Thesaurus Construction Project

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A guide to thesaurus construction

Thesaurus construction involves a series of steps informed by the scope of the subject field, the nature of the literature to be indexed, potential thesaurus users and their information needs, as well as language issues and available finances (Shiri, 2013). Once these variables have been identified and defined, thesaurus construction generally follows these steps:

Step 1: Create/analyze subject statements
Step 2: Perform a facet analysis
Step 3: Construct term hierarchies (BT/NT/RT)
Step 4: Establish term relationships (Use/UF)
Step 5: Add scope notes (SN) (Shiri, 2013a).

Once the above steps have been completed, the final terms are entered into the chosen thesaurus software in order to create a digital file. The process of thesaurus creation is further detailed in this thesaurus.

About the thesaurus

The scope of this thesaurus includes documents within a library and information science collection. Thesaurus users include library and information science students, faculty members, and librarians. This thesaurus is designed for use within a post-coordinated information retrieval system. Terms used in this thesaurus were derived in part from the ASIST Thesaurus and the Library Literature and Information Science Thesaurus (Library Literature), along with content derived from the Online Dictionary for Library and Information Science.
Facet analysis

Facet analysis involves analyzing a subject into a set of aspects (main and sub-facets), and then identifying single-concept terms (isolates) which are then classified within the main facets. This is commonly accomplished through indexing subject statements that represent the documents within a collection (Shiri, 2013).

When performing facet analysis for a subject field or discipline, it is common to use industry accepted “fundamental facets” which provide a set of basic categories that represent concepts underlying any subject field (Aitchinson, Gilchrist, & Bawden, 70). For this thesaurus, isolates were extracted from the subject statements (Appendix A) and classified according to the fundamental categories (detailed in Appendix B). At this point, terms were left in their original form, to be revised at the stage of final term selection. In some cases, isolates could fit into multiple categories; in these cases, the subject statements were used for guidance in determining the most relevant category.

Classifying terms within the fundamental categories can become complicated when dealing with potential compound terms. Since term selection was informed through referencing the ASIST and Library Literature thesauri, the identification of compound terms was not yet determined at this stage. Therefore, multiple terms were mapped as well as compound terms to represent certain concepts. For example, to represent the concept of “health research community,” in addition to indexing all three terms separately, compound terms were also created for “health research” and “research communities.”

As is the case with all thesauri, the fundamental categories must be adapted to fit the scope of each individual thesaurus. In the case of this thesaurus, main and sub-facets were created at a condensed level compared to the much larger ASIST and Library Literature thesauri.
Also, a facet for “time period” was created within this thesaurus which does not exist in either the ASIST or Library Literature thesauri.

To ensure that all terms within the subject statements were represented in the fundamental categories, terms were marked as represented through the use of “strikethrough” formatting. After compound terms were identified, care was taken to mark off the additional terms created in the process of identifying potential compound terms. This was done to avoid the addition of unnecessary terms that were already represented through compound terms.

**Term hierarchies (BT/NT/RT)**

To determine term hierarchies, every isolate was researched and compared within both the ASIST and Library Literature thesauri. The closest equivalent terms were chosen from either thesaurus to represent the concepts identified from the subject statements.

Once the appropriate terms were identified, term hierarchies were developed based on a combination of the hierarchies within the ASIST and Library Literature thesauri as well as the main and sub-facets already determined through facet analysis. Because this thesaurus is much smaller in scope than both the ASIST and Library Literature thesauri, it was necessary to condense term hierarchies in some cases.

**Term relationships (Use, UF)**

After structuring term hierarchies, final terms must be chosen and term relationships must be established. In some cases, terms were not created for concepts that were deemed non-indexable. The following terms were found not to be indexed in either the ASIST or Library Literature thesauri: *ideas, evolution, history, impact, place, future,* and *recommendations;* all were classified as abstract entities.
Forms of terms

Term forms were based on the thesaurus construction guidelines presented in Aitchinson, Gilchrist, and Bawden (2000). Some of their most basic guidelines include:

- Descriptors should consist of nouns, noun phrases, and verbal nouns (19).
- Non-count nouns, abstract concepts, and unique entities should be entered in singular form; count nouns, and abstract concepts regarded as classes should be entered as plural (22-23).
- Abbreviations and acronyms should be used if well known.
- Spelling should conform to a recognized dictionary or glossary; the most acceptable spelling for intended users of the thesaurus should be adopted (p 24).
- Apostrophes should be retained in common nouns and proper names (25).
- Hyphens in compound terms should be avoided unless dropping them would lead to ambiguity (p 26).

Compound terms

The formation of compound terms for this thesaurus was based on both Aitchinson et al.’s (2000) general guidelines, as well as the amount of pre-coordination present within the ASIST and Library Literature thesauri. Aitchinson et al.’s (2000) main guidelines for the construction of compound terms are highlighted below:

- Compound terms should be factored except if the resulting terms could be potentially ambiguous to the user (38).
- Compound terms should be entered in natural language order (p 39).
- Compound terms should be retained when factoring would lead to a loss of meaning (41).
Appendix C illustrates the process of analyzing potential compound terms within both the ASIST and Library Literature thesauri, with resulting terms used in this thesaurus. As stated previously, the ASIST and Library Literature thesauri utilize different hierarchies as well as coordination structures; in many cases, compound terms were developed from a combination of terms from both thesauri.

Exceptions

In order to obtain greater specificity for important concepts not indexed within the ASIST and Library Literature thesauri, new terms were created within this thesaurus. A few representative examples are highlighted below:

In the ASIST thesaurus, even though the concept of “youth” is represented, the concept of “seniors” is not. The Library Literature thesaurus represents the concept of “seniors” using the term “Libraries & older people.” Since this thesaurus is designed for use in a post-coordinated information retrieval system, this term was incompatible. For this thesaurus, the term “seniors (citizens)” was chosen, and a scope note added to restrict the meaning of the term.

Some aspects of library administration were not thoroughly represented in the ASIST and Library Literature thesauri. In general, library policies, protocols, and planning/goals do not seem to contain as much specificity as other facets. For example, the concept of program evaluation and mission statements were not well represented in either thesauri. Although the term “strategic planning” was represented in the Library Literature thesaurus, the more specific concepts of library vision and mission statements and library goals were not. Because these concepts have become increasingly important in today’s libraries, representative terms were created for these concepts under the “Library administration” facet instead of creating a reference to the term “strategic planning.”
Scope notes

Scope notes were used in this thesaurus to restrict the meaning of certain terms, and to disambiguate terms that might become confusing to users when viewed out of context. For example, the term “library use studies” can be seen as ambiguous; it is not clear what library use means. In this case, the following scope note was entered: “The extent to which the resources and services of a library are utilized by its clientele.” Types of library use studies could then be entered as narrower terms.

Conclusion

The process of thesaurus construction as outlined in this paper should be followed prior to entering terms into thesaurus creation software. Although the process is described in a linear fashion, in practice the process is iterative; it is not uncommon to revisit decisions made in earlier steps as new term hierarchies and relationships are determined. It is also wise to keep in mind that a thesaurus is always evolving as new knowledge is acquired!
References


APPENDIX A: SUBJECT STATEMENTS

1. The place of knowledge brokers in the Canadian health research community.
2. The evolution of evidence-based librarianship in Britain.
3. Inter-library loan policies of community college libraries in Northern Alberta.
5. Using the computer to catalogue video programs in school library media centres.
6. Story-time ideas for toddlers, moms and dads.
7. Evaluating instruction for seniors in the use of the OPAC in public libraries.
8. The future of DVD-technology for archiving community newspapers.
10. Recommendations for standards for designing web sites for the physically handicapped.
12. A history of the design of reference and information services for the children’s library.
13. Classifying and indexing metadata protocols for small-scale digital libraries.
APPENDIX B: FACET ANALYSIS

Fundamental facets
- Entities (things/objects)
  (By characteristics)
  - Abstract entities (ideas, disciplines)
    - Discourse
    - Evidence-based librarianship
    - Health
    - Information science
    - Librarianship
    - Library science
  - Artifacts (man-made)
    - Antiquities
  - Attributes (properties/qualities, states/conditions)
    - Bibliometric
    - Digital
    - Evidence-based
    - Physically handicapped
    - Scholarly
    - Small-scale
  - Whole entities/Complex entities (motor vehicles, buildings, schools)
    - Classification systems
    - Internet
    - Internet technologies
    - Library of Congress classification
    - Metadata
    - Standards
    - Technology/Technologies

(By function)
- Agents (performers of action: animate/inanimate)
  - Academic library
  - Card catalogues
  - Catalogue cards
  - Children’s library
  - Colleges
  - Community college libraries
  - Computer
  - Digital libraries
  - DVDs
  - DVD-technology
  - Journals
  - Knowledge brokers
- Libraries
- Library catalogues
- Library media centres
- Library schools
- Newspapers
- OPAC
- Programs
- Public libraries
- Reference libraries
- Rural libraries
- Scholarly journals
- School libraries
- School library media centres
- Schools
- Sites
- Video programs
- Videos
- Web sites
- World Wide Web

- **Patients** (receivers of action: animate/inanimate)
  - Community
  - Dads
  - Moms
  - Research community
  - Seniors
  - Toddlers
  - Undergraduates

- **End products** (end product of an action: food products, residue, research results)
  - Evidence-based research
  - Health research
  - Library missions
  - Mission statements
  - Missions
  - Statements
  - Statistics

- **Actions/Activities**
  - **Processes/functions** (internal processes, intransitive actions)
    - Analysis
    - Archiving
    - Bibliometric analysis
    - Catalogue (verb)
    - Classifying
    - Designing
Discourse analysis
Evaluation
Indexing
Ordering
Research

- Operations (external processes, transitive actions)
  - Information services
  - Instruction
  - Inter-library loan
  - Library programs
  - Reference services
  - Story-time
  - Using

- Space/place/location/environment
  - Britain
  - Canadian
  - North America
  - Northern Alberta

- Time (i.e. chronological divisions)
  - 1990-2000
## APPENDIX C: COMPOUND TERM ANALYSIS

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**My decision:**
Library materials [facet]
- NT Audiovisual materials
- NT video recordings

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**My decision:** Use two compound terms.
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  - NT School libraries
  - NT Media centers

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**My decision:**
Information technology
- NT Storage media
- NT Compact disks
- NT DVDs

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<td>NT strategic planning</td>
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<td>UF Goal setting (strategic planning)</td>
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| facet | Library administration | |
|-------|-----------------------| |
|       | NT Strategic planning | |
APPENDIX D: FINAL TERMS AND TERM RELATIONS

Entities (characteristics)

Abstract entities

Information science
  NT knowledge management
    NT knowledge workers
      UF knowledge brokers
  NT statistics
    NT bibliometrics
  NT medical informatics

Library science
  NT evidence-based library science

Entities (function)

Agents (individuals, personnel, organizations)

Libraries
  NT public libraries
    NT rural libraries
  NT academic libraries
    NT community college libraries
  NT school libraries
    NT media centers
      UF media centres
  NT digital libraries
  NT reference libraries
  NT children’s libraries
  NT small libraries

Archives
  NT archival processing

Schools
  NT universities and colleges
    NT library schools

Agents (equipment, apparatus)

Information technology
  NT computer networks
    NT Internet
      NT World Wide Web
        NT web sites
          UF websites
          RT web design
            NT Accessible web sites
SN Web sites that incorporate features to assist users with disabilities.

NT computer hardware
- NT computer equipment
- NT computers

NT storage media
- NT compact disks
- NT DVD
  - UF Digital Video Disc
  - UF Digital Versatile Disc
- NT CD-ROM
  - UF Compact Disc Read-Only Memory

NT information systems
- NT integrated systems
  - NT integrated library systems
    - UF OPAC
    - UF library catalog

NT information storage and retrieval systems
- NT paper based information systems
  - NT card catalogs
  - NT catalog cards
    - UF catalogue cards

**Library resources**
- NT print resources
  - NT periodicals
    - NT newspapers
    - NT journals
      - NT scholarly periodicals
        - UF scholarly journals

- NT audiovisual resources
  - NT video recordings
    - UF video programs

- NT cultural resources
  - NT cultural property
    - UF antiquities

**Patients**

**Library users**
- NT children
  - UF toddlers
- NT men
  - UF dads
  - UF fathers
- NT women
UF moms
UF mothers

NT seniors (citizens)
SN Adults aged 65 years and older.

NT communities
  NT communities of practice
  NT research communities
  NT academic communities
    NT students
      UF college students

End products

Research and Analysis
  NT quantitative research
    NT content analysis (communication)
      SN Methods of interpreting and summarizing the essential
      points of any kind of communication.
      UF discourse analysis

Actions/Activities

Processes/functions

Library programs and services
  NT library programs
    NT library program evaluation
  NT information services
  NT reference services
  NT interlibrary loans
    NT interlibrary loan policies
  NT storytelling
    UF story-time
  NT education
    UF instruction

Operations

Library operations
  NT web design
    UF website design
    UF web site design
  NT Accessible Web Design
    SN Design principles that include the needs of people
    whose physical, mental, or environmental conditions limit
    their performance.
  NT Universal Web Design
    SN Design principles that include people of all ages and
    abilities.
RT web sites
NT collection development
   NT materials acquisitions
      NT materials orders
   UF ordering

**Library administration**
NT library policies
NT library use studies
   UF library use
      SN The extent to which the resources and services of a library are utilized by its clientele.
NT strategic planning
   NT library mission statements
   NT library vision statements
   NT library goals
      SN The systematic process by which an institution formulates achievable policy objectives for future growth and development based on its mission and goals.

**Complex actions**

**Information organization**
NT data analysis
   NT data
      NT metadata
NT cataloging
   NT cataloging standards
      UF metadata standards
   NT classification
      NT Library of Congress classification
   NT indexing

**Location**

**Geographic location**
NT Europe
   NT United Kingdom
      NT Great Britain
         UF Britain
NT North America
   NT Canada
         UF Northern Alberta
      SN For specific Provinces of Canada, perform a full text search.

**Time**

**Time period**
NT 1900-2000 (UF 1990-2000)
APPENDIX E: SOFTWARE GENERATED THESAURUS

1800-1900
BT TIME PERIOD

1900-2000
BT TIME PERIOD

2000-2100
BT TIME PERIOD

ACADEMIC COMMUNITIES
BT COMMUNITIES
NT STUDENTS

ACADEMIC LIBRARIES
BT LIBRARIES
NT COMMUNITY COLLEGE LIBRARIES

ACCESSIBLE WEB DESIGN
SN Design principles that include the needs of people whose physical, mental, or environmental conditions limit their performance.
BT WEB DESIGN

ACCESSIBLE WEB SITES
SN Web sites that incorporate features to assist users with disabilities.
BT WEB SITES

ANTIQUITIES
USE CULTURAL PROPERTY

ARCHIVAL PROCESSING
BT ARCHIVES

ARCHIVES
NT ARCHIVAL PROCESSING

AUDIOVISUAL RESOURCES
BT LIBRARY RESOURCES
NT VIDEO RECORDINGS

BIBLIOMETRICS
BT STATISTICS

BRITAIN
USE GREAT BRITAIN
CANADA
  SN For specific Provinces of Canada, perform a full text search.
  UF NORTHERN ALBERTA
  BT NORTH AMERICA

CARD CATALOGS
  BT PAPER BASED INFORMATION SYSTEMS
  NT CATALOG CARDS

CATALOG CARDS
  UF CATALOGUE CARDS
  BT CARD CATALOGS

CATALOGING
  BT INFORMATION ORGANIZATION
  NT CATALOGING STANDARDS

CATALOGING STANDARDS
  UF METADATA STANDARDS
  BT CATALOGING

CATALOGUE CARDS
  USE CATALOG CARDS

CD-ROM
  UF COMPACT DISK READ-ONLY MEMORY
  BT COMPACT DISKS

CHILDREN
  UF TODDLERS
  BT LIBRARY USERS

CHILDREN'S LIBRARIES
  BT LIBRARIES

CLASSIFICATION
  BT INFORMATION ORGANIZATION
  NT LIBRARY OF CONGRESS CLASSIFICATION

COLLECTION DEVELOPMENT
  BT LIBRARY OPERATIONS
  NT MATERIALS ACQUISITIONS

COLLEGE STUDENTS
  USE STUDENTS
COMMUNITIES
  BT  LIBRARY USERS
  NT  ACADEMIC COMMUNITIES
      COMMUNITIES OF PRACTICE
      RESEARCH COMMUNITIES

COMMUNITIES OF PRACTICE
  BT  COMMUNITIES

COMMUNITY COLLEGE LIBRARIES
  BT  ACADEMIC LIBRARIES

COMPACT DISK READ-ONLY MEMORY
  USE  CD-ROM

COMPACT DISKS
  BT  STORAGE MEDIA
  NT  CD-ROM
  NT  DVD

COMPUTER EQUIPMENT
  BT  COMPUTER HARDWARE
  NT  COMPUTERS

COMPUTER HARDWARE
  BT  INFORMATION TECHNOLOGY
  NT  COMPUTER EQUIPMENT

COMPUTER NETWORKS
  BT  INFORMATION TECHNOLOGY
  NT  INTERNET

COMPUTERS
  BT  COMPUTER EQUIPMENT

CONTENT ANALYSIS (COMMUNICATION)
  SN  Methods of interpreting and summarizing the essential points of any kind
      of communication.
  UF  DISCOURSE ANALYSIS
  BT  QUANTITATIVE RESEARCH

CULTURAL PROPERTY
  UF  ANTIQUITIES
  BT  CULTURAL RESOURCES
CULTURAL RESOURCES
  BT  LIBRARY RESOURCES
  NT  CULTURAL PROPERTY

DADS
  USE  MEN

DATA
  BT  DATA ANALYSIS
  NT  METADATA

DATA ANALYSIS
  BT  INFORMATION ORGANIZATION
  NT  DATA

DIGITAL LIBRARIES
  BT  LIBRARIES

DIGITAL VERSATILE DISC
  USE  DVD

DIGITAL VIDEO DISC
  USE  DVD

DISCOURSE ANALYSIS
  USE  CONTENT ANALYSIS (COMMUNICATION)

DVD
  UF  DIGITAL VERSATILE DISC
  UF  DIGITAL VIDEO DISC
  BT  COMPACT DISKS

EDUCATION
  UF  INSTRUCTION
  BT  LIBRARY PROGRAMS AND SERVICES

EUROPE
  BT  GEOGRAPHIC LOCATION
  NT  UNITED KINGDOM

EVIDENCE-BASED LIBRARY SCIENCE
  BT  LIBRARY SCIENCE

FATHERS
  USE  MEN
GEOGRAPHIC LOCATION
   NT EUROPE
   NT NORTH AMERICA

GREAT BRITAIN
   UF BRITAIN
   BT UNITED KINGDOM

INDEXING
   BT INFORMATION ORGANIZATION

INFORMATION ORGANIZATION
   NT CATALOGING
   NT CLASSIFICATION
   NT DATA ANALYSIS
   NT INDEXING

INFORMATION SCIENCE
   NT KNOWLEDGE MANAGEMENT
   NT MEDICAL INFORMATICS
   NT STATISTICS

INFORMATION SERVICES
   BT LIBRARY PROGRAMS AND SERVICES

INFORMATION STORAGE AND RETRIEVAL SYSTEMS
   BT INFORMATION TECHNOLOGY
   NT PAPER BASED INFORMATION SYSTEMS

INFORMATION SYSTEMS
   BT INFORMATION TECHNOLOGY
   NT INTEGRATED SYSTEMS

INFORMATION TECHNOLOGY
   NT COMPUTER HARDWARE
   COMPUTER NETWORKS
   INFORMATION STORAGE AND RETRIEVAL SYSTEMS
   INFORMATION SYSTEMS
   STORAGE MEDIA

INSTRUCTION
   USE EDUCATION

INTEGRATED LIBRARY SYSTEMS
   BT INTEGRATED SYSTEMS
UF  OPAC
UF  LIBRARY CATALOGS

INTEGRATED SYSTEMS
NT  INTEGRATED LIBRARY SYSTEMS
BT  INFORMATION SYSTEMS

INTERLIBRARY LOAN POLICIES
NT  INTERLIBRARY LOANS

INTERLIBRARY LOANS
BT  LIBRARY PROGRAMS AND SERVICES
NT  INTERLIBRARY LOAN POLICIES

INTERNET
BT  COMPUTER NETWORKS
NT  WORLD WIDE WEB

JOURNALS
BT  PERIODICALS
NT  SCHOLARLY PERIODICALS

KNOWLEDGE BROKERS
USE  KNOWLEDGE WORKERS

KNOWLEDGE MANAGEMENT
BT  INFORMATION SCIENCE
NT  KNOWLEDGE WORKERS

KNOWLEDGE WORKERS
BT  KNOWLEDGE MANAGEMENT
UF  KNOWLEDGE BROKERS

LIBRARIES
NT  ACADEMIC LIBRARIES
    CHILDREN'S LIBRARIES
    DIGITAL LIBRARIES
    PUBLIC LIBRARIES
    REFERENCE LIBRARIES
    SCHOOL LIBRARIES
    SMALL LIBRARIES

LIBRARY ADMINISTRATION
NT  LIBRARY POLICIES
NT  LIBRARY USE STUDIES
NT  STRATEGIC PLANNING
LIBRARY CATALOG
  USE INTEGRATED LIBRARY SYSTEMS

LIBRARY OF CONGRESS CLASSIFICATION
  BT CLASSIFICATION

LIBRARY GOALS
  BT STRATEGIC PLANNING

LIBRARY MISSION STATEMENTS
  BT STRATEGIC PLANNING

LIBRARY OPERATIONS
  NT COLLECTION DEVELOPMENT
  WEB DESIGN

LIBRARY POLICIES
  BT LIBRARY ADMINISTRATION

LIBRARY PROGRAM EVALUATION
  BT LIBRARY PROGRAMS

LIBRARY PROGRAMS
  BT LIBRARY PROGRAMS AND SERVICES
  NT LIBRARY PROGRAM EVALUATION

LIBRARY PROGRAMS AND SERVICES
  NT EDUCATION
  NT INFORMATION SERVICES
  NT INTERLIBRARY LOANS
  NT LIBRARY PROGRAMS
  NT REFERENCE SERVICES
  NT STORYTELLING

LIBRARY RESOURCES
  NT AUDIOVISUAL RESOURCES
  NT CULTURAL RESOURCES
  NT PRINT RESOURCES

LIBRARY SCHOOLS
  BT UNIVERSITIES AND COLLEGES

LIBRARY SCIENCE
  NT EVIDENCE-BASED LIBRARY SCIENCE
LIBRARY USE
  USE LIBRARY USE STUDIES

LIBRARY USE STUDIES
  SN The extent to which the resources and services of a library are utilized by its clientele.
  UF LIBRARY USE
  BT LIBRARY ADMINISTRATION

LIBRARY USERS
  NT CHILDREN
  COMMUNITIES
  MEN
  SENIORS (CITIZENS)
  WOMEN

LIBRARY VISION STATEMENTS
  BT STRATEGIC PLANNING

MATERIALS ACQUISITIONS
  BT COLLECTION DEVELOPMENT
  NT MATERIALS ORDERS

MATERIALS ORDERS
  UF ORDERING
  BT MATERIALS ACQUISITIONS

MEDIA CENTERS
  UF MEDIA CENTRES
  BT SCHOOL LIBRARIES

MEDIA CENTRES
  USE MEDIA CENTERS

MEDICAL INFORMATICS
  BT INFORMATION SCIENCE

MEN
  UF DADS
  UF FATHERS
  BT LIBRARY USERS

METADATA
  BT DATA

METADATA STANDARDS
USE CATALOGING STANDARDS

MISSION STATEMENTS
   USE STRATEGIC PLANNING

MOMS
   USE WOMEN

MOTHERS
   USE WOMEN

NEWSPAPERS
   BT PERIODICALS

NORTH AMERICA
   BT GEOGRAPHIC LOCATION
   NT CANADA

NORTHERN ALBERTA
   USE CANADA

OPAC
   USE INTEGRATED LIBRARY SYSTEMS

ORDERING
   USE MATERIALS ORDERS

PAPER BASED INFORMATION SYSTEMS
   BT INFORMATION STORAGE AND RETRIEVAL SYSTEMS
   NT CARD CATALOGS

PERIODICALS
   BT PRINT RESOURCES
   NT JOURNALS
   NT NEWSPAPERS

PRINT RESOURCES
   BT LIBRARY RESOURCES
   NT PERIODICALS

PUBLIC LIBRARIES
   BT LIBRARIES
   NT RURAL LIBRARIES

QUANTITATIVE RESEARCH
   BT RESEARCH AND ANALYSIS
CONTENT ANALYSIS (COMMUNICATION)

REFERENCE LIBRARIES
   BT   LIBRARIES

REFERENCE SERVICES
   BT   LIBRARY PROGRAMS AND SERVICES

RESEARCH AND ANALYSIS
   NT   QUANTITATIVE RESEARCH

RESEARCH COMMUNITIES
   BT   COMMUNITIES

RURAL LIBRARIES
   BT   PUBLIC LIBRARIES

SCHOLARLY JOURNALS
   USE   SCHOLARLY PERIODICALS

SCHOLARLY PERIODICALS
   UF   SCHOLARLY JOURNALS
   BT   JOURNALS

SCHOOL LIBRARIES
   BT   LIBRARIES
   NT   MEDIA CENTERS

SCHOOLS
   NT   UNIVERSITIES AND COLLEGES

SENIORS (CITIZENS)
   SN   Adults aged 65 years or older.
   BT   LIBRARY USERS

SMALL LIBRARIES
   BT   LIBRARIES

STATISTICS
   BT   INFORMATION SCIENCE
   NT   BIBLIOMETRICS

STORAGE MEDIA
   BT   INFORMATION TECHNOLOGY
   NT   COMPACT DISKS
STORY-TIME
  USE STORYTELLING

STORYTELLING
  UF STORY-TIME
  BT LIBRARY PROGRAMS AND SERVICES

STRATEGIC PLANNING
  SN The systematic process by which an institution formulates policy objectives for growth and development based on its mission and goals.
  NT LIBRARY VISION STATEMENTS
  NT LIBRARY MISSION STATEMENTS
  NT LIBRARY GOALS
  BT LIBRARY ADMINISTRATION

STUDENTS
  UF COLLEGE STUDENTS
  BT ACADEMIC COMMUNITIES

TIME PERIOD
  NT 1800-1900
      1900-2000
      2000-2100

TODDLERS
  USE CHILDREN

UNITED KINGDOM
  BT EUROPE
  NT GREAT BRITAIN

UNIVERSAL WEB DESIGN
  SN Design principles that include people of all ages and abilities.
  BT WEB DESIGN

UNIVERSITIES AND COLLEGES
  BT SCHOOLS
  NT LIBRARY SCHOOLS

VIDEO PROGRAMS
  USE VIDEO RECORDINGS

VIDEO RECORDINGS
  UF VIDEO PROGRAMS
  BT AUDIOVISUAL RESOURCES
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