

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

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Wiley Online Library: Browse and search the ASIST thesaurus. (n.d.). *ASIST Thesaurus*. Retrieved November 1, 2013, from <http://onlinelibrary.wiley.com/asist?contextTerm=>

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.
4. Ordering catalogue cards for rural reference libraries.
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.
9. A bibliometric analysis of scholarly journals in library and information science for the period 1990-2000.
10. Recommendations for standards for designing web sites for the physically handicapped.
11. Statistics on the impact of internet technologies on undergraduates' uses of the academic library.
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.
14. A discourse analysis of library school mission statements in North America.
15. An evaluation of Library of Congress Classification for antiquities.

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

Concept	ASIS&T terms	Library Lit terms
Evidence-based librarianship <ul style="list-style-type: none"> • Librarianship • Evidence-based 	Term not listed	Evidence-based library science -no BT listed
My decision: Library science [facet] NT Evidence-based library science		
Inter-library loan	Library operations NT library and archival services NT library technical services NT interlibrary loans	Library circulation & loans NT Interlibrary loans NT Academic libraries—interlibrary loans
My decision: Library operations [facet] NT interlibrary loans		
Community college libraries <ul style="list-style-type: none"> • Communities • Community colleges • Colleges • Libraries 	Product and service providers NT libraries NT academic libraries NT community college libraries	Libraries NT Academic libraries NT Community college libraries
My decision: Libraries [facet] NT Community college libraries		
Rural reference libraries <ul style="list-style-type: none"> • Libraries • Reference libraries • Rural libraries 	Term not listed	Libraries NT Public libraries NT Rural libraries
My decision: Libraries NT Reference libraries NT Public libraries NT Rural libraries		
Catalogue cards <ul style="list-style-type: none"> • Card catalogues • Library catalogues 	Hardware, software, and equipment NT information technology NT information storage and retrieval systems NT paper based information systems Hardware, software, and equipment NT integrated systems NT integrated library systems	Library publishing NT Library publications NT Library catalogs NT Card catalogs
My decision: Information technology [facet]		

NT information storage and retrieval systems NT paper based information systems NT card catalogues NT catalogue cards		
Video programs <ul style="list-style-type: none"> Videos Programs (software) 	Documents by medium, physical form NT nonprint media NT video recordings	Library materials NT Nonbook materials NT Audiovisual materials NT Video recordings
My decision: Library materials [facet] NT Audiovisual materials NT video recordings		
School library media centres <ul style="list-style-type: none"> School libraries Library media centres 	Products and service providers NT libraries NT media centers	Libraries NT School libraries Schools NT Instructional materials centers UF School media centers
My decision: Use two compound terms. Libraries NT School libraries NT Media centers		
DVD-technology <ul style="list-style-type: none"> DVDs Technology 	Hardware, software, and equipment NT optical equipment NT optical media NT optical disks NT compact disks -NT DVD Physical media NT optical media NT optical disks NT compact disks NT DVD	Optical disks (no BT) NT DVDs UF DVD technology
My decision: Information technology NT Storage media NT Compact disks NT DVDs		
Bibliometric analysis <ul style="list-style-type: none"> Bibliometric Analysis 	Research and analytic methods NT quantitative analysis NT measurement NT informetrics -NT bibliometrics	Information science—Statistics NT Bibliometrics
My decision: Information science [facet]		

NT Statistics NT Bibliometrics				
Scholarly journals <ul style="list-style-type: none"> • Journals • Scholarly 			Document types NT publications NT serials NT periodicals -NT journals	Library materials NT Periodicals NT Scholarly periodicals
My decision: Library resources NT Print resources NT Periodicals NT Newspapers NT Journals NT Scholarly periodicals UF Scholarly journals				
Library and Information Science <ul style="list-style-type: none"> • Library science • Information science 			Fields and disciplines NT information science NT librarianship	Communication NT Information science Library science (no BT)
My decision: Library science [facet] Information science [facet]				
Designing web sites <ul style="list-style-type: none"> • Web sites • Web design 			Document types NT digital objects NT electronic documents -NT electronic publications Attributes NT general attributes NT design NT screen design	Computer network resources NT Websites NT Accessible websites for people with disabilities Web development (no BT) NT Web design
My decision: Library resources [facet] Library operations [facet] NT Computer network resources NT web design NT Websites				
Physically handicapped (do not factor)			Activities and operations NT library operations NT access to resources NT universal access	Libraries & people with disabilities UF Handicapped—Library services for
My decision: Library operations [facet] NT Access to resources NT Universal access				
Internet technologies <ul style="list-style-type: none"> • Internet • Technologies 			Communications networks NT telecommunications networks NT Internet	Wide area networks (computer networks) NT Internet
My decision:				

Info technology [facet] NT Computer networks NT Internet		
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Small-scale digital libraries • Digital libraries • Small-scale libraries	Product and service providers NT libraries NT small libraries NT digital libraries	Libraries NT Digital libraries NT Small libraries
My decision: Libraries [facet] NT Small libraries NT Digital libraries		
<hr/>		
Discourse analysis • Discourse • Analysis	Natural processes and events NT human processes NT mental processes NT linguistic analysis	Authorship NT Academic discourse Quantitative research NT Content analysis (communication)
My decision: Research and Analysis [facet] NT Quantitative research NT Content analysis (communication)		
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Library school • Libraries • Schools	Organizations NT Colleges and universities NT Library schools	Schools NT Universities & colleges NT Library schools
My decision: Schools NT Universities and colleges NT Library schools		
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Mission statements • Missions • Library missions • Statements	Activities and operations NT management operations NT planning NT strategic planning	Strategic planning UF Goal setting (strategic planning) Libraries—Aims & objectives
My decision: Library administration [facet] 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
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

NT 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

WEB DESIGN

UF WEB SITE DESIGN
UF WEBSITE DESIGN
BT LIBRARY OPERATIONS
NT ACCESSIBLE WEB DESIGN
NT UNIVERSAL WEB DESIGN
RT WEB SITES

WEB SITE DESIGN

USE WEB DESIGN

WEB SITES

UF WEBSITES
NT ACCESSIBLE WEB SITES
BT WORLD WIDE WEB
RT WEB DESIGN

WEBSITE DESIGN

USE WEB DESIGN

WEBSITES

USE WEB SITES

WOMEN

UF MOMS
UF MOTHERS
BT LIBRARY USERS

WORLD WIDE WEB

BT INTERNET
NT WEB SITES