

Getting Results From One-Shot Instruction:

A Workshop For First-Year Students

Forthcoming publication in *College & Undergraduate Libraries*, Spring 2007

ABSTRACT

Describes a one-shot workshop called “Unravel The Library” aimed at students enrolled in English Composition classes at the University of Minnesota. Unravel lesson plans follow a set of objectives, use active learning techniques, and can be taught by any staff member. Some workshops include an assessment to measure student retention of basic concepts, tools, and skills. Parts of the lesson plan can be adopted to a variety of audiences by teachers or librarians wanting to build information literacy competencies, refresh students on using indexes, identifying scholarly literature, evaluating citations, finding books and periodicals, and designing search strategies in databases.

KEYWORDS:

information literacy, library workshops, first-year students, college freshman, active learning

Van Houlson, MA
Assistant Librarian, University of Minnesota Libraries, Twin Cities Campus
309 19th Ave. South
Minneapolis MN 55455
houls001@umn.edu
612-624-1140
612-626-9353 (fax)

INTRODUCTION

Academic librarians routinely assemble one-shot presentations and workshops without training in instructional design. Often in response to a request for a particular course, these presentations may show how to search the library catalog, use databases, and provide orientation to library services. Demos and lectures on library resources and services easily overload an audience because they are not designed around how much learners can absorb. Nor do they employ active learning techniques or anticipate the different learning styles of students.

Especially for first-year students, lectures build awareness about the library but are passive learning experiences and lack measurable outcomes. At the University of Minnesota, a series of workshops called *Unravel The Library* provide orientation but also include basic information literacy skills for evaluating sources, using indexes, finding books and articles, and learning search skills. One of the *Unravel The Library* workshops called *The Research Process - Finding Books and Articles* includes an assessment to evaluate student learning.

BACKGROUND

Librarians at the University of Minnesota formed an instructional design team in response to requests from the English Department. The department wanted tours that would show their students how to use the library for their English Composition assignments. A series of three workshops called *Unravel The Library* were developed to provide freshman students with an orientation and teach skills in using library tools to search articles and books.

The workshops were introduced in the fall 2002 and continue to be scheduled during the fall and spring semesters. *Unravel The Library 1: Orientation to the Libraries & Tour of Wilson Library* introduces library services, collections, along with a tour of the main library for social sciences and humanities. *Unravel The Library 2: The Research Process - Finding Books and*

Articles teach skills in searching indexes and evaluating scholarly vs. popular articles. *Unravel 3: Beyond the Basics-Advanced Searching* is instruction on how to formulate search strategies and use advanced search techniques. The English Composition teachers require students to complete at least one of the workshops and turn in a library certificate to verify attendance. Requiring certificates has resulted in consistent enrollment for the Unravel workshops. From the Fall 2002 to the Fall 2005, there were 310 Unravel sessions taught from 2002-2005, with a total attendance of 3780 students (Table 1)

Unravel Attendance Table 1					
	Fall 2002	2003	2004	2005	Total
Unravel 1	108	134	542	398	1182
Unravel 2	250	539	810	843	2442
Unravel 3	9	21	76	50	156
Total	367	694	1428	1291	3780

All of the workshops require online registration but are open enrollment, so they do attract students other than those from English Composition. This is particularly true of the *Unravel 3: Advanced Searching* workshops taken by upper level students. The most popular workshop is *Unravel 2: The Research Process* which targets specific research competencies for searching articles.

Using an instructional design model, the User Education Coordinator led a team to create lesson plans that would maximize student learning (Veldof 2003). This approach limits content into manageable “chunks” of what students “need to know” from the many “nice to know” skills, resources, and services. It was important to create lesson plans that taught fewer skills in order to reduce cognitive overload for learners. Human resource trainers share a similar concern in delivering computer-based instruction that organizes content into manageable chunks so that working memory can digest new information. (Clark 1994).

Unravel lesson plans have outlines that include learning objectives with teaching methods that serve as a script for instructors. Each “chunk” of an Unravel lesson plan has a method of presenting content, applications for learning such as exercises, and opportunities for learners to reflect and give verbal feedback on the teaching points. In their textbook on information literacy instruction, Grassian and Kaplowitz discuss major learning theories and how to design practical applications for teaching diverse learners (Grassian and Kaplowitz 2000). The Unravel lesson plans anticipate some of the learning styles commonly identified by Kolb's stages of learning. (Kolb 1964). Kolb's model describes learning as a cycle of experiencing, reflecting, thinking, and acting. (Chapman 2005). Learners will gravitate somewhere between these four styles of learning: 1) feeling and watching, 2) watching and thinking, 4) doing and thinking, 5) doing and feeling. In presenting content and creating exercises, Unravel instructors employ teaching methods so students learn by listening, seeing, doing and reflecting.

HOW IT WORKS

A variety of library staff have developed their own teaching style while delivering standard instructional sessions using the Unravel lesson plans. A pool of instructors is important for scheduling numerous workshops. Staff from reference, collections, and technical service was encouraged to become Unravel instructors even if they had no previous classroom experience. For example, a stack maintenance manager who supervises student workers, a business librarian with subject expertise, and a student employee assigned with support tasks became regular instructors. An intern from a local library science graduate program gained valuable experience by taking the workshops and teaching several sessions. Structured lesson plans lay the foundation for any staff member to develop their own instructional style. Current and past lesson plans for the Unravel workshops are available from <http://staff.lib.umn.edu/rcs/usered/unravel.html>

The workshops are held in a computer lab equipped with a projector. Class size is limited to twenty and additional staff serve as rovers to provide students with individual assistance. Most instructors begin as rovers and benefit from watching their peers teach to learn the lesson plan. Unravel workshops are 75 minutes and each segment of a lesson is timed. Each segment consists of teaching points and exercises to keep instructors focused and from talking too much. Packets of handouts, exercises, and certificates are kept in stock so that instructors can quickly prepare for a workshop.

UNRAVEL ONE

As the design team reviewed “need to know” content for workshops aimed at freshman, it became clear that an orientation was needed in addition to teaching specific research skills. The goals for *Unravel The Library 1: Orientation to the Libraries & Tour of Wilson Library* are:

1. Welcome new users to the University Libraries
2. Introduce students to the library system so they can get started
3. Help students feel comfortable so they come back and ask questions

The home page to the University Libraries is used to introduce students to library facilities and access tools, since most of what library users need is linked directly from the home page. The orientation is divided into a hands-on session and a walking tour of the main library for the humanities and social sciences. It begins with a virtual tour where the instructor navigates to selected links for library information, databases, services, tutorials and guides while students follow along at their workstations.

Although the logo “LUMINA, your digital gateway” is no longer used by the University of Minnesota Libraries, the teaching points remain the same. Students are reminded that “everything we’re doing here can be done off-campus” by logging on with a university id and password. The handout *What’s In Lumina* includes brief screen shots and descriptions for access

tools covered in the presentation. Take-aways that graphically review how to navigate to access are useful for library workshops. The *Orientation Guide* includes a campus map of library facilities that are promoted as learning spaces with wireless and network access. Active learning techniques are used to engage students by asking “does anyone have a major” to discuss a particular library or research collection. .

Unravel 1 does include a search of the catalog to find a book and a journal in order to demonstrate how to find call numbers and locations. Databases are described as “information about articles and other publications” with links that show how they are organized by type, subject, or alphabetically. Descriptions for a few indexes illustrate their specialized nature, but further demos are avoided. Rather than searching databases, the design team chose to introduce students to the research guides and tutorials that could help them get started with their research papers. *Research Quickstart* [<http://research.lib.umn.edu/>] is a tool for locating subject guides to indexes, web sites and reference source. *Research Quickstudy* [<http://tutorial.lib.umn.edu/>] is a tutorial on research strategies such as choosing a topic, designing a research strategy, finding and evaluating several different kinds of sources, and citing sources using style manuals.

The *Assignment Calculator* (Figure 1) is an open source software that combines content from other tutorials, library resources and writing centers.

[<http://www.lib.umn.edu/help/calculator/>].

UNIVERSITY OF MINNESOTA
Assignment Calculator
You CAN beat the clock!!

Date you will begin the assignment: 10 / 18 / 2005

Date the assignment is due: 11 / 18 / 2005

Subject area of the assignment:
Note: It is not required to enter in a subject area, but you might be surprised by what unique resources Research QuickStart tracks down for you!

- Accounting
- Advertising
- African American Studies
- African Studies
- Agriculture
- Agronomy
- Alternative Medicine

Calculate Assignment Schedule!

Figure 1

Students are shown how the *Calculator* will generate steps for completing the research paper with deadlines for each step. The steps cover how to define topics, develop research strategies, find articles and books, write drafts, gather additional information, and assemble the final paper. Links to writing centers and library tools create a powerful way to connect the writing and research process with library sources. No research has been conducted to determine if students use these tutorials, which cover most of the competencies being taught in the Unravel workshops.

Other orientation teaching points cover lending policies, delivery services, and reference assistance. Some of these functions are available as “personal account” features in the library catalog (MNCAT). Students are unaware of automated services for recalling books or obtaining materials from branch libraries or interlibrary loan. Other links are demonstrated for getting help through virtual reference services, visiting service desks, and calling by phone. Showing how to use the Frequently Asked Questions is promoted as helpful “when the library is closed”. Teaching content is reinforced by an exercise called the *LUMINA Hunt* (Appendix A). Like all

Unravel workshops, instructors and rovers visit each student to provide individual assistance during exercises and review “questions you found difficult”.

The second half of the workshop is a 25 minute tour of the Wilson Library. Teaching points include shelving arrangements, reference collections, service desks, printing, and the computer workstations in the Information Commons. Instructors try to include active learning techniques in the walking tour, for example, having students randomly select books from different shelving areas to compare how they are shelved by call number, size, or classification system. The staff at major service points like reference, circulation, reserves, and copy services is introduced so that students are more comfortable asking for assistance. Collections for reference, periodicals, microfilm, government publications, and business are visited along with the Information Commons. The tour stresses how service desks are places to ask questions and floor plans useful to find books and periodicals.

UNRAVEL TWO

Unravel 2 has the highest attendance and tends to be the lesson plan recommended by the English Composition teachers. It is divided into six “chunks”: Introduction (5 minutes), Choosing an Article Index (12 minutes), Searching For Articles (15 minutes), Searching Known Items in the Library Catalog (25 minutes), Popular versus Scholarly (10 minutes), Wrap-Up and Quiz (8 minutes). It includes a quiz which functions as an assessment of learning outcomes.

The introduction begins with an overview of this "big library" as a reason to learn how to find "good information". The class is shown the *Assignment Calculator* with links to emphasize how “the library has numerous guides just like this one for finding good information in books, journals, and magazines” Flipcharts are also used in Unravel 2 to introduce objectives and review teaching points for each section. The goals for this workshop:

1. Identify articles and books on a topic for a speech or paper

2. Locate books and periodicals in U of M Libraries
3. Identify whether an article is considered scholarly

The first part, "Choosing An Article Index", trains students on finding indexes for any topic. The design team agreed this was more important than teaching database search skills. The teaching objectives are: 1) define an article index 2) know how to access the *Research Quickstart* guides 3) locate three article indexes on a topic. To reinforce learning, teaching points are printed on handouts and written on flipcharts. For example, "An article index is where you find articles that exist – what's been published – not necessarily what is owned by the library". A display of indexes using an alphabetical or subject listing illustrates their specialized nature. Selecting indexes which reflect different perspectives is a major teaching point for this "chunk". Most libraries have some kind of subject arrangement to their indexes. At the University of Minnesota Libraries, *Research Quickstart* (Figure 2) is a finding tool for indexes and other reference sources on various subjects. These subject guides and specialized indexes are resources to locate articles on a topic that have been written for different audiences such as law, medicine, business, or technology.

RESEARCH QUICKSTART UNIVERSITY LIBRARIES
UNIVERSITY OF MINNESOTA

Contents of this page:

- [Abstracts and Indexes](#)
 - [Academic or Scholarly Articles Subject Indexes](#)
 - [General Indexes to Magazines, Journal & Newspaper Articles](#)
 - [Indexes, Other](#)
- [Catalogs and Bibliographies](#)
 - [Catalogs](#)
- [General Reference Sources](#)
 - [Biographical Sources](#)
 - [Dictionaries](#)
 - [Directories](#)
 - [Encyclopedias](#)
 - [General Reference Works](#)
 - [Handbooks and Manuals](#)
- [Internet Resources](#)
 - [Gateways & Megasites](#)
- [Societies, Agencies, and Organizations](#)

Selected Resources for: Agriculture

Subject Description: This subject covers: the science or art of cultivating the soil, growing and harvesting crops, and raising livestock. (From Britannica Online) [Questions? Ask Us!](#)

Abstracts and Indexes

Academic or Scholarly Articles Subject Indexes

- **AGRICOLA** [Find It enabled](#)
1970 - present, updated monthly.
Search here to find citations and abstracts for articles from over 600 periodicals, as well as USDA and state experiment station and extension publications, and selected books on agriculture, animal husbandry, animal and human nutrition, forestry, plant pathology, plant science, human ecology, agricultural economics, rural sociology. Basic truncation symbol is the asterisk *.
- **AGRIS** [Find It enabled](#)
1976 - present, updated quarterly.
Strong in agricultural and development economics of developing countries; AGRIS, the International System for the Agricultural Sciences and Technology, is an international bibliographic database. It is produced by the AGRIS Coordinating Centre, Food and Agriculture Organization of the United Nations (FAO), Rome, Italy, in cooperation with participating countries and international organizations. Basic truncation symbol is the asterisk *.
- **CAB Abstracts** [Find It enabled](#)
1973 - present
(Please note: We are now purchasing this index through CAB Direct; CAB Direct requires either Internet Explorer or Mozilla based browsers such as Netscape or Firefox) This index covers agriculture in its broadest sense, including crop production, forestry, environment, public health, animal health and nutrition, veterinary science, agricultural engineering, biotechnology, soil and water, agricultural economics, recreation and tourism, rural sociology, and human nutrition and health. It provides bibliographic citations with abstracts in English for records of all languages. Indexes journal articles, monographs, conferences, and other primary literature. Basic truncation symbol is the asterisk *.
- **Plant Information Online**

Figure 2

After this presentation, students work together in small groups on a mock assignment of finding articles about the “energy crisis from the perspective of the environment, business, technology, and government. Working with peers is an effective learning style for many students. Brainstorming is a technique to discuss issues that surround a topic and helps learners build their own concept of how articles are written for different audiences. For example, “what kinds of articles about the energy crisis would be written from a technology perspective?...from a public policy perspective?” Each group explores the *Research Quickstart* guides to find indexes that have articles written for their assigned perspective, although fast learners are told to locate indexes for all four perspectives. The instructor and rover visit each workstation and provide coaching, which is extremely important to clarify the goal of the exercise and help those students with less ability. Limiting class size and providing individual attention does result in more questions and hands-on learning. Each group identifies the indexes they find and writes them on a whiteboard. Allowing movement and talking will keep learners engaged and interested. Teaching content is reviewed by getting feedback from each group on their subject guides and indexes while the instructor navigates to database descriptions.

Lesson plans that reinforce concepts can develop critical thinking skills by building on other skills more easily acquired (Van Gelder 2005). Knowing how to select indexes for specific disciplines develops the ability to find articles from authoritative journals. Students are encouraged to find articles with different perspectives so their papers will be more interesting and to improve their grades. The next part, "Searching For Articles" has the following objectives: 1) perform a search in an article index 2) get a list of citations 3) identify one relevant citation 4) identify one full-text article that can be sent via email. The presentation and exercise covers keyword searching and interpreting database records to understand citations,

abstracts, and full text availability. Again, flipcharts repeat learning points which are also listed in the handouts, such as "citations give information about the article and include the title, author, the magazine name and publication details" Any general index would work, but the lesson uses *Expanded Academic Index* as "general index that works for many topics" and includes full text articles. Instructors engage the class while they demo how to search by asking "how many items matched this search?" Learners create their own ideas of how databases work by reflecting on what they see and verbalizing. Skills are acquired by insisting that students interpret records, "what is the title of this article?"-- "who is the author?"-- "what is name of the magazine?" These critical thinking skills prepare them for the next section on evaluating sources and finding periodical holdings. The same technique is used to get feedback on database records to distinguish between those with abstracts, those with full text, and those with only citations. The demo includes limiting and narrowing topics by keywords and how to look for other search terms when reviewing database records. The email function is pointed out, but other features like marking, saving, downloading are omitted.

Students then work on an exercise where they search for articles on a given topic. A common problem is getting logged off, so handouts with screen shots and instructions are included to help navigate. Selecting topics that students will be familiar with can stimulate interest, such as "downloading music" limited by keywords like "illegal" or "copyright"; or "college drinking" limited by "binge" or "underage". Again, the instructor and rover visit each student individually to clarify questions. While students have little difficulty searching and navigating a database, evaluating the records and identifying other keywords involves critical thinking. At the end of the exercise, the instructor reviews teaching points by asking for examples of articles that seem relevant and subject headings or other words that would make good search terms "to find more articles on this topic".

The next part, “Finding “Known Items in the Library Catalog” was designed because students have difficulty understanding how to search the catalog using article citations. The instructor asks, "What do you do when you have a specific book or article, and you want to find out if the library owns it? First we will explore where to look and second how we look" The objectives are 1) Using a citation, search the catalog to find out if the library owns a journal 2) Using a citation, search the catalog to find out if the library owns a book.

Teaching points cover the contents of the library catalog, how to search for books and periodicals, tips like omitting initial articles, and interlibrary loan services for items not owned. Basic competencies in reading citations are essential for searching known items. A slide presentation on identifying book and article citations was included when it became apparent that freshman lacked this ability. An exercise called *Book or Articles—You Decide* is given to practice selecting bibliographic elements to search for in the catalog. By asking the class, “How many say it’s a book? How many say it’s an article?” and “why did you think it was an article?” or “what else?” develops critical thinking skills in evaluating citations. One easy rule for freshman to help identify article citations is "look for two titles”.

The main exercise is a list of citations to find call numbers and locations. Sample searches in the catalog are performed to demonstrate both an article and a book citation. There are no further explanations about catalog records, subject headings, or other ways to search the library catalog. Tips on searching author names and omitting initial articles for titles are included in the handouts and during the presentation. Call numbers are essential but further explanation is kept conversational... "we're not making this up, they come from the Library of Congress in Washington D.C." Finding journal holdings is an essential competency for retrieving articles from print or electronic collections. There is regular confusion about how to search library catalogs to find articles. Teaching points on journal holdings is reinforced as

much as possible to help students learn how the catalog collects information about periodicals rather than articles.

Students work in pairs on the exercise while instructors and rovers provide individual coaching. This is the most difficult part of the workshop because freshman vary in their abilities to read citations, search, and navigate screens. Instructors get feedback from students by asking, "which citations gave you the most trouble" and then demo examples as needed. Mention of interlibrary loan services for finding known items create realistic expectations about library collections--"no library will own everything".

The English Composition department wanted their students to use academic sources for their writing assignments. The section called "Scholarly vs. Popular" was added to teach how to distinguish between popular and scholarly articles. As students continue their education, they are told how faculty will require using scholarly journals for research assignments. A handout is silently reviewed called *Popular or Scholarly* which outlines a variety of criteria. Only four criteria are used--page length, audience, subject matter, vocabulary--since most students will need to evaluate citations from database records. A whiteboard is used to vote on citations as scholarly, popular, or "don't know" Even though students get nervous about being incorrect, this active learning technique helps guide the discussion by asking "why did you choose?" or "what else?" to bring out less obvious clues like frequency of publication. The "grey area" example is *Science* magazine which is explained as having articles with good information that may not fit the criteria for scholarly. The wrap-up includes links to other Unravel workshops, online guides, and getting help from the AskUs virtual reference service. Students complete an assessment quiz to obtain their certificates.

UNRAVEL THREE

To include database searching in the previous workshops would have required more instructional design and less time for content that was considered more important for novice library users. *Unravel 3: Beyond The Basics* was created to teach advanced search techniques, database structure, and apply this to searching the library catalog. These competencies demonstrate how the information literate student “accesses needed information effectively and efficiently” (Association of College and Research Libraries, 2000).

Although Unravel 3 has the lowest enrollment, it attracts upper level students. Like all Unravel lesson plans, teaching methods include worksheets and target specific learning outcomes. There are two “chunks” to this workshop, which is introduced as a way “to get the most out of the databases the library buys” and to learn how “to go beyond a simple keyword search”. The goals for Unravel 3:

- How a database record is put together
- Use limiting
- Use truncation
- Use Boolean operators

The first part, “Database Design” uses the following objectives: 1) Create a database record from an article; 2) Identify 5-8 database fields. Teaching points cover how databases will differ in content, differ in their record construction, use different subject headings, and how keywords can search across multiple fields. Learning techniques include verbal responses such as asking for examples of databases found on the web for entertainment, shopping and directories. This analogy is useful for contrasting the contents of the library catalog as a

database of “bibliographic descriptions of journals, books, videos, reports, maps and other materials owned by the library”.

Slide presentations are used for Unravel 3, and begin with database records for the same article from different databases. Editing screen shots with graphics to point out fields helps illustrate how database records are similar but also differ in the types and number of fields. A record from PsycINFO, for example, “has lots of good information and more description” than a record from a general index. The lesson teaches how subject headings and descriptors from different databases can describe the same concept using different terms. “Controlled” or “accepted” subject words are powerful ways “to find all the information on a particular topic” in any database. One technique for teaching controlled vocabulary, database fields, and natural language is to describe students using colors of clothes, age, belts, jewelry, hometown, or recent activities. These are examples of “fields of information” that contrast with names which function like the controlled vocabulary.

After the presentation, an exercise on how databases are structured involves a worksheet and a reprint of an article. Students work in pairs to review the article and create their own database record using the *Build Your Own Database* worksheet with a sample record and field labels. The class is encouraged to think of additional fields as well. To review, a commercial database record for the reprint article is displayed which gives the class an opportunity to discuss how they entered information for author names, subject headings, or abstracts. Teaching points include how keywords match whatever terms are found in a database record. .

“Boolean & Truncation & Limiting” is the next “chunk” with the following objectives: 1) Create a Boolean search using the AND/OR operators, 2) Truncate a word appropriately, 3) Limit a search by location and material type, 4) Use Advanced Search in the library catalog to

limit a search by date, material format, language, and location. A slide presentation illustrates how Boolean logic works for keyword searching in the library catalog. While other indexes could work, previous workshops did not teach how to search for topics in the library catalog. Teaching aids for criteria such as truncation are useful for completing an exercise which is then reviewed using a whiteboard. Worksheets are also used to design a search strategy and how to select keywords, identify synonyms, truncate, and cluster search terms using the OR, AND operators. Students actively participate in brainstorming for keywords for topics like “media” and “body image” which are then written on the whiteboard.

Like other Unravel sessions, roving provides individual coaching on how to design search strategies and use advanced search screens. This includes assistance in finding subject headings and re-performing the search to compare the number of “hits”. Instructors review the exercise by having students share their search strategies, by comparing the number of “hit”, and by performing a demo on searching a subject heading. The library catalog is the database used to teach limiting searches by year, format, language, and location. For example, a keyword search on “mystery films” is limited by various criteria and the number of “hits” entered on the whiteboard. Exercises where groups perform different variations of a search actively engage learners in seeing how their search results vary depending on criteria. The session wraps up with a review about how “all databases offer advanced search screens” with Boolean operators, truncation symbols, limiting, and a way to search specific fields. Unravel 3 does not have a formal assessment, but did include a *Reflections* questionnaire discussed below.

ASSESSMENT

Early sessions included a feedback questionnaire called *Your Reflections* to obtain student responses to all the Unravel workshops. Students were asked to identify something learned that was most useful, something that was not known about the library before, something

about the library they might share with others, and to list any other comments. Table 2 lists the top responses for each category.

Table 2 <i>Your Reflections on Unravel The Library (n=100)</i>			
Question	Unravel 1	Unravel 2	Unravel 3
Most useful thing learned?	Refworks Quickstart subject guides MNCAT catalog	MNCAT catalog Finding books and articles Scholarly vs. popular	Boolean Truncation Tips for searching
Not known before the session?	Branch library locations On campus delivery	Using MNCAT Size of library system Interlibrary loan	Not applicable
Recommend to others?	Refworks Navigating website Interlibrary loan	Using MNCAT Assignment calculator Scholarly vs. popular	Not applicable

Table 2

For Unravel 1, the bibliographic management software called RefWorks was identified as the most useful thing learned, followed the Research Quickstart subject guides and the MNCAT catalog. Branch library locations dominate as something students did not know about before the workshop as well as the Point-to-Point campus delivery system. Students named RefWorks as something they would share with others along with navigating the library website and interlibrary loan services. This reveals that students value knowing about library facilities and tools that automate the process of creating bibliographies.

Those attending Unravel 2 workshops overwhelmingly list MNCAT as the most useful thing learned. Knowing how to distinguish between scholarly and popular articles was listed as useful, although less frequently than searching MNCAT. In response to the question on what was not known before the session, MNCAT again ranked first followed by the size of the University Libraries, using interlibrary loan, and searching for articles. Students continue to list MNCAT as something they would share with others, with fewer mentions of the Assignment

Calculator and understanding scholarly vs. popular articles. The frequent mention of MNCAT may be due to the significant amount of time on searching citations. Instructional librarians may wish to consider more exercises using the library catalog since this resource is less familiar to new generations of learners.

Comments also reveal the different abilities of learners who attend library workshops:.

“ I wish I would have taken this before my senior year!”

“Combine Unravel 1 and 2”

“There weren’t any moments where I felt bored”

“Less activities and more information”

“Need more time to cover everything in-depth”

“Explain it like we don’t know”

Because Unravel 2 teaches specific competencies and has the most attendance, it includes a multiple choice criterion test to assess outcomes (Appendix B). Table 2 shows the percentage of successfully answered questions for quizzes during the fall and spring semesters for two years.

Table 3 Criterion Scores for Unravel 2 Sessions		
Questions and Teaching Points	2003/04 (N=923)	2004/05 (N=1160)
#1 Chooses subject guides as way of selecting article indexes with different perspectives.	74%	79%
#2 Selects article index as tool that gives list of articles	73%	74%
#3 Names Academic Search Premier as database to start searching for articles on a topic	70%	65%
#4 Distinguishes between article indexes that include full text versus those with citations only	91%	92%
#5 Searching journal titles in the catalog to locate articles	53%	52%
#6 Searching MNCAT catalog to find out what library owns	85%	86%
#7 Selects call number, location, and library as criteria for locating journal/magazine/newspapers at the library	81%	78%
#8 Selects scholarly articles as those written for experts in a particular field	79%	51%

Table 3

The percentages for correct answers are similar for all semesters during the Fall 2003 to Spring 2005. This confirms the overall consistency in the delivery of the lesson plan by a diverse group of instructors. Some variation does occur in the scores for the question eight, identifying the audience of scholarly articles. This could suggest revising the quiz since some of the multiple choices are plausible. However, students selected “popular articles”—the least correct choice—on 42% of the quizzes during the 2004/05 semesters which suggests less consistency in teaching this section of the lesson plan.

The competency students struggle to demonstrate is searching library catalogs for periodical holdings to match an article citation. Only half of the scores are correct for question five, searching by the title of the journal/magazine/newspaper to find out if the University Libraries owns an article. Despite reinforcing this teaching point and practice exercises, the low scores show how difficult the concept of a library catalog is for freshman regarding article level information. Instructors that reinforce searching the catalog for journal titles to find articles throughout their lesson tend to have higher scores for this question.

The criterion test is an excellent tool for instructors to evaluate their teaching effectiveness and spot weak areas in covering the content in the lesson plans. Straying from the lesson plan, not reinforcing teaching points, and running out of time are common pitfalls. Successful teachers also develop the ability to talk to freshman at their level and convey a sense of fun and excitement.

CONCLUSION

One-shot workshops and orientations typically cover too much information and rely on passive learning. The Unravel workshops are designed to assist freshman students in getting started on their research assignments by limiting content to what these users “need to know” instead of many “nice to know” library resources and search skills. Lesson plans for library

instruction are organized into “chunks” so that teaching content is presented, applied, and include opportunities for reflection and feedback from students. Active learning techniques allow students with different learning styles to gain information literacy competencies by seeing, doing, reading, and talking.

Instructional librarians should consider including segments on identifying scholarly publications. Students do not have a good understanding of scholarly sources and faculty respond enthusiastically to refreshers on scholarly sources. The “chunk” for scholarly vs. popular articles has been used by other librarians at the University of Minnesota Librarians for subject related instruction and for sessions aimed at adult students in professional programs.

A major benefit of structured lesson plans like the Unravel workshops is the involvement of graduate students, interns, and other staff who become effective instructors. Numerous sessions are scheduled without placing the demand on a single instructor. Consistency is achievable when new instructors serve as rovers for their peers and learn to teach from a structured outline. Coordinating with instructors for a writing course like English Composition to require certificates of attendance is an effective way to maintain enrollment in the library workshops which can be scheduled outside of class time.

References

- Association of College and Research Libraries. Information literacy competencies for higher education. [online]. Chicago, 2000 [cited October 15, 2005]. Available from <http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm>
- Chapman, Alan. Kolb learning styles, from BusinessBalls.Com [online]. Leicester, England, 2005 [cited 9/26 2005]. Available from <http://www.businessballs.com/kolblearningstyles.htm>.
- Clark, Ruth Colvin, and David Taylor. 1994. The causes and cure of learner overload. *Training* 31 (7): 40-43.
- Grassian, Esther S., and Joan R. Kaplowitz. 2001. *Information literacy instruction : Theory and practice*. Information literacy sourcebooks. New York: Neal-Schuman.
- Kolb, David A. 1984. *Experiential learning : Experience as the source of learning and development*. Englewood Cliffs, N.J: Prentice-Hall.
- Van Gelder, Tim. 2005. Teaching critical thinking. *College Teaching* 53 (1): 41-46.
- Velfdof, Jerilyn. 2003. Take a ride on the design cycle. In *Integrating information literacy into the college experience : Papers presented at the thirtieth LOEX library instruction conference held in Ypsilanti, Michigan, 10 to 11 may 2002.*, ed. Nims, Julia K. et al., 240. Ann Arbor, MI: Published for the University Library, Eastern Michigan University by Pierian Press.

Appendix A

The LUMINA Hunt

@ <http://www.lib.umn.edu>

LUMINA has a tremendous amount of information.
This exercise is designed to help you explore the depth and breadth of this resource.

1. **Find if the Architecture Library is open on Sundays.**

Yes No (*circle one*)

2. **Where would you go to find out the proper format to use for your bibliography** (for example you have used an article to write your paper and you have to include it in your bibliography and your instructor has told you to use "APA Style")

Name of Web site:

URL:

3. **You've been assigned a paper to write on archeology and want to find a list of recommended places to start your research. Find this web site on LUMINA and write down a recommended encyclopedia here.**

Recommended encyclopedia:

4. Find the form you need to submit an Interlibrary Loan request for a book.

URL:

5. **Is Point to Point available from the Bio-Medical Library to Wilson Library?**
(Note: *Point to Point* will deliver you books from one library on campus to another library on campus that might be more convenient for you.)

Yes No (*circle one*)

6. **Find if there's a FAQ on group study space in Wilson.**

Yes No (*circle one*)

Appendix B

Name _____

Date _____

HOW WELL DID WE TEACH YOU?

Unravel 2: The Research Process

- _____ is good to use to help you select article indexes with different perspectives (i.e. business or environment)
 - Assignment Calculator
 - Research QuickStart
 - an article index
 - LUMINA
- Searching in _____ will give you a list of articles that have been published on your topic
 - an article index
 - MNCAT
 - a library catalog
 - the Assignment Calculator
- A good starting place to search for articles on your topic is in _____.
 - subject headings
 - MNCAT
 - Academic Search Premier Index
 - a library catalog
- Some article indexes provide the _____ of the article, while some only give you the citation of the article.
 - record
 - full-text
 - subject
 - index
- To find out if the U of M Libraries own the article you want, you need to search by the _____ in MNCAT.
 - title of the article
 - title of the journal/magazine/newspaper
 - author of the article
 - any of these
- To find out what is owned by the U of M Libraries, you should search _____.
 - LUMINA
 - Academic Search Premier Index
 - MNCAT
 - Research QuickStart
- To locate a book or journal/magazine/newspaper in the library at the U of M, you will need the _____.
 - call number
 - Location in library
 - Library name
 - all of these
- _____ articles are normally written for experts in a particular field.
 - scholarly
 - journal
 - popular
 - citations of