage of meaning: Qualifier > Lead > 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? and >>
  - 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
- Indexes to the individual names and words that the author used
- Bible concordance
KWOC, KWIC, KWAC

<table>
<thead>
<tr>
<th>KWOC</th>
<th>TERM</th>
<th>FREQ</th>
<th>ITEM ID</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>chips</td>
<td>2</td>
<td>doc2, doc4</td>
</tr>
<tr>
<td></td>
<td>computer</td>
<td>3</td>
<td>doc1, doc4, doc10,</td>
</tr>
<tr>
<td></td>
<td>design</td>
<td>1</td>
<td>doc4</td>
</tr>
<tr>
<td></td>
<td>memory</td>
<td>3</td>
<td>Doc3, doc4, doc8, doc12</td>
</tr>
</tbody>
</table>

KWIC

| chips/ computer design contains memory |
| computer design contains memory chips/ |
| design contains memory chips/ computer |
| memory chips/ computer design contains |

KWAC

| chips | computer design contains memory chips |
| computer | computer design contains memory chips |
| design | computer design contains memory chips |
| memory | computer design contains memory chips |

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
- Used for research articles
- 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
Example:

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."

Educational Administration Abstracts

<table>
<thead>
<tr>
<th>Abstract Number</th>
<th>Category</th>
<th>SubCategory</th>
<th>Subject Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>0784</td>
<td>ADMINISTRATIVE STRUCTURE AND PROCESS</td>
<td>Organization and Process</td>
<td>ACADEMIC PERFORMANCE, ORGANIZATIONAL CULTURE, SCHOOL-COMMUNITY RELATIONS</td>
</tr>
</tbody>
</table>

The idea that schools should function as communities is popular in education circles. It is also confusing, for the term "community" means different things to different people. This article argues that efforts to reduce ambiguity by linking the concept to clearly defined indicators may be short-sighted. Multiple meanings linked with the notion of community reflect the richness of this concept, the author contends, and these meanings should be explored and understood—not reduced or eliminated. Analyzing language used by academics and practitioners writing about community in school settings, the author attempts to demonstrate that the concept is both complex and reasonably coherent. Recognizing that this is so can only assist scholars who desire to better understand this phenomenon, the author argues. Similarly, knowledge of the ways one make sense of being in and out of community can provide guidance to people seeking to create and sustain communal schools.
Subject Indexes for Abstracts

NOTE: Numerical entries refer to abstract numbers

Academic Aptitude, 1032, 1033, 1035, 1037
Academic Disciplines, 0810
Academic Performance, 0784, 0807, 0811, 0819, 0829, 0830, 0833, 0835, 0858, 0860, 0867, 0873, 0877, 0884, 0901, 0902, 0925, 0930, 0931, 0932, 0934, 0935, 0936, 0938, 0939, 0940, 0941, 0945, 0946, 0947, 0948, 0949, 0950, 0956, 0971
Academic Standards, 0787, 0798, 0799, 0808, 0843, 0951, 0954, 0955, 0956, 0957, 1040, 1048
Accelerated Learning, 0893
Accountability, 0794, 0922, 0963, 1024
Administrative Roles, 0797, 0800
Administrative Skills, 0979
Administrative Techniques, 0798, 0803
Administrator Education, 0914, 0915, 0916, 0917
Administrator Roles, 0802, 0808
Adolescence, 0827, 0836, 0906, 0909, 0961, 0965, 0978, 1043, see also headings under Female, Male

Children's Television, 1001
Citizen Participation, 0981
Civil War, 0996
Classroom Management, 0814, 0815, 0816, 0817, 0937, 0994
Cognitive Development, 0966
Cognitive Processes, 0788, 0882, 0888, 0896, 0966, 1024, 1042, see also Learning Processes
Collective Bargaining, 0818
College Students, 0835, 0904, 0907, 0908, 0910, 0953, 0983, 1023
Colleges, 0811, 0824, see also Community Colleges, Universities
Counseling, 0946
Commission Studies, 0858
Communication Education, 0881, 0920
Communication Skills, 0810
Community College Students, 0100
Community Colleges, 0973, see also Colleges, Universities

Author Indexes for Abstracts

Allen-Brown, V., 0001
Almog, T., 0893
Altspaugh, J.W., 0042
Altman, E.R., 0294
Altman, A., 0848
Amada, G., 0991, 0904
Anderson, G.L., 0256
Anderson, L., 0417, 0520
Anderson, M.D., 0461
Anderson, R.D., 0817
Andreasen, R., 0607
Anjaneysu, K.S.R., 0225
Annunziata, J., 0412
Antis, J., 0318
Aoki, T.T., 0976
Artizzone, P.M., 0090
Artiar, T., 0123
Arkes, J., 0583
Armstrong, G.M., 0849
Armstrong-Stassen, M., 0218
Beauman, A., 0970
Beccagno, L., 0054
Beck, L.C., 0764
Bedard, G.H., 0653
Bedi, A.S., 0684
Beerman, K., 0091
Bees, C., 0501
Behrman, J.R., 0685
Beljaard, D., 0023
Belfiore, P.J., 0008
Bell, E.D., 0914
Benjoch, J., 0978
Benavides, A.H., 0979
Bennis, W., 0062
Bennett, P., 0179
Bennett, T.R., 0575
Beresford, J., 0146
Berg-Cross, L., 0392
Bernace, C., 0436
Bernal, D.D., 0706
Bowell, B., 0639
Bowen, G.L., 0830, 1029
Bowen, N.K., 0830, 0950
Bowen, W.G., 0705
Bowman, J., Jr., 0462
Boylan, C., 0821
Boyle-Baine, M., 0707
Bracher, D., 0561
Bradshaw, L.K., 0915
Bradby, M.P., 0786
Brandes, G.M., 0021
Braunton, D.M., 0622
Braun, I., 0607
Braun, J., 0024
Bren, B.O., 0399
Brennan, J.M., 0761
Brewer, D.H., 0688, 0690
Bridges, D., 0004
Brindis, C., 0492
Brindley, S., 0593
Display Formats of Thesaurus

- Alphabetical Descriptor Display
- Rotated Descriptor Display
- Hierarchical Descriptor Display
- Descriptor Group Display

Alphabetical Descriptor Display