Google, Discovery, and Individual Database Searches: Cultivating Critical-thinking Skills in Undergraduates

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What we will cover today?

Part I

- Technology and smart learning
- Diverse learning styles
- Google, databases, and discovery
- Pedagogy, teaching techniques, & active learning
- Assessment
- Life-long learning

Part II

- Issues interfering with academic success
- Different search strategies and individualized learning
- Team Teaching @ Multiple Learning Stations
- Sample Lesson used with education undergraduates
- Tiered assessment (formal)
- Teaching reflections as formative assessment

Part I

- Technological innovations and 21st-Century Smart Learners
- Diverse Learning Styles
- Fast-paced and critical-thinking skills in undergraduates based on first-hand experience working with this student population
- Searching Google
- Searching Library Databases/Discovery Services
- Pedagogical methods & techniques to engage learners
    - Discussion method - Google Vs Library Databases & Discovery Services
    - Flipped Classroom Activity -Compare searches in Google, Library Databases and Discovery Services
    - Concept Mapping tools to understand relationship between concepts
    - Search Like Detective and Write Like Journalist to Promote Inquiry Based Learning
    - Case Scenarios- for Citing Works, Plagiarism Prevention etc
    - Formative and Summative assessment
    - Nurturing Life-long learning skills

Technological innovations and 21st-century learners

- Potential Learning Resources and Formats

  Textual, Images, Maps, Audio, Video, Podcasts, Apps, Special Features and more

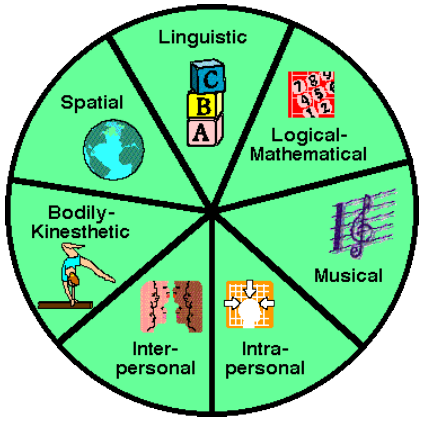
- Diverse Learning Styles

  Visual- Verbal & Non -Verbal, Auditory,

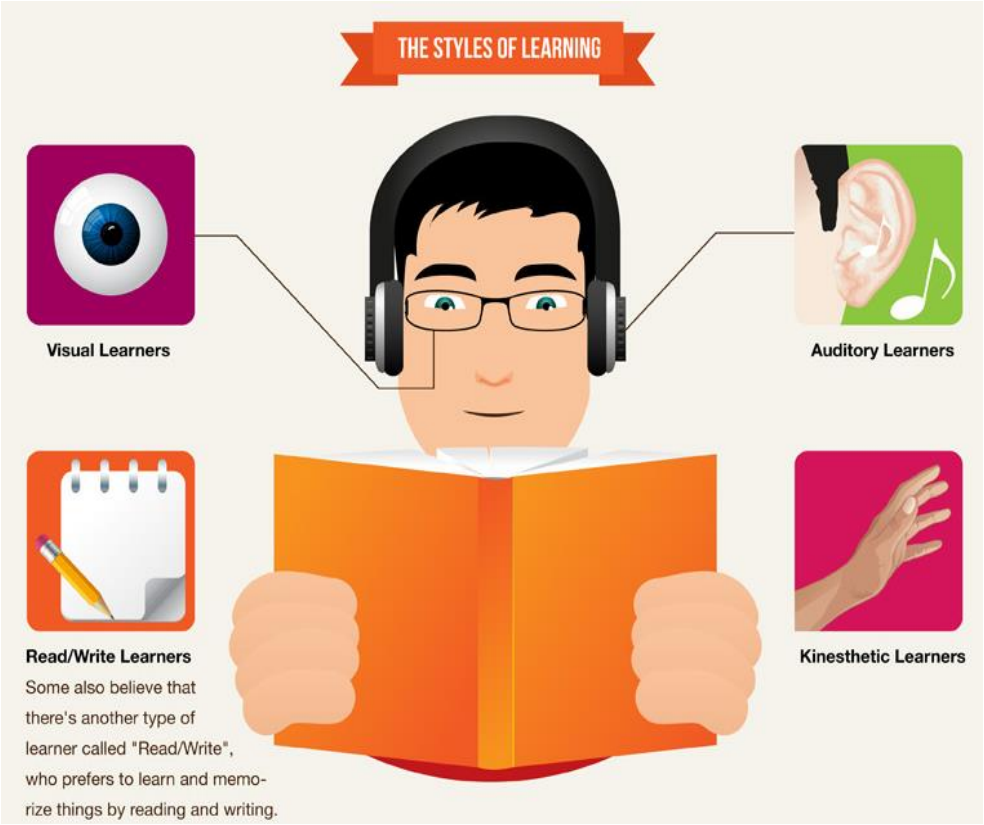
  Tactile/Kinesthetic and more

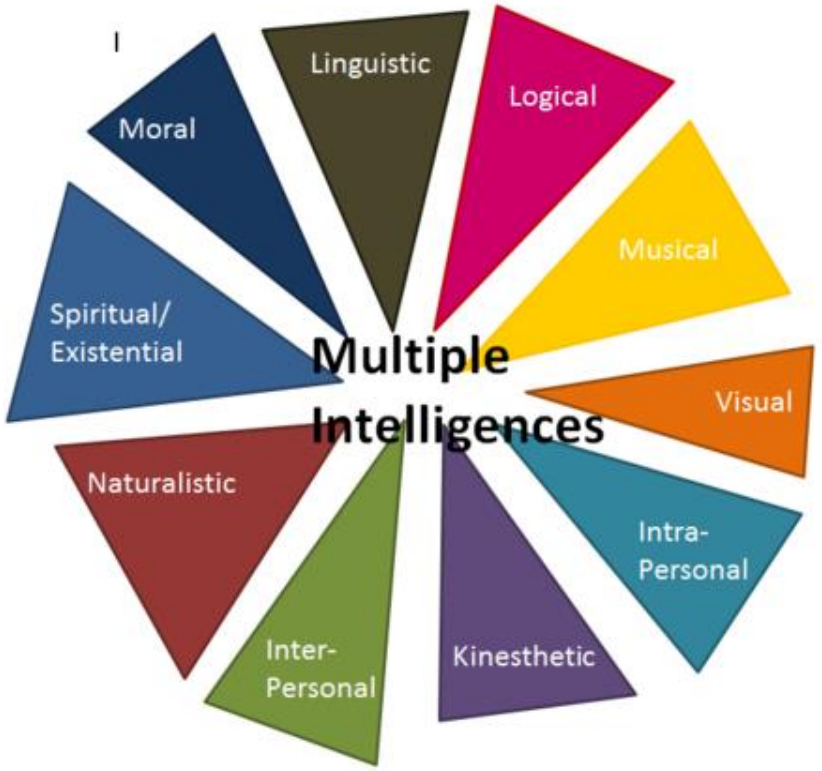
- 21st-Century Learners

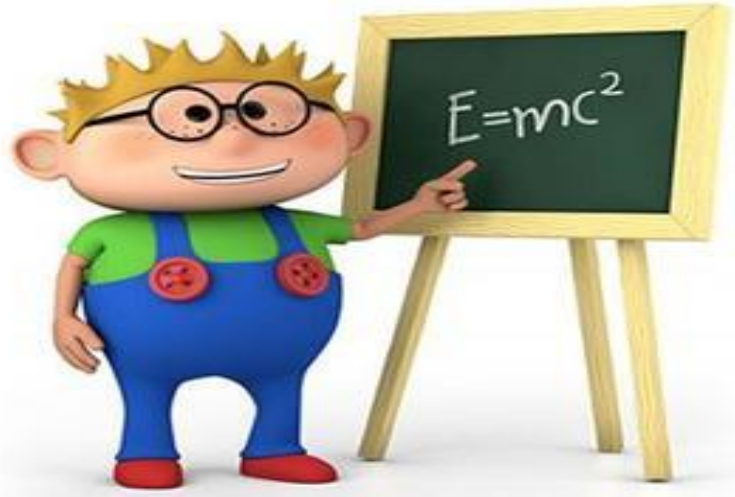
  Fast-paced



Diverse Learning Styles







What Is My Learning Style ?

- Do we inventory our students learning styles?
- a brief survey can solve the mystery –

http://www.vark-learn.com/english/page.asp?p=questionnaire

21st-Century Learners

Research and critical thinking skills in undergraduates :
First-hand experience working with this student population

Student – Let's Fix the Assignment

- My assignment is due today.
- Let's pick the first two/first page search results and I'll do the assignment. Next time, I'll be more careful and start earlier.
- This resource/article is coming from the database and no doubt it will be good.
- I can't use Wikipedia and yahoo answers but still have more options on Google.

21st-Century Learners

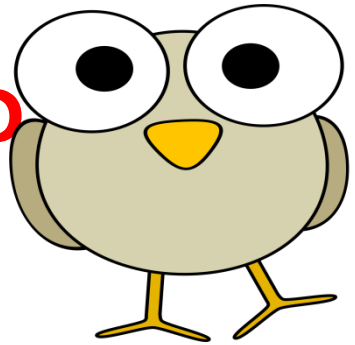
Research and critical thinking skills in undergraduates:

First-hand experience working with this student population

Student: Let's Fix the Assignment

- Let's check if someone already has written something online and has tips for an easy fix.
- I already wrote the paper; NOW, I have to match my text/content with resources.
- My friend gave me references and I only need to locate resources.
- More

Does This Sound Familiar??



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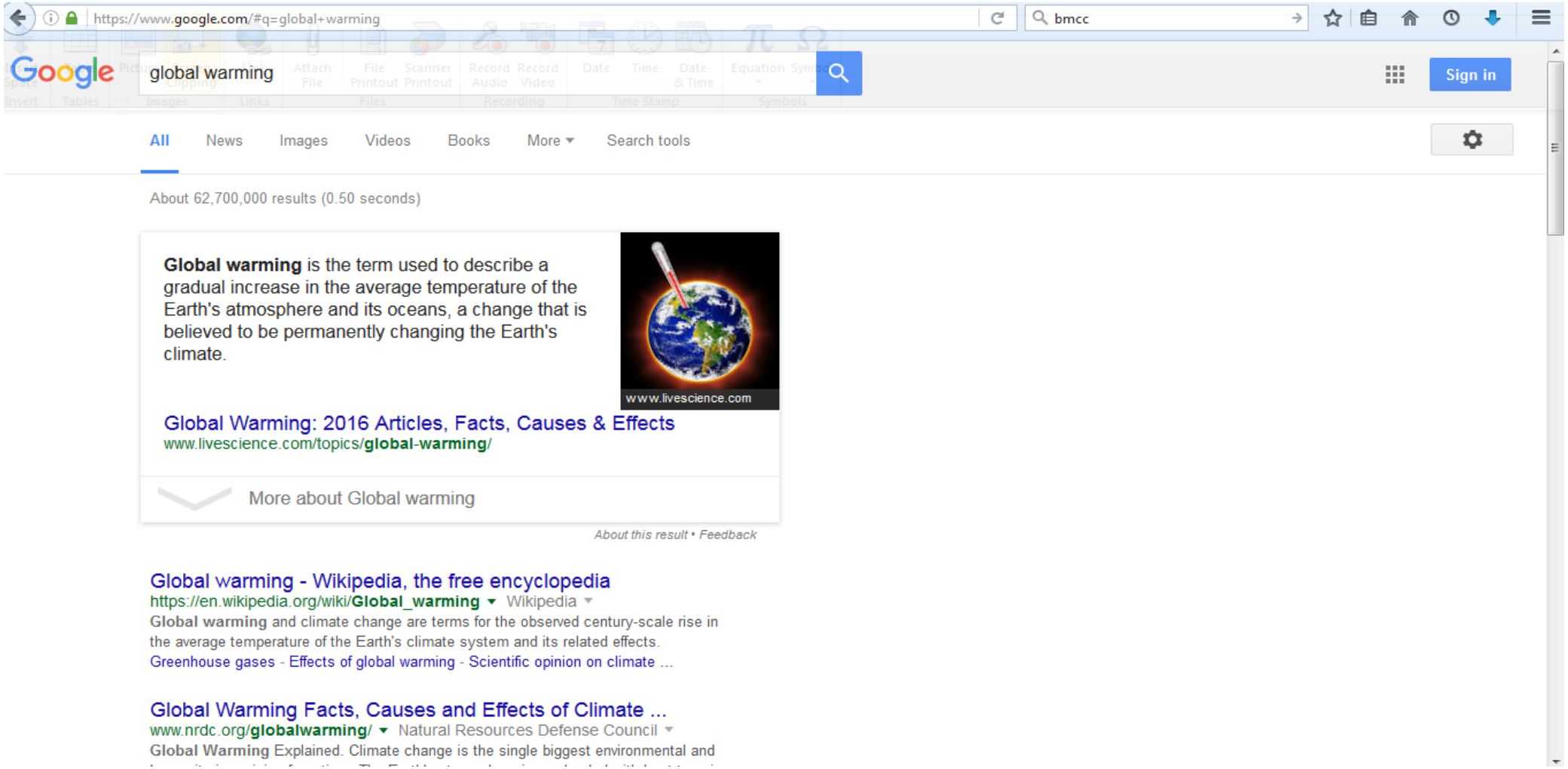
Searching Google

- Fast Access
- Google is easy for numerous formats
- Clean Interface
- No Authentication/ Login is required
- Open Source , Digital repositories, Free Digital Library, Museum and Other Info is available
- Images, Videos , Free books and more free stuff

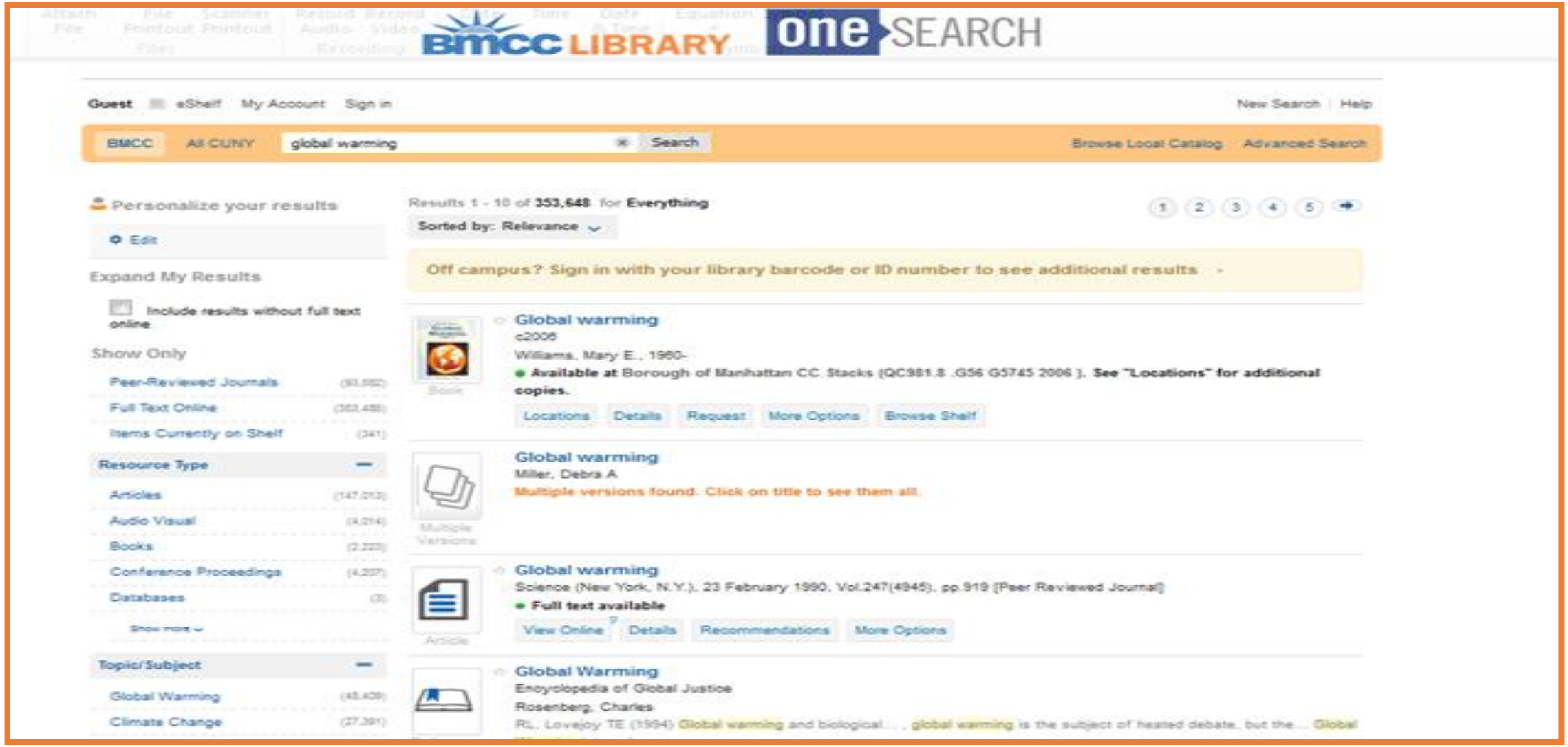
✓Google may supplement your library resources

✓Google may serve as an excellent Index which may lead to ILL

Searching Google



Searching Library Databases/Discovery Services



Searching Library Databases/Discovery Services

Filters

- Full text, Peer Reviewed, Items currently on shelf and more
- Resource Types

Articles, Audio Visual, Books, Conference proceedings, Databases, Dissertations, Images, Journals, Maps, Newspaper Articles, Other, Reference resources, Research Data Sets, Reviews, Statistical Data Sets, Technical Report, Text Resources, Websites

- Topic/Subject : Presents related subject terms
- Date
- Language
- Author/Creator
- Geography
- Journal Title
- Call Numbers

Features and Tools

- Boolean Operators
- Basic, Advanced Search
- Concept Map/Mind Map/ Topic Finder
- Add to Folder/Add to Shelf
- Print
- Email
- Save
- Cite
- Export
- Create note/Annotate
- Permalink
- Share

Pedagogical Methods and Techniques to Engage Learners

Pedagogical Methods & Techniques to Engage Learners

Discussion Method - Google Vs Library Databases & Discovery Services

Google	Library Databases & Discovery Services
How many results?	How many results?
Nature and type of results?	Nature and type of results?
Reliability-Who can write on blogs and Wikipedia?	Reliability-Who can write articles/essays in journals, encyclopedias and databases?
Payment for research articles?	Payment for research articles?
Information sources?	Information sources?
Availability of resources for long?	Availability of resources for long?
Citations?	Citations?
Evaluation?	Evaluation?

Pedagogical Methods & Techniques to Engage Learners

Activity- Compare Searches in Google and Library Databases

Flipped Classroom

Use same keywords for Google and Database search for your topic and list following :

How many results you get?

Nature and type of results?

Are they relevant?

Reliability of Information Sources/ What source?

Are the references available at the end of essay/article?

Do you need to pay for research articles?

List subject terms/related terms and how did you find?

Can you filter research results by date, format, language, full text ?

Can you get already made Citations?

List two most relevant sources you found each from Google and Library Databases ?

Classroom Activity

Use same keywords for Google and Database search for your topic and list following :

How many results you get?

Nature and type of results?

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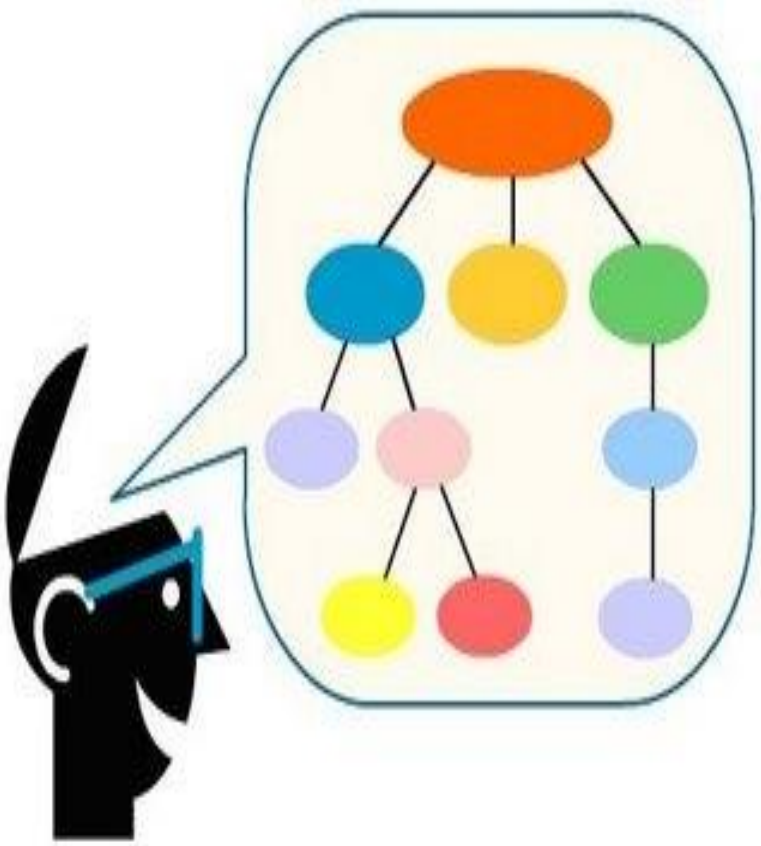
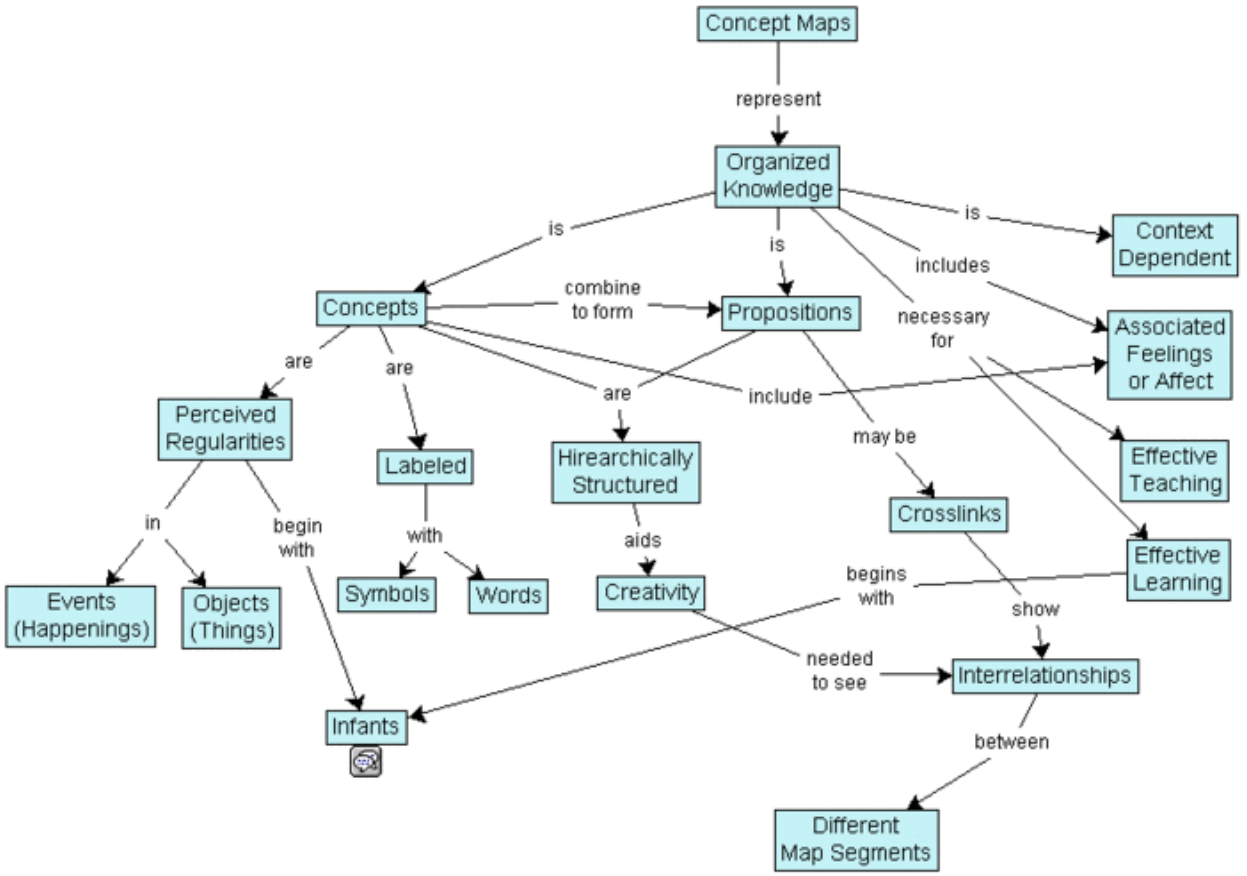
Concept Mapping



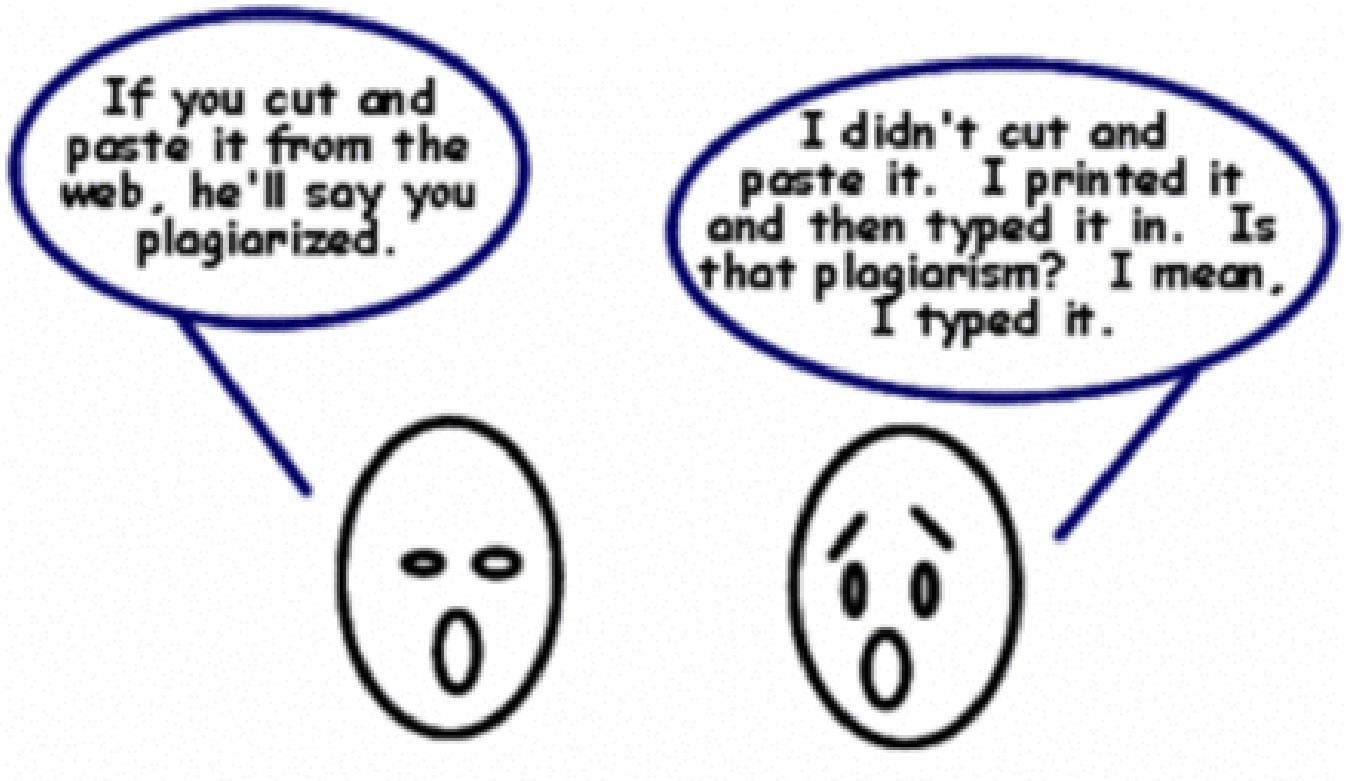


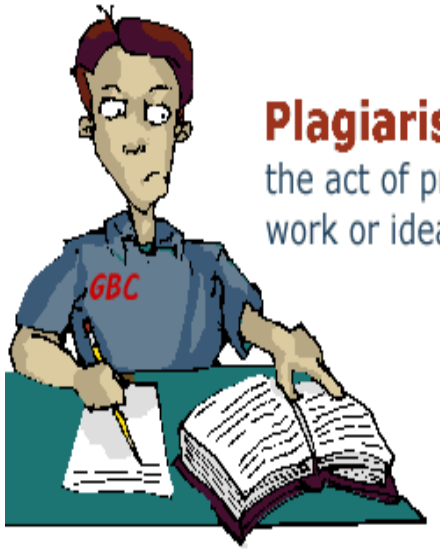
Concept Mapping Tools

Built-in search feature in some databases such as Credo Ref and Gale Virtual Ref Library
"Concept Map Builder"
http://www.nwmissouri.edu/library/courses/research/conceptMap.html
"Concept Map Maker":
http://www.softschools.com/teacher_resources/concept_map_maker/
"Bubbl.us": https://bubbl.us/
"Simple Mapper": http://simplemapper.org/
"18 Free Mind Mapping Tools for Teachers and Students":
http://www.educatorstechnology.com/2012/06/18-free-mind-mapping-tools-for-teachers.html

Search Like Detective and Write Like Journalist to Promote Inquiry-based Learning

Case Scenarios to Avoid Plagiarism

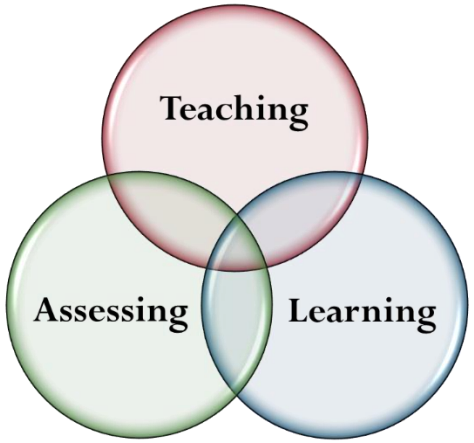




Plagiarism:
the act of presenting another's work or ideas as your own.

Assessment

- Formative Assessment
- Summative Assessment



Nurturing Life-long Learning Skills

- Google, Discovery and Individual Database Searches with mix of Blended Learning Methods facilitate **Organic Learning**--- by reaching and engaging students where they are to cultivate critical thinking skills for life-long learning

Part II

- Twenty-first century learners' sense of immediacy
  - Discovery search feature
  - Google Scholar via the library portal
  - Individual databases for specific assignments
  - Worldcat: Interlibrary loan using **REQUEST IT**!
- **Successful academic learning and challenges**
- **Library instruction**
  - **Co-teaching with an instructor at multiple learning stations**
- Tiered assessment methods
  - Diagnostic
  - Formative
  - Summative
- Reflective practices for librarians

Twenty-first century learners' sense of immediacy

- Organizational skills
- Time-management
- Prioritizing assignments
- Balancing academic, life, and social responsibilities
- Mental health issues
  - Stress
  - Anxiety
  - Hyperactivity
  - Depression
  - Bipolar and other brain disorders

- Fast-paced and impatience
- Immediate gratification
- Fewer literacy skills entering the first-year of college
- Inexperience using a variety of sources
- Developing stages
  - Analytic thinking
  - Evaluating information
  - Inquiry-based thinking
  - Integrating information from sources

Negotiating the use of discovery and Google Scholar

Discovery search feature

- Controlled language
- Advanced search helpful
- More efficient than Google Scholar
- More thinking required
- NEW and DIFFERENT!

Google Scholar

- Natural language
- Advanced search not popular
- More complicated than Discovery
- Habitual and continuous use because it is similar to Google searching

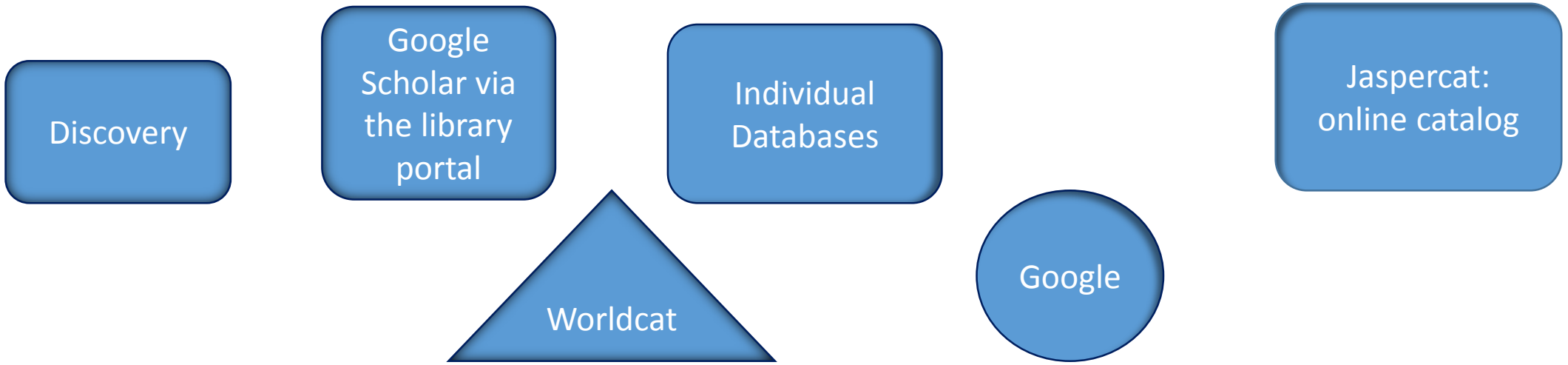
Individual databases! Worldcat!

Individual Databases

- Professor's favorite database or way to search
- Classmate's or friend's way to search
- Fastest way to find a the BEST database!
- Particular purpose
  - PsycTests
  - Encyclopedias
  - World Street Journal
  - Kanopy Streaming

Worldcat

- Professor's favorite way to search
- Professor preference over Discovery
- Easy access to **REQUEST IT!** For interlibrary loan (ILL) submissions
- Not always user-friendly for undergraduates



Provide options to undergraduates!

1. **Great instructional technique to meet the student where he/she is!**
2. **Scaffold in tiered learning of content and skills.**
3. **Encourage and support risk-taking based on the result of formative assessment!**

Benefits of providing options!

- Multiple means of representation (written, visual, audio. etc.)
  - Provide various ways of acquiring information and knowledge.
- Multiple means of expression (written, verbal, graphic/visual, etc.)
  - Provide undergraduates with alternatives for demonstrating what they know.
  - Acknowledge what they have learned and develop confidence in their own learning abilities.
- Multiple means of engagement (books/ebooks, presentations, videos, etc.)
  - Affords opportunities to develop and explore their interests
  - Engage in risk-taking in their learning by going beyond their original intention
  - Challenge undergraduates on an individual basis
  - Support and encourage their learning so that they are motivated to learn more.

Making connections: Co-teaching, liaising, and networking!

Co-teaching with an instructor

- Co-design a lesson
- Cover diverse collections
- **Designate specific learning outcomes based on content and information literacy skills/knowledge**
- **Engage undergraduates in a learning activity relevant to course, research assignment, and/or future profession**
- **Involve undergraduates in moving around the library as well as searching online**
- Physical movement increases learning

Library liaisons and networking!

- Undergraduates benefit from a research consultation
- Share their experience with classmates
- More undergraduates will schedule research consultations
- Ongoing communication among/between instructor, students, and library liaison

Co-teaching experience: FUN FOR ALL!

Discovery

Google Scholar via the library portal

Individual Databases: Kanopy, MMY, PsycTests, etc.

Jaspercat

Worldcat

Education Research Guide

Streaming Video Collection

Curriculum Collection for picture books

Circulating Stacks for books in educational philosophy and educational psychology

Lesson Plan
Common Core State Standards & Anchors
engageNY
NYSED requirements

Sample lesson plan: Multiple collections at two teaching stations

- Allows each student to get a more intimate learning experience with classmates, instructor, and librarian
- Acquaints undergraduates with different areas of the library
- Engages all group members, allowing them to share and ask questions
- Affords all group members to
  - Acquire knowledge about the same content
  - Develop information literacy skills in multiple library collections

Sample lesson plan for undergraduate education students

Two sessions: (15 minutes long)

- One group with librarian in the lab
- One group with instructor in Curriculum Collection
- Whole group in the stacks to become acquainted with educational philosophy and educational psychology

Activity related to creating a lesson plan using library resources

- One completed with the instructor
- One completed with the librarian
- Completed assignment submitted to instructor for feedback and/or grading

Sample activities in co-teaching library lesson

Kanopy Streaming in Lab with Librarian

1. Create log-in and save password.
2. Search for a topic (write topic here) _____.
3. Find an interesting video (write title of video) _____.
4. Create a playlist and add title to your “playlist.”
5. Snip a clip from the video and save it to share in class.
6. Add a video transcript (great support for various types of learners).
7. Explain how this resource could be used in a flipped classroom approach.
8. Document in lesson plan, using APA citation.
9. Submit to professor

Curriculum Collection Room with Instructor

1. Tour of curriculum collection; tactile experience.
2. Search Jaspercat advanced search filtering to curriculum collection
3. Find two picture books with multicultural themes
4. Document them in APA style in lesson plan
5. Borrow books at the circulation desk
6. Read the books and become familiar with authors’ works

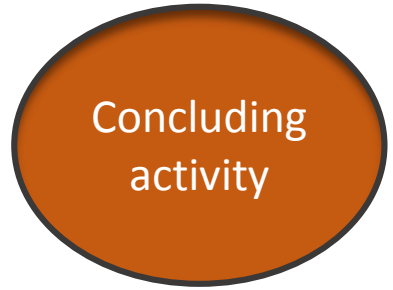
Sample lesson plan: Jaspercat activity

- Search for*: lesson plans, grades 4-6*
  - Title of book: _____ Call #: _____ Location: ____ (using location guide)
- Search for: *Horace Mann or John Dewey*
  - Title of book: ____ Call #: Location: _____ (using location guide)
- Search for: *teaching social studies or science*
  - Title of book: _____ Call #:_____ Location: _____ (using location guide)
- What do you notice about the call numbers?
  - _____

Students complete the assignment and walk around to locate books.

Sample lesson plan continued: Co-teaching library instruction

1. Reunite in whole class share
2. Explain LC call numbers and location guide
3. Field trip to Educational Philosophy and Educational Psychology
4. Students select a book to peruse
5. Check out at the circulation desk
6. Explain relevance to lesson plan and course assignment
7. Submit to professor
8. Moving around the library reinforces learning!



Tiered assessment of information literacy skills

- Diagnostic
  - JOLT
  - Establishes baseline for first-year and transfer students
  - Required online test in Moodle
- Formative
  - Student Evaluations
  - Peer Evaluations
  - Librarian's observation
  - Instructor's feedback
- Summative
  - Evaluation of first-year ENGL 110/210 research papers
  - Evaluation of senior research papers (e.g., Education: philosophy/psychology)
  - Repeat taking JOLT (group of 50 students representing each school)—*forthcoming!*

Data included in annual report and in Middle States Report

Office of Institutional Effectiveness collaborated with the library on these assessment measures.

Beyond formative assessment: Reflective practice for librarians

- Personalized approach to improve and/or diversify teaching
- Your observations of what works and does not work
- Set goals about experimenting with different strategies
- Discussions about learning outcomes with teaching faculty
- Targets diverse collections and search strategies
  - Avoid using one's favorites all the time
  - Promotes and nurtures lifelong learning

- Journaling or blogging
- Walking around the room with a clipboard, jotting notes down
- taking notes in google docs
- Writing down students' questions or comments
  - Students' anticipatory and/or slips

Librarian-Instructor Information Literacy Co-teaching Library Lesson Plan

- **In your groups, discuss designing a lesson with an instructor**.
- **Group mates should assume the roles of instructor or librarian in order to contribute course content as well as IL skills and knowledge.**
  - What are the learning goals of your lesson?
  - Who will teach what? How will you divide the lesson up with between instructor and librarian?
  - Which collections are included in the lesson?
  - Are they connected to the immediate assignment and professional requirements?
  - How will you engage undergraduates in three active learning activities (e.g., flipped lesson, concept mapping, gallery walk, anticipatory/exit slips, etc.)?
  - Design a brief assignment that can be completed while they are engaged.

THANK YOU!

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