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Assignment 2: Thesaurus Construction Project

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<u>Final Report</u>

To construct my thesaurus, I began with facet analysis, which is useful for areas of knowledge that include complex subjects. Library and information science, which is the focus of my collection, qualifies as a complex area of knowledge. The first step is to create singlesentence subject statements to represent what the documents in the collection are about, but this part has already been done for me as part of the assignment. I moved on to the second step, which is to pull indexable concepts from these subject statements. To do this, I printed the list of statements and highlighted the significant words and phrases from each. Since my thesaurus is intended for the library and information science audience, I purposefully omitted the term "library and information science" as being too general and likely to be related to most other terms in the thesaurus. I also left out other terms that I felt were too generic or ambiguous to be useful in narrowing down a topic, including "place," "recommendations," "impact," and "uses."

According to the textbook by Aitchison, Gilchrist, and Bawden, and the information discussed in class, it is often best to divide multi-concept subjects into single-concept components, which can later be joined together (synthesized) at the point of information retrieval. To this end, I factored out the individual terms whenever possible. For example, I separated "Canadian health research" into the three separate terms "Canadian," "health," and "research." Similarly, I factored out "reference and information services" to form "reference services" and "information services." I did not break these two terms down further, because that would have led to loss of clarity, with the separate terms "reference," "information," and "services" being too vague to be of much use. Another example of factoring is in the case of "rural reference libraries," wherein I divided the compound term into "rural libraries" and "reference libraries." My next step was to put my terms into the appropriate forms for indexing. I could have done this later on, but I thought it would be easier to work with the correct word forms from the beginning, rather than having to change out words later on. The textbook by Aitchison et al provides a list of rules for determining the form that index terms should take, and I followed these guidelines. This included converting adjectives to noun forms ("small-scale" became "small-scale libraries"), omitting articles ("the physically handicapped" became "physically handicapped"), and avoiding hyphens whenever possible ("inter-library loan" became "interlibrary loan"). I also referred to the rules regarding count nouns and non-count nouns to decide which terms should be plural and which should be singular. Examples of count nouns that needed to be converted to plurals include "computers" and "library schools." Non-count nouns (including abstract concepts) to be left in the singular form included "instruction" and "history." Finally, I converted the slang terms "moms" and "dads" to the more formal "mothers" and "fathers."

Now that I had my terms formatted uniformly, I began the faceted classification, placing them in the fundamental facet categories and subcategories as explained in the class notes and the textbook. The main facets I used were Entities/Things/Objects, Actions/Activities, and Space/Place/Location/Environment. I should note here that I did not include the time period 1990-2000 for my thesaurus because I felt that this kind of specific time frame could better be handled at the point of information retrieval by narrowing results by date. Therefore, I had no terms for the Time facet. Within the Entities/Things/Objects facet, I had the subfacets Abstract Entities, Artifacts (man-made), and Agents. Agents was further subdivided into Institutions, Individuals, and Equipment. Under the Actions/Activities facet were the subfacets Processes/Functions and Operations. Space/Place/Location/Environment had no subfacets. Since I am new at facet analysis, I am sure that I did not place every term in the same facet or subfacet as a more experienced indexer, but the process of categorizing the terms in this way helped me sort out the various elements that would go into the thesaurus nevertheless.

My next step was to use the ASIS&T Thesaurus of Information Science and Librarianship (ASIST) and the Library Literature and Information Science Full Text Thesaurus (LLIS) to determine preferred terms and gather ideas for related terms, narrower terms, and broader terms. I went through my entire list of terms, seeing if each was in either or both thesauri and making notes as to how each thesaurus used and presented those terms. The following is a table showing a sampling of some of my original terms and how I converted them based on the information found in the thesauri and my own judgment.

My Original Term	Preferred Term	Notes	
Bibliometric Analysis	Bibliometrics	Preferred term in LLIS	
Britain	Great Britain	Preferred term in ASIST	
Community Newspapers	Newspapers	Preferred term in LLIS; community newspapers is more specific than necessary for this thesaurus	
Instruction	Bibliographic Instruction	This is a term in LLIS and shows the focus on library and information science contexts	
Knowledge Brokers	Information Brokers	Preferred term in LLIS	
Ordering	Materials Acquisition	Ordering is ambiguous	
School Libraries	Media Centers	dia Centers Preferred term in ASIST (different from preferred term in LLIS)	
Seniors	Aged	Preferred term in LLIS	
Toddlers	Children	Preferred term in LLIS and ASIST; toddlers is more specific than necessary for this thesaurus	
Video Programs	Video Recordings	"Video Programs" in LLIS relates to library program planning, not the kind of programs intended in the subject statements	

In addition to determining preferred terms, I also used ASIST and LLIS to collect ideas for broader terms, narrower terms, related terms and additional USE/UF terms. This was a lengthy and complex process in which I followed words up and down the hierarchies in both thesauri, making notes about possible connections. I relied on the examples I found in the thesauri as well as the rules for determining relationships set forth in the textbook and other class materials to aid me in this process. I will present here some selected examples to show my thought processes in determining relationships in the various relationship types.

- For the term "antiquities," I used a quasi-synonym ("antiques"), which appeared in the thesauri in several contexts. Although these terms are not perfect synonyms and would not be interchangeable in a history collection, they are similar enough for use in a thesaurus focused on library and information science. Similarly, "parents" is specific enough for the purposes here, whereas "mothers" and "fathers" may need to be distinguished for other subject areas.
- Using the rules for whole-part hierarchical relationships, I linked the geographical term "Northern Alberta" to the broader term "Alberta," which in term had the broader term "Canada."
- According to the generic hierarchical relationship (linking a class/category to its members/species), "libraries" had several narrower terms, including "academic libraries," "digital libraries," and "public libraries." Similarly, "community college libraries" became a narrower term for "academic libraries." The important key to generic relationships is to follow the "all and some" rule. That is, it must be (and is) true that *all* academic libraries are libraries, and *some* libraries are academic libraries.

- Associative relationships suggest that siblings (terms sharing a common broader term) are not used as related terms, because they can be found by going one level up the hierarchy. Therefore, because "indexing," "cataloging," and "classification" all appeared as narrower terms for "organization of information," I did not link them to each other as related terms.
- One category of associative relationships is between an occupation and person in that occupation. This led me to include "librarians" and "librarianship" as related terms, because librarianship is the occupation of librarians.

At this point, I input all of my terms into the thesaurus software (TheW32) using the Add Term(s) function. The software interface was simple enough to understand, but I noticed that I was repeating many actions unnecessarily due to lack of shortcuts. For example, each time I added another term, I had to select and delete the previous term from the text field. Once all of my terms were all in the system, I went through and added the relationships between them (RT, BT, NT, USE, and UF) according to my notes. One mistake I made a few times, requiring me to go back and check for errors, was to start adding relationships after only single clicking on a term rather than double clicking. At one point, I had about ten irrelevant relationships listed under scholarly journals because of this error. Thankfully, the errors were easy to fix. I made a few minor adjustments upon seeing the whole thesaurus laid out together, but for the most part, I used the relationships and terms I had determined ahead of time.

Next, I went through my terms to see which ones needed scope notes added. Using information in LLIS, the Online Dictionary of Library and Information Science, and a general purpose dictionary, I constructed some brief scope notes. For example, "design" can have many

different meanings, so I added a scope note indicating the restrictions on its meaning. In certain cases, I felt that the context of the term was enough to provide clarification of the term's scope, so I did not add a scope note. For example, "aged" might be ambiguous on its own, but when seen in relation to the terms "elderly" and "senior citizens" its meaning becomes clear.

Although I am certain there are many improvements that could be made to my thesaurus, I have done my best with what little knowledge and experience I have gathered so far. I did my best to make my thesaurus useful and relevant to its intended audience, reaching a balance between exhaustivity and brevity, and between recall and precision. This is a much more complicated process than I would have imagined, and it requires a deep understanding of the subject matter being indexed as well. As this is only my second semester in the MLIS program, I still have much to learn about terminology and other intricacies of the field. The goal of a thesaurus is to aid searchers in finding the terms that they can use, and I have tried to accomplish that in this project. Upon putting together my information to submit for this thesaurus project, I discovered that I had combined multiple steps into one, namely Step 2 (construction relations) and Step 3 (selecting preferred terms). This was not a problem for me while doing the assignment, but it caused confusion when trying to separate out the elements for submission. Another lesson learned.

Original 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.
- 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.

Main Facets and Sub-Facets

Entities/Things/Objects

Abstract Entities history metadata instruction standards statistics Library of Congress Classification classification story-time protocols policies health Artifacts (man-made) internet technologies scholarly journals catalog cards antiquities DVD technology mission statements web sites video programs Agents Institutions libraries community college libraries reference libraries library schools school libraries public libraries academic libraries children's libraries digital libraries rural libraries small-scale libraries community newspapers Individuals librarians

moms and dads

seniors

toddlers

knowledge brokers

physically handicapped

Equipment

OPAC (online public access catalog) computers

Actions/Activities

Processes/Functions

research

reference services

information services

bibliometric analysis

interlibrary loans

evidence-based librarianship

Operations

ordering indexing designing

archiving

Space/Place/Location/Environment

Canada Northern Alberta Britain North America

Relations Constructed

academic libraries **BT** libraries NT community college libraries RT colleges and universities antiquities archiving **RT** libraries bibliometric analysis BT statistical methods **Britain** BT United Kingdom Canada **BT** North America NT Alberta catalog cards RT card catalogs RT cataloging RT library catalogs children's libraries **BT** libraries RT children RT storytelling classification BT organization of information NT classification schemes community college libraries BT academic libraries RT colleges and universities community newspapers computers designing digital libraries BT libraries RT virtual libraries DVD technology BT optical media evidence-based librarianship BT librarianship

health history indexing BT organization of information RT Library of Congress Classification information services RT reference services instruction interlibrary loans internet technologies NT World Wide Web RT web sites knowledge brokers librarians NT reference librarians **RT** librarianship libraries NT academic libraries NT children's libraries NT digital libraries NT school libraries NT public libraries NT small-scale libraries NT rural libraries Library of Congress Classification BT classification schemes RT indexing library schools BT colleges and universities **RT** librarianship metadata RT metadata standards mission statements BT policies moms and dads RT children North America NT Canada Northern Alberta **BT** Alberta

OPAC (online public access catalog) BT library catalogs ordering physically handicapped policies NT mission statements protocols public libraries **BT** libraries reference libraries RT information services **RT** libraries RT reference librarians reference services RT information services **RT** libraries **RT** reference librarians research rural libraries **BT** libraries scholarly journals school libraries **BT** libraries seniors small-scale libraries **BT** libraries standards NT metadata standards statistics NT statistical methods story-time RT children's libraries toddlers undergraduates BT students RT colleges and universities video programs BT optical media web sites RT internet

Final Term Selections

academic libraries aged UF elderly UF senior citizens UF seniors Alberta antiques UF antiquities antiquities USE antiques archives UF archiving archiving **USE** archives bibliographic instruction UF instruction bibliometric analysis **USE** bibliometrics bibliometrics UF bibliometric analysis Britain **USE** Great Britain Canada card catalogs catalog cards cataloging children UF toddlers UF youth children's libraries classification classification schemes college students UF undergraduate students UF undergraduates colleges and universities community college libraries community newspapers

USE newspapers computers dads USE parents design UF designing designing USE design digital libraries digital videodiscs UF DVD UF DVD technology disabled USE handicapped DVD USE digital videodiscs DVD technology USE digital videodiscs elderly USE aged evidence-based librarianship USE evidence-based library and information practice evidence-based library and information practice UF evidence-based librarianship fathers USE parents Great Britain UF Britain handicapped UF disabled UF physically handicapped health history indexing information brokers UF knowledge brokers information services instruction USE bibliographic instruction inter-library loans

USE interlibrary loans interlibrary loans UF inter-library loans internet UF internet technologies internet technologies **USE** internet knowledge brokers USE information brokers librarians librarianship libraries library catalogs library of congress classification library schools materials acquisitions UF ordering media centers UF school libraries UF school library media centers metadata metadata standards mission statements moms USE parents mothers USE parents newspapers UF community newspapers North America Northern Alberta online catalogs UF OPAC (online public access catalogs) **UF OPACs** OPAC (online public access catalogs) USE online catalogs **OPACs** USE online catalogs optical media ordering

USE materials acquisitions organization of information parents UF dads UF fathers UF moms UF mothers peer-reviewed journals USE refereeing of periodicals physically handicapped USE handicapped policies USE policy statements policy statements UF policies protocols **USE** standards public libraries refereeing of periodicals UF peer-reviewed journals UF scholarly journals reference librarians reference libraries USE reference services reference services UF reference libraries research rural libraries scholarly journals USE refereeing of periodicals school libraries USE media centers school library media centers **USE** media centers senior citizens USE aged seniors USE aged small libraries UF small-scale libraries

small-scale libraries USE small libraries standards UF protocols statistical methods statistics story telling USE storytelling story-time USE storytelling storytelling UF story telling UF story-time students toddlers USE children undergraduate students USE college students undergraduates USE college students United Kingdom video programs USE video recordings video recordings UF video programs UF videotapes videotapes USE video recordings virtual libraries web sites world wide web youth USE children

Final Thesaurus

ACADEMIC LIBRARIES

- BT LIBRARIES
- NT COMMUNITY COLLEGE LIBRARIES
- RT COLLEGES AND UNIVERSITIES

AGED

UF ELDERLY SENIOR CITIZENS SENIORS

ALBERTA

- BT CANADA
- NT NORTHERN ALBERTA

ANTIQUES

UF ANTIQUITIES

ANTIQUITIES

USE ANTIQUES

ARCHIVES

- UF ARCHIVING
- RT LIBRARIES

ARCHIVING

USE ARCHIVES

BIBLIOGRAPHIC INSTRUCTION

- SN Instruction designed to teach library users how to effectively use various library resourcesUF INSTRUCTION
- BIBLIOMETRIC ANALYSIS
 - USE BIBLIOMETRICS

BIBLIOMETRICS

- SN The use of mathematical and statistical methods to study and identify patterns of usage
- UF BIBLIOMETRIC ANALYSIS
- BT STATISTICAL METHODS

BRITAIN

USE GREAT BRITAIN

CANADA

- BT NORTH AMERICA
- NT ALBERTA

CARD CATALOGS

- RT CATALOG CARDS
- CATALOG CARDS
 - RT CARD CATALOGS
 - CATALOGING
 - LIBRARY CATALOGS

CATALOGING

RT CATALOG CARDS

CHILDREN

BT

UF TODDLERS

YOUTH

RT CHILDREN'S LIBRARIES PARENTS

CHILDREN'S LIBRARIES

- BT LIBRARIES
 - RT CHILDREN
 - RT CHILDREN STORYTELLING

CLASSIFICATION

- BT ORGANIZATION OF INFORMATION
- NT CLASSIFICATION SCHEMES

CLASSIFICATION SCHEMES

- BT CLASSIFICATION
- NT LIBRARY OF CONGRESS CLASSIFICATION
- COLLEGE STUDENTS
 - UF UNDERGRADUATE STUDENTS UNDERGRADUATES
 - BT STUDENTS
 - RT COLLEGES AND UNIVERSITIES
- COLLEGES AND UNIVERSITIES
 - NT LIBRARY SCHOOLS
 - RT ACADEMIC LIBRARIES
 - COLLEGE STUDENTS

COMMUNITY COLLEGE LIBRARIES

COMMUNITY COLLEGE LIBRARIES

- BT ACADEMIC LIBRARIES
- RT COLLEGES AND UNIVERSITIES
- COMMUNITY NEWSPAPERS

USE NEWSPAPERS

COMPUTERS

DADS

USE PARENTS

DESIGN

SN The organization or structure of formal elements, such as web sites or service programs UF DESIGNING

DESIGNING

USE DESIGN

DIGITAL LIBRARIES

SN A library in which a significant proportion of the resources are available in digital form and accessible via computers

BT LIBRARIES RT VIRTUAL LIBRARIES DIGITAL VIDEODISCS UF DVD DVD TECHNOLOGY **OPTICAL MEDIA** ΒT DISABLED USE HANDICAPPED DVD USE DIGITAL VIDEODISCS DVD TECHNOLOGY USE DIGITAL VIDEODISCS ELDERLY USE AGED EVIDENCE-BASED LIBRARIANSHIP USE EVIDENCE-BASED LIBRARY AND INFORMATION PRACTICE EVIDENCE-BASED LIBRARY AND INFORMATION PRACTICE UF **EVIDENCE-BASED LIBRARIANSHIP** BT LIBRARIANSHIP FATHERS USE PARENTS GREAT BRITAIN UF BRITAIN BT UNITED KINGDOM HANDICAPPED UF DISABLED PHYSICALLY HANDICAPPED HEALTH HISTORY INDEXING BT ORGANIZATION OF INFORMATION RT LIBRARY OF CONGRESS CLASSIFICATION **INFORMATION BROKERS KNOWLEDGE BROKERS** UF **INFORMATION SERVICES** RT **REFERENCE SERVICES** INSTRUCTION USE BIBLIOGRAPHIC INSTRUCTION **INTER-LIBRARY LOANS** USE INTERLIBRARY LOANS INTERLIBRARY LOANS

UF INTER-LIBRARY LOANS INTERNET

- UF INTERNET TECHNOLOGIES
- NT WORLD WIDE WEB
- RT WEB SITES

INTERNET TECHNOLOGIES

USE INTERNET

KNOWLEDGE BROKERS

USE INFORMATION BROKERS

LIBRARIANS

NT REFERENCE LIBRARIANS

RT LIBRARIANSHIP

LIBRARIANSHIP

- NT EVIDENCE-BASED LIBRARY AND INFORMATION PRACTICE
- RT LIBRARIANS LIBRARIES LIBRARY SCHOOLS

LIBRARIES

- NT ACADEMIC LIBRARIES CHILDREN'S LIBRARIES DIGITAL LIBRARIES MEDIA CENTERS PUBLIC LIBRARIES RURAL LIBRARIES SMALL LIBRARIES
- RT ARCHIVES LIBRARIANSHIP REFERENCE SERVICES

LIBRARY CATALOGS

NT ONLINE CATALOGS

RT CATALOG CARDS

LIBRARY OF CONGRESS CLASSIFICATION

- BT CLASSIFICATION SCHEMES
- RT INDEXING
- LIBRARY SCHOOLS
 - BT COLLEGES AND UNIVERSITIES
 - RT LIBRARIANSHIP
- MATERIALS ACQUISITIONS
 - UF ORDERING
- MEDIA CENTERS
 - UF SCHOOL LIBRARIES
 - SCHOOL LIBRARY MEDIA CENTERS
 - BT LIBRARIES
- METADATA
 - RT METADATA STANDARDS

METADATA STANDARDS ΒT **STANDARDS** RT METADATA MISSION STATEMENTS BT POLICY STATEMENTS MOMS USE PARENTS MOTHERS USE PARENTS NEWSPAPERS UF COMMUNITY NEWSPAPERS NORTH AMERICA NT CANADA NORTHERN ALBERTA BT ALBERTA **ONLINE CATALOGS** UF **OPAC (ONLINE PUBLIC ACCESS CATALOGS)** OPACS BT LIBRARY CATALOGS **OPAC (ONLINE PUBLIC ACCESS CATALOGS)** USE ONLINE CATALOGS **OPACS** USE ONLINE CATALOGS OPTICAL MEDIA NT DIGITAL VIDEODISCS VIDEO RECORDINGS ORDERING USE MATERIALS ACQUISITIONS ORGANIZATION OF INFORMATION NT CATALOGING CLASSIFICATION INDEXING PARENTS UF DADS FATHERS MOMS **MOTHERS** RT **CHILDREN** PEER-REVIEWED JOURNALS USE REFEREEING OF PERIODICALS PHYSICALLY HANDICAPPED USE HANDICAPPED

POLICIES

USE POLICY STATEMENTS POLICY STATEMENTS UF POLICIES NT MISSION STATEMENTS PROTOCOLS USE STANDARDS PUBLIC LIBRARIES BT LIBRARIES **REFEREEING OF PERIODICALS** UF PEER-REVIEWED JOURNALS SCHOLARLY JOURNALS **REFERENCE LIBRARIANS** BT LIBRARIANS RT **REFERENCE SERVICES REFERENCE LIBRARIES** USE REFERENCE SERVICES **REFERENCE SERVICES** UF **REFERENCE LIBRARIES** RT INFORMATION SERVICES LIBRARIES **REFERENCE LIBRARIANS** RESEARCH **RURAL LIBRARIES** BT LIBRARIES SCHOLARLY JOURNALS USE REFEREEING OF PERIODICALS SCHOOL LIBRARIES USE MEDIA CENTERS SCHOOL LIBRARY MEDIA CENTERS USE MEDIA CENTERS SENIOR CITIZENS USE AGED SENIORS USE AGED SMALL LIBRARIES UF SMALL-SCALE LIBRARIES ΒT LIBRARIES SMALL-SCALE LIBRARIES USE SMALL LIBRARIES **STANDARDS** UF PROTOCOLS NT METADATA STANDARDS STATISTICAL METHODS

BT STATISTICS NT **BIBLIOMETRICS STATISTICS** NT STATISTICAL METHODS STORY TELLING USE STORYTELLING STORY-TIME USE STORYTELLING STORYTELLING UF STORY TELLING STORY-TIME CHILDREN'S LIBRARIES RT **STUDENTS** NT COLLEGE STUDENTS TODDLERS USE CHILDREN UNDERGRADUATE STUDENTS USE COLLEGE STUDENTS UNDERGRADUATES USE COLLEGE STUDENTS UNITED KINGDOM NT **GREAT BRITAIN** VIDEO PROGRAMS USE VIDEO RECORDINGS VIDEO RECORDINGS UF VIDEO PROGRAMS VIDEOTAPES BT **OPTICAL MEDIA** VIDEOTAPES USE VIDEO RECORDINGS VIRTUAL LIBRARIES RT DIGITAL LIBRARIES WEB SITES RT INTERNET WORLD WIDE WEB BT INTERNET YOUTH USE CHILDREN