



Western  
Libraries

# Charting the Course of Information Literacy With SAILS



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# Project SAILS

- **Part 1 – Framework**
- **Part 2 – Implementation**
- **Part 3 – Results**
- **Part 4 – Next Steps**



# 1: Setting the Framework

- **What is SAILS?**
- **Objectives**
- **Broad overview of test**
- **3 Phases**
- **Participants**
- **Number of questions – random generation**
- **Canadian participation**

# Why SAILS?

- **Information Literacy Explosion**
- **ACRL Standards**
- **Accountability**
- **Program assessment**
- **International participation**
- **Common language**
- **Standardized methodology**



## Key Questions

- How do we know if a student is information literate?
- Does the library and its programs contribute to the attainment of these skills?
- Does information literacy make a difference to student success?



## Goals for Kent Team

- **Easily administered test instrument**
- **Valid and reliable**
- **ACRL objectives as the foundation**
- **Cross institutional application**
- **Acceptable to administrators**



## Skill Sets

- **More useful test results**
  - Activities and processes more closely aligned with how we teach
- **12 unique **skills** articulated**
  - Integrated with ACRL objectives
  - Standards 1, 2, 3 & 5



## Question development

- **Multiple choice format**
- **Randomly generate testing subset**
- **Tests cohort groups – not individuals**
- **Examined for**
  - **language clarity, jargon, plausibility**





## Item testing

- 1-1 student testing
- Small group testing
- Field trials

**What is the term for an online resource that shows what materials a library owns?**

**CHECK ONLY ONE ANSWER.**

- bibliography
- keyword
- library catalog
- research database
- subject heading



**What is the term for an online resource that shows what materials a library owns?**

**CHECK ONLY ONE ANSWER.**

**ACRL Objectives 2.1.3.4 & 2.3.2.2**

**SAILS Skill Set 4**

library catalog

**What is the "invisible college"?**

**CHECK ONLY ONE ANSWER.**

- a phenomenon that describes all the information sources that students don't know about
- collections of resources, such as archives, that are not open to the public
- method for taking classes through distance learning
- term used to describe all the informal ways which students learn
- unpublished communication among faculty, such as personal contacts, listservs, email



**What is the "invisible college"?**  
**CHECK ONLY ONE ANSWER.**

**ACRL Objectives 1.2.1.2**

**SAILS Skill Set 2**

**[ ] unpublished communication among faculty, such as personal contacts, listservs, email**



**You hear on a radio talk show that Mad Cow Disease may have been found in the United States. How might you determine the truth of this statement?**

**CHOOSE ONLY ONE ANSWER**

- Call for a transcript or the program from the radio station
- Check the fbifiles.com web site for information the government itself might not release to the public
- Discuss the news with colleagues who might have heard the program
- Look up the topic in the American Council on Beef web site for current news
- Search for Mad Cow Disease on the U.S. Department of Agriculture web site.

## Canadian Content

- **42 questions**
  - **Variant spelling for words**  
catalog/catalogue
  - **Legal differences**  
copyright
  - **Canadian context and examples**  
College/University

You hear on a radio talk show that Mad Cow Disease may have been found in **Canada**. How might you determine the truth of this statement?

**CHOOSE ONLY ONE ANSWER**

- Call for a transcript or the program from the radio station
- Check the **CSISfiles.com** web site for information the government itself might not release to the public
- Discuss the news with colleagues who might have heard the program
- Look up the topic in the **Canadian Cattlemen's Association** web site for current news
- Search for Mad Cow Disease on the **Department of Agriculture and Agri-Food** web site.





**You are assigned a report for your political science class on testimony given by the US Sec. of the U.N. 10 days ago at a congressional hearing. What research tools would be most helpful in finding information about the address?**

**CHECK ALL THAT APPLY.**

- search for articles in Yahoo News Directory (online)**
- search for articles in New York Times (online)**
- search for articles in The Reader's Guide to Periodical Literature (reference room)**
- search for articles in the Social Science Index (reference room)**
- search for books in university library's catalog (online)**

You are assigned a report for your political science class on **an address to Parliament made by the United Nations Secretary** 10 days ago. What research tools would be most helpful in finding information about the address?

**CHECK ALL THAT APPLY.**

- search for articles in Yahoo **Canada** News Directory (online)
- search for articles in **Canadian Newsstand** (online)
- search for articles in The Reader's Guide to Periodical Literature (reference room)
- search for articles in the Social Science Index (reference room)
- search for books in university library's catalogue **ue** (online)



## Phase I - 2002-03

- **Small sample of 8 institutions**

## Phase II - 2003-04

- **40 institutions**
- **4 Canadian schools**
  - **UBC, Alberta, Brandon, Western**



## Phase III - 2004-05

- **67 institutions**
- **3 additional Canadian schools**
  - **UBC, Alberta, Brandon, Manitoba, Western, York, New Brunswick**



# Part 2: How SAILS Phase III was Implemented

- **Multiple Test Environments**
- **Multiple Formats**
- **Offered 2x/year**
- **Reporting at ALA**

# Context at York

- **45,000+ undergrads, 1,400 faculty**
  - includes librarians
- **Information Literacy at York**
  - IL Committee formed early 2004
  - IL Program coordinator – new position Aug 2004
  - 700+ IL sessions (2004-2005)
    - 21,000+ student contacts
- **Rationale for assessment**
- **York's assessment culture/history including LIBQUAL**
- **Participation in Phase III**

# Phase III at York

- **HPRC (Human Participants Research Committee) Ethics Submission**
  - **Summer 2004**
- **Implementation**
  - **Spring 2005**
- **Unmonitored testing environment**
- **All undergraduates had option to participate**
- **Test administered online**



# Context at Western

- **25,000 undergrads, 1,300 faculty**
- **Long tradition of teaching**
- **950 sessions, 31,000 student contacts**
- **Information Literacy Coordinator (2004)**
- **Teaching Support Centre (2004)**
- **Participation in SAILS Phase II and III**





## Phase II

- **NMREB (research ethics) late 2003**
- **2 large first year classes**
  - **Politics & Biology**
- **February implementation**
- **Highly monitored test environment**
- **Electronic version of the survey**



## Phase III

- **NMREB submission late 2004**
- **Spring implementation**
- **Unmonitored testing environment**
- **Entire undergraduate population**
- **Electronic test available 24/7**

# Phase III



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Library Catalogue  
Resources by Subject  
Databases by Title  
**New!** Assignment Calculator  
More Resources...

**How Do I...**  
  
Cite References  
Connect to Wireless  
More "How Do I" Topics...

**My Library Account**  
Renew Books  
Course Readings  
More...

**What's New**  
Service Quality - Information Resources  
My Reading History  
RefWorks  
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**Have a Question? Chat with Us Online...**

**Complete the survey...** 

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# Phase III



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## Consent

I have read the above information about the Project SAILS research project and I agree to participate. All questions have been answered to my satisfaction.

Click either:

**YES**

**NO**  If you click NO you will not be able to complete the survey.

Please enter your STUDENT ID NUMBER:

Year

- 1
- 2
- 3
- 4
- Grad

Opt out of the draw for the Apple iPod mini.

Click  to start the survey.

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### Standardized Assessment of Information Literacy Skills Research Project

Phase III - 2004/05

Kent State University  
Association of Research Libraries

**You forgot to enter your current year in the programme.**

**Back to the survey**

Please return to the information / consent page,  
Enter all information.  
Then click SUBMIT to advance to the survey.

**Quit the survey**

Thanks for your interest in Project SAILS.  
You can return to complete the survey at a later time

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# Phase III

## University of Western Ontario

Please answer all of the following questions. Do the best you can. Thank you for your time!

Page 1 of 5

### 1. Which of the following actions qualify as plagiarism?

CHOOSE ALL THAT APPLY.

- Including a paragraph from an article as long as you change a few of the words.
- Reporting statistics from the Census of Canada.
- Turning in a paper written by someone else.
- Using another person's ideas in your research paper without attribution.
- Using commonly known information without attribution.

### 2. Which of the following provide information?

CHOOSE ALL THAT APPLY.

- Folk art
- Personal stories
- Research reports

# Phase III

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### Standardized Assessment of Information Literacy Skills Research Project

Phase III - 2004/05

Kent State University  
Association of Research Libraries

**DATE: 2005/4/6**

**NAME: Homer Simpson**

**STUDENT NUMBER: 999999999**

This certifies that this student completed the Project SAILS survey on the date indicated.

Thanks for participating in the SAILS research project. Return to [Western Libraries homepage](#).

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# Partners

- **ULO** endorsement – financial support – upfront SAILS participation fee and prizes
- **Ethics** Approval
- **Registrar's Office** - Demographic data
- **Library Computing Services** – mounting of web front-end
- **Faculty** – buy-in sought in selected disciplines
- **Students** – proactive in seeking participation e.g. student councils and distribution of promotional materials
- **Librarians** – promotion at student orientation days and in IL classes



# Promotion

- **Hired students to run some of the advertising**
- **Web Site – Home Page (What's New)**
- **Poster, Flyer, Faculty & Student newsletters**
- **Draw for Prizes**



## *Participate in our survey and enter a draw for PRIZES!!!!*

**What's in it for me?**

You can enter a draw to win the grand prize of a DVD player! Other prizes are photocopier cards each worth \$20.

**What kind of questions are we asking?**

We are asking questions about your library and research skills.

**Who developed the survey?**

The survey was developed at Kent State University and is sponsored by the Association of Research Libraries. York is working in partnership with Kent State to refine the survey so that it can be used to test future generations of undergraduate students.

**Why get involved?**

To help your professors and librarians understand what you need to know about doing research and writing papers so they can teach you necessary skills during library workshops. Ultimately, it will help us to know what to teach you for a successful academic experience.

**Are we alone?**

No. York University has decided to join over 140 other North American universities – 6 Canadian – to assist in creating this survey.

**How long does it take?**

About 30-35 minutes of your time.

**How can I participate?**

If you are an undergraduate student you may complete the online survey at:

<http://epsilon.library.yorku.ca/sailsform.htm>



# Promotion

- **Presentations to Faculty**
- **Integration into IL Programs**
- **Easy access from Library page**
- **Incentives**
- **“Splash” screens**



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# Promotional Materials



**THERE IS ONLY ONE WEEK LEFT**

... for you to complete a short library survey  
and win a chance for one of three  
**iPod Minis** ...

All Western undergrads are eligible.  
It only takes about 30 minutes of your time and can be completed online.

Click the button  on the [Library homepage](#)  
and follow the instructions.

You may win an **iPod mini** just by participating.  
The draw will happen next week, at the end of the survey period.



# Part 3: SAILS Results

- **Number of Participants by April 22 2005**
  - YorkU - 276
  - UWO - 1,727
  - Canadian - 3,860
  - USA - 30,804
  - Total - 34,664
- **Number of Institutions by April 22 2005**
  - Canadian - 4 (YorkU, UWO, UM, BrandonU)
  - U.S. - 63
  - Total - 67



# Demographic Picture

- **Data collected for each student:**
  - Gender, Year of study, Discipline, Ethnicity and GPA
- **More female participants, especially in Canada**
- **Canadian results show more of a balance across all 4 years of study**
- **U.S. Ethnicity and GPA equivalent not available or not comparable in Canadian context –**
  - Ethnicity data is never collected in Canada



# Demographic Picture: Test Takers, Highest Representation by Discipline

|                           | UWO   | YorkU |
|---------------------------|-------|-------|
| Biological and Biomedical | 8.6%  | N/A   |
| Business                  | 11.7% | 23.5% |
| Engineering               | 3.5%  | N/A   |
| English Lang & Lit        | 3%    | 5%    |
| Health                    | 22.4% | 5%    |
| Psychology                | 4.1%  | 13.5% |
| Social Sciences           | 21.9% | 17.1% |
| Visual & Performing Arts  | 6.7%  | 3.9%  |

# Standard 1

## Average Scores

The information literate student determines the nature and extent of the information needed

|              |            |
|--------------|------------|
| <b>ALL</b>   | <b>.55</b> |
| <b>UWO</b>   | <b>.56</b> |
| <b>YorkU</b> | <b>.55</b> |





# Standard 2

## Average Scores

The information literate student accesses needed information effectively and efficiently

|              |            |
|--------------|------------|
| <b>ALL</b>   | <b>.52</b> |
| <b>UWO</b>   | <b>.53</b> |
| <b>YorkU</b> | <b>.53</b> |



# Standard 3

## Average Scores

The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system

|              |            |
|--------------|------------|
| <b>ALL</b>   | <b>.55</b> |
| <b>UWO</b>   | <b>.56</b> |
| <b>YorkU</b> | <b>.56</b> |

# Standard 5

## Average Scores

The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally

|              |            |
|--------------|------------|
| <b>ALL</b>   | <b>.53</b> |
| <b>UWO</b>   | <b>.53</b> |
| <b>YorkU</b> | <b>.53</b> |



# Standard 4

- **The information literate student uses information effectively to accomplish a specific purpose**
  - **Not Tested – multiple choice not appropriate format for testing**



# No significant Divergences with Cross-Institutional Data

- Cross-institutional results are grouped around the midpoint
  - Provide a consistent benchmark
  - Indication of soundness of the questions
- Question remains:
  - Do students actually understand what they are meant to understand at the midpoint?



# 12 Skill sets

1. Developing a topic,
2. Scholarly communication / Structure of disciplines,
3. Identifying & Distinguishing among sources,
4. Selecting finding tools,
5. Selecting search terms,
6. Conducting the search,
7. Database mechanics,
8. Evaluating and revising search results,
9. Retrieving sources,
10. Evaluating and selecting sources,
11. Documenting sources,
12. Ethical legal and social issues around the use of information

# Skill Sets

## Trends & Observations

### Strongest performance:

- 1. Developing a Research Strategy**  
All: .56; UWO: .60; YorkU: .61
- 2. Scholarly Communication/Structure of Disciplines**  
All: .63; UWO: .66; YorkU: .65

### Weakest performance:

- 5. Selecting Search Terms**  
All: .47; UWO: 48; YorkU: .47
- 7. Understanding Information Retrieval Systems**  
All: .45; UWO: .45; YorkU: .47



# Significance of the Development of the 12 Skill Sets

- Translate the ACRL standards into more meaningful processes.
- More closely related to the work we do as instructors
- Provides guidelines on where to direct IL instruction





# Conclusions:

- **Really need break-outs to draw deeper conclusions about these results**
  - **Question level analysis**
  - **Individual performance data**

# Analysis of Results at Item (Question) Level

- Can pinpoint student strengths, weaknesses
  - more meaningful when results are analyzed at question level within each of 12 skill sets
  - identify high to low competency
- A few examples follow for Skill Set 6 - *Constructing the Search* which showed overall average scores of:  
All (.54), UWO (.56), and York (.56)

# SAILS Data Report – Skill Set 6

## *Constructing the Search - Example*

### Average Scores Overall and Individual Item Scores (Scale of 0 to 1)

Difficult Items

2s 56

250

24

251b

108 39

167

1s

154a 247 253  
21  
249

York Average - 0.56

Across-Institutional Average - 0.54

0.5

M

154c 251d 283 59  
15b 251a 252e  
15g  
154d 8  
154e  
163  
15f  
154b  
251c

252c  
218  
252d 32

15d  
15e 246

1s

252a



# Result Showing Very High Ranking Score – Author Searching Ranked as Second Easiest Item (.24)

If you want to find books that Charlotte Bronte wrote, which search would you do?

Choose only one answer

- a) *author: bronte*
- b) Subject: bronte
- c) Title: bronte



# Result Showing Above Average Competency – Use of Boolean connector “And” (.39) (*v. similar question with .37*)

When using a research database, which search is the most effective one for identifying articles on how weight affects self esteem?

Choose only one answer

- a) How weight affects self esteem
- b) Self esteem
- c) Weight
- d) *Weight and self esteem***
- e) Weight or self esteem

# Result Showing Mid-Level Competency – Subject Searching (.59)

If you wanted to find books about the American poet Maya Angelou, which search would you do?

Choose only one answer.

- a) Author: angelou
- b) *Subject: angelou***
- c) Title: angelou



# Result Showing

## Low Level Competency

- Use of Boolean “Or” Operator (.67)

If you wanted to search for a topic that has several synonyms (for example - young, people, adolescents, teenagers, teens), which operator would you use?

Choose only one answer

- a) Adj
- b) And
- c) Near
- d) Not
- e) Or**

# Result Showing Very Low Level Competency- Nested Boolean Logic Ranked as Second Most Difficult Item (.77)

Which of the following search statements best utilizes nesting search operators for a communication research paper on speech anxiety

Choose only one answer

- a) Speech and talk and (anxiety or fear)
- b) Speech or talk and (anxiety and fear)
- c) Speech or talk and (anxiety or fear)
- d) (Speech or talk) and anxiety or fear
- e) ***(Speech or talk) and (anxiety or fear)***





# Part 4: Next Steps

## At our Institutions:

- Address areas where student skills are weak
  - Help us show both librarians and faculty where instruction might be focussed
- Develop instructional and assessment tools
  - General and subject-specific
  - E.g. build pre-tests/post-tests



# More at our institutions

- **Use SAILS results to leverage support for Information Literacy on our campuses**
  - Among fellow Librarians
  - Among Faculty
  - Administrators
- **Be proactive about sharing the SAILS results with librarians, administrators and faculty on campus –**
- **Show we engage in assessment thereby lending more credibility to our efforts**



# Plans at Kent State

- **Revisiting original research question analysis of the data**
  - determine if the instrument is viable.
- **Refining questions**
  - more difficult items needed
- **Discipline Specific tools**
  - **Biology, Communication Studies, History and Education to begin with**



# Cost-Recovery Model

## By Fall of 2006

- Development of data bank of questions for use by institutions
- Fee-based, cost recovery model
  - \$3/student up to \$2000 cap per institution
  - To feature easy report generation - colour PDF
  - Online tutorial for data analysis

## By 2007

- Hope to be able to offer a system that can generate individual student scores



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# Thank you

- **Comments??**
- **Questions??**