

A decorative graphic consisting of a thin gold circle on the left side. A horizontal bar with a gold-to-white gradient extends from the circle across the top of the slide. The title text is centered within this bar. Large black and gold brackets are positioned on the left and right sides of the bar, respectively.

Search Challenges as Assessment Tools

**A Collaboration between the Library
and the 21st Century Information
Fluency Project in Illinois**

Partnership

- **Paula Garrett, presenter & Library Director**
Illinois Math & Science Academy (IMSA)
- **David Barr, Founding Director**
IMSA's 21st Century Information Fluency Program (21CIF)
- **Carl Heine, 21 CIF Project Director**
- **Dan Balzer, 21 CIF Online Professional Developer**
- **Gautam Saha, 21 CIF Programmer**
- **Jim Victory, IMSA History Faculty**
- **Sixty IMSA students, year 10**

Profiles

■ Environment

- Residential high school, 650 Illinois students
- Library – secondary and academic
- 21CIF resources for educators and learners

■ Collaboration

- Development of search challenges
- Pair of pilot assessments

Illinois Mathematics and Science Academy



Information Resource Center

"Every person has within themselves a potential far greater than they perceive..."— Leto M Furnas

Locate CDs, Books, Videos...

- Library Catalog
- My Account
- IRC Journal List
- Archive of IMSA's History

Find Articles, E-Resources...

- Research Databases
- Reference Links
- Internet Wizard & Tutorials

Get Research Assistance

- Guides
- Faculty/Staff Resources
- Student Resources
- Ethical Use

Learn About Us

- Hours
- Services & Policies
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Free Back to School Webinar: What's in Your DIF Backpack?

- Join us on September 21, 3 to 4 p.m. (CDT) Register at [Learning Times](#)

Now Available Recognizing Relevance




IMSA *full circle* resource kit Oct. 2006

a new practical resource for digital searching, evaluation and ethical use

free subscription, enter here 

- Each free kit is packed with practical activities and ideas that promote effective searching, evaluation and ethical use. Educators, librarians and media specialists will find these resources immediately useful for teaching and learning digital information skills.

[Key Question]

How can we assess database research skills while engaging students and delivering data to drive library instruction development?

[What were we assessing?]

- Understanding of literal matching
- Ability to distill an optimal number of key concepts
- Understanding of Boolean and special operators
- Ability to employ alternate terminology

Our Process

- **Pre-Assessment (25 min.)**
 - 6 multiple choice
 - 3 live search challenges
 - 1 simulated search

- **Library Instruction (55 min.)**
 - Feedback on pre-assessment
 - Question-to-query worksheet for research assignment
 - Database demonstration and hands-on activity

- **Post-Assessment (35 min.)**
 - 4 multiple choice
 - 6 live search challenges
 - 1 simulated search



Simulation

IRC Search Challenge

JSTOR Search: Using the Advanced Search page of the JSTOR database, find an article published in December of 1946 that focuses on the topic of isolationism in World War II in the middle west.

1. Enter the title of the article and author's name in the fields provided.

Article Title:	<input type="text"/>
Author's Name:	<input type="text"/>

2. Enter the query just as you entered it in JSTOR using this simulated interface.

All of these words:	<input type="text"/>
The exact phrase:	<input type="text"/>
At least one of these words:	<input type="text"/>
None of these words:	<input type="text"/>
<input type="checkbox"/> Search full-text content only	

These Fields: Title Author Caption Abstract

These Types: Article Review Opinion piece Other items

These Dates: From: through: (specify dates as yyyy, yyyy/mm, or yyyy/mm/dd)

These Journal Title(s): (separate titles with semicolon)



IRC Search Challenge

This next section expands your searching to the entire IRC Research Database

There are three Challenges in this section. Complete as many of them, in any order, as time allows.

navigation
buttons

click on a Challenge

1

Find 3 articles in the news which provide insight into how troops in Iraq are communicating with their families...

2

Find essays with opposing viewpoints on the impact of technology on privacy...

3

Find in-depth reports that provide background information, chronology, and pros/cons on the issue of government wiretaps...

Findings: Literal Matching

Students who understand that search engines perform Literal Matching

Pre-assess.

36.7%

Post-assess.

63.3%

Students using Natural Language in queries

Pre-assess.

27.1%

Post-assess.

08.3%

Findings: Key Concepts

Number of Key Concepts used in queries

Pre-assess.

2.95

Post-assess.

3.40

With a total of 4 possible correct concepts per scenario, the inclusion of key concepts rose by 13% on average.

Findings: Operators

Average number of OR errors in queries

Pre-assess.

45.0%

Post-assess.

20.0%

Appropriate use of the * Wildcard Operator

Pre-assess.

08.5%

Post-assess.

12.6%

Students confused the OR & AND operators & seemed to prefer OR.

Findings: Alternate Words

Percentage of students using Alternate Terminology in queries

Pre-assess.

14.0%

Post-assess.

46.5%

The use of “nyms” correlated significantly with successful search challenges.

Success Factors

- Project team availability and expertise
- Relevancy of actual research assignment
- Game-like search challenges that measured knowledge and skills
- Immediate feedback to teacher and students

[Our Challenges]

- Network down the morning of the Pre-Assessment.
- Gains in knowledge did not always translate into gains in performance.
- For any authentic search scenario multiple solution paths exist & are difficult to predict.
 - Students found answers despite poor search techniques.
 - Web mapping software could help us track search steps.

Future Directions

- Informed library instruction
- Integrating “game-like” challenges
- Incorporating federated search interfaces
- Faculty search skills
- 21CIF Resource Kit

Contact Us

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- 21CIF & Full Circle Resource Kit

<http://21cif.imsa.edu>