

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



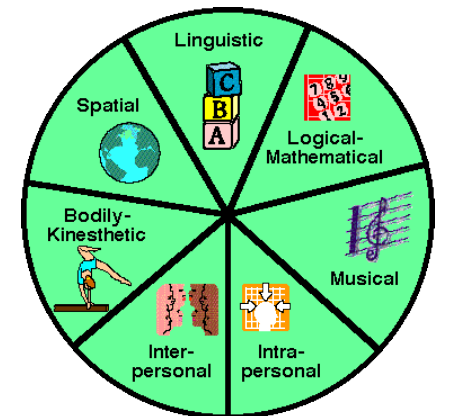
VISUAL
SEE IT



AUDITORY
HEAR IT



KINESTHETIC
DO IT

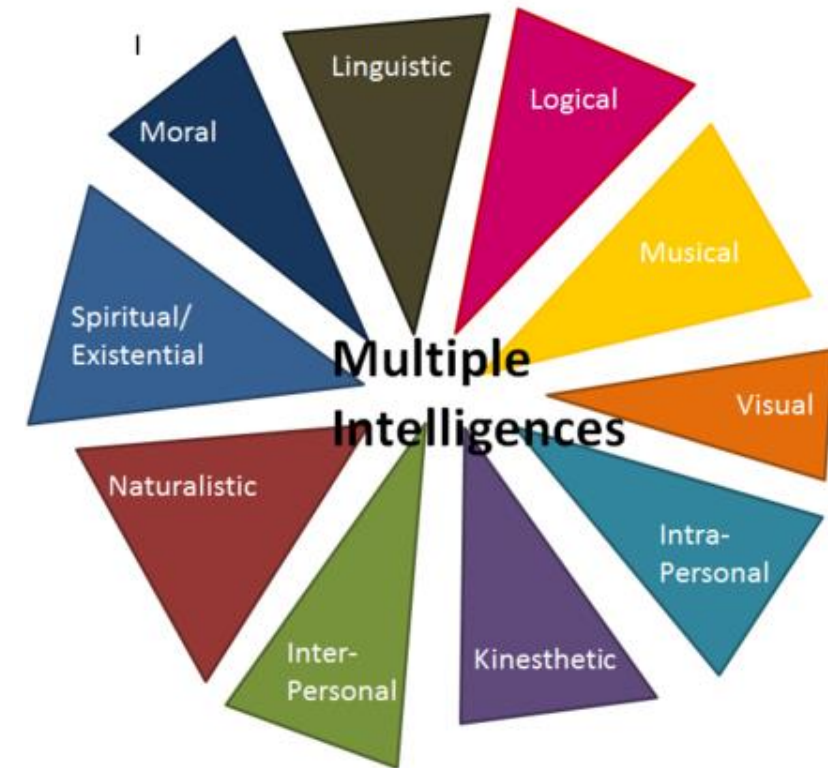


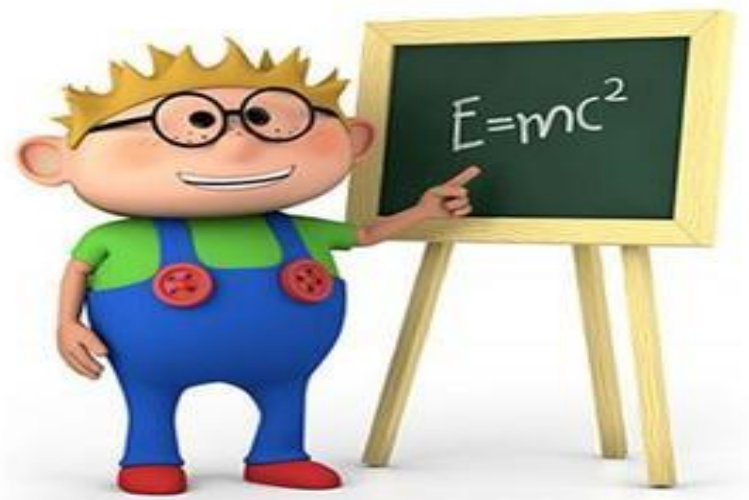
VISUAL
 SEE IT

AUDITORY
 HEAR IT

KINESTHETIC
 DO IT

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

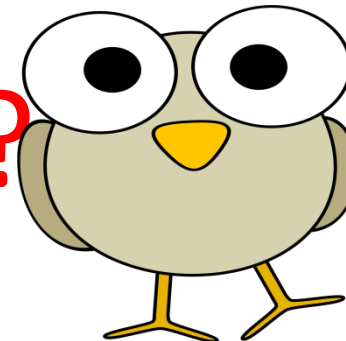


Student: Let's Fix the Assignment



- 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??



??

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


Browser address bar: <https://www.google.com/#q=global+warming> | Search bar: [bmcc](#) | [Sign in](#)

Google **global warming** [Tools: Attach File, File Printout, Scanner, Record Audio, Record Video, Date, Time, Date & Time, Equation Symbols]

[All](#) [News](#) [Images](#) [Videos](#) [Books](#) [More](#) [Search tools](#) [Settings]

About 62,700,000 results (0.50 seconds)

Global warming is the term used to describe a gradual increase in the average temperature of the Earth's atmosphere and its oceans, a change that is believed to be permanently changing the Earth's climate.



www.livescience.com

Global Warming: 2016 Articles, Facts, Causes & Effects
www.livescience.com/topics/global-warming/

[More about Global warming](#)

[About this result](#) • [Feedback](#)

Global warming - Wikipedia, the free encyclopedia
https://en.wikipedia.org/wiki/Global_warming ▾ Wikipedia ▾
Global warming and climate change are terms for the observed century-scale rise in the average temperature of the Earth's climate system and its related effects.
[Greenhouse gases](#) - [Effects of global warming](#) - [Scientific opinion on climate](#) ...

Global Warming Facts, Causes and Effects of Climate ...
www.nrdc.org/globalwarming/ ▾ Natural Resources Defense Council ▾
Global Warming Explained. Climate change is the single biggest environmental and ...

Searching Library Databases/Discovery Services

The screenshot displays the BMCC Library oneSEARCH interface. At the top, there's a navigation bar with links like 'Attach File', 'File Printout', 'Scanner Printout', 'Records Record Audio Video', 'oneSEARCH', and 'BMCC LIBRARY'. Below this, a search bar contains the text 'global warming' and a 'Search' button. To the right of the search bar are links for 'Browse Local Catalog' and 'Advanced Search'. The main content area shows search results for 'global warming'. On the left, there's a sidebar with filters: 'Personalize your results' (with an 'Edit' button), 'Expand My Results' (with a checkbox for 'Include results without full text online'), 'Show Only' (with options like 'Peer-Reviewed Journals', 'Full Text Online', 'Items Currently on Shelf'), 'Resource Type' (with options like 'Articles', 'Audio Visual', 'Books', 'Conference Proceedings', 'Databases'), and 'Topic/Subject' (with options like 'Global Warming', 'Climate Change'). The main results area shows 'Results 1 - 10 of 353,648 for Everything', sorted by 'Relevance'. A yellow banner提示 says 'Off campus? Sign in with your library barcode or ID number to see additional results'. The first result is a book titled 'Global warming' by Williams, Mary E., 1990-, available at Borough of Manhattan CC. The second result is an article titled 'Global warming' by Miller, Debra A. The third result is an article titled 'Global warming' from Science (New York, N.Y.), 23 February 1990. The fourth result is an encyclopedia entry titled 'Global Warming' from the Encyclopedia of Global Justice by Rosenberg, Charles.

BMCC LIBRARY oneSEARCH

Guest eShelf My Account Sign in New Search Help

BMCC All CUNY global warming Search Browse Local Catalog Advanced Search

Personalize your results Edit

Expand My Results

☐ Include results without full text online

Show Only

- Peer-Reviewed Journals (63,592)
- Full Text Online (363,438)
- Items Currently on Shelf (341)

Resource Type

- Articles (147,013)
- Audio Visual (4,014)
- Books (2,223)
- Conference Proceedings (4,227)
- Databases (3)

Show more

Topic/Subject

- Global Warming (43,409)
- Climate Change (27,391)

Results 1 - 10 of 353,648 for Everything

Sorted by: Relevance

Off campus? Sign in with your library barcode or ID number to see additional results

Global warming
c2006
Williams, Mary E., 1990-
Available at Borough of Manhattan CC. Stacks [QC981.S .G56 G5745 2006]. See "Locations" for additional copies.
Locations Details Request More Options Browse Shelf

Global warming
Miller, Debra A.
Multiple versions found. Click on title to see them all.

Global warming
Science (New York, N.Y.), 23 February 1990, Vol.247(4945), pp.919 [Peer Reviewed Journal]
Full text available
View Online Details Recommendations More Options

Global Warming
Encyclopedia of Global Justice
Rosenberg, Charles
RL Lovejoy TE (1994) Global warming and biological... global warming is the subject of heated debate, but the... Global

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

How many results?
Nature and type of results?
Reliability-Who can write on blogs and Wikipedia?
Payment for research articles?
Information sources?
Availability of resources for long?
Citations?
Evaluation?



Library Databases & Discovery Services

How many results?
Nature and type of results?
Reliability-Who can write articles/essays in journals, encyclopedias and databases?
Payment for research articles?
Information sources?
Availability of resources for long?
Citations?
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?

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?

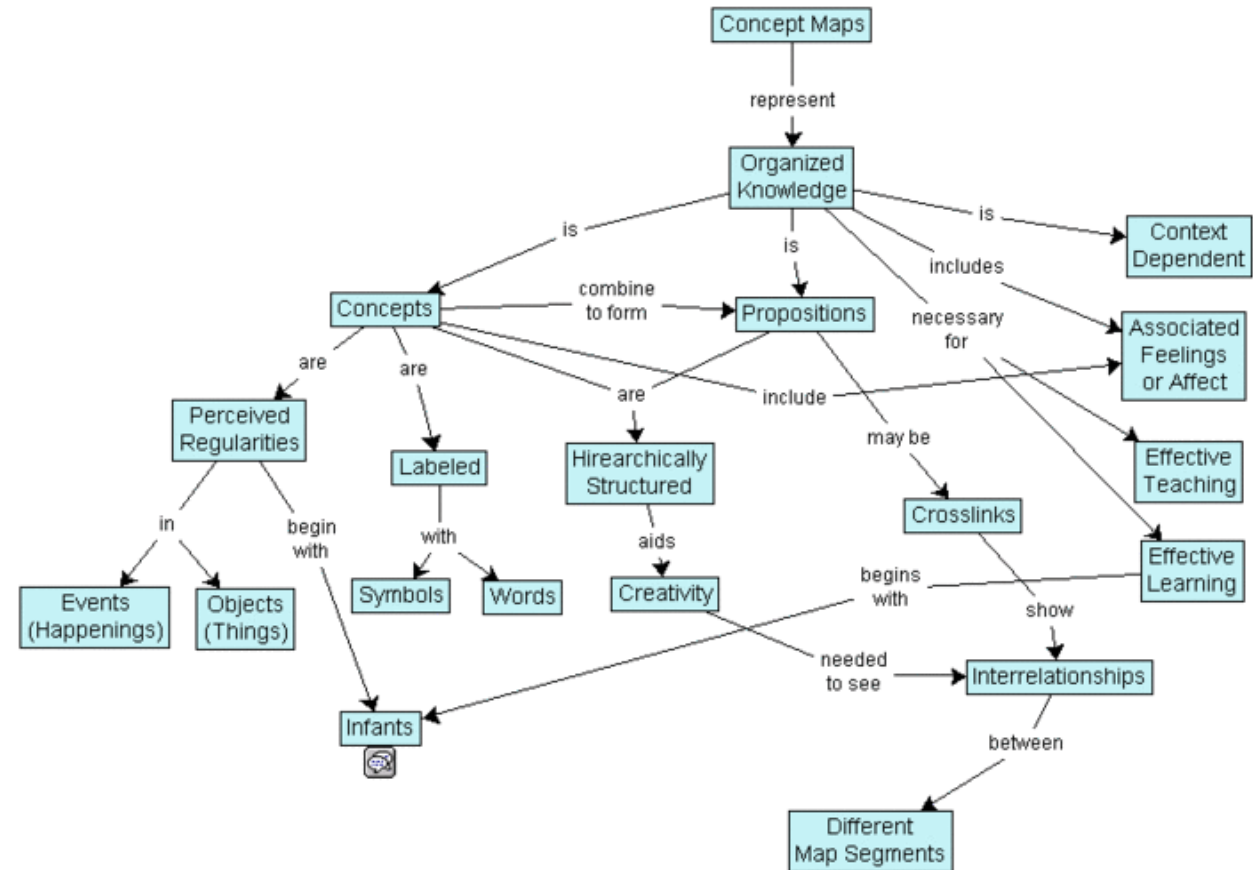
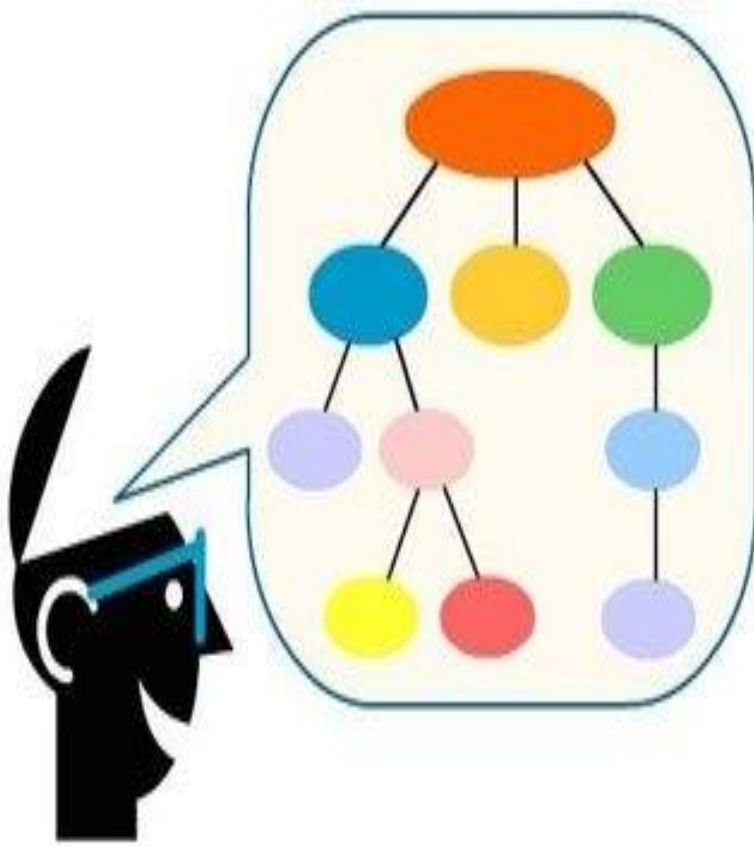
Can you filter research results by date, format, language, full text ?

Can you get already made Citations?

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



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

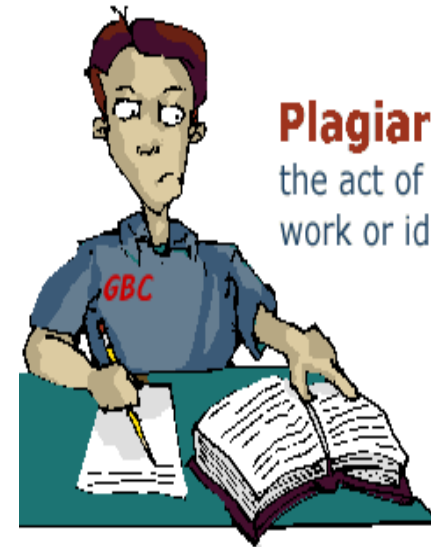


Case Scenarios to Avoid Plagiarism

If you cut and paste it from the web, he'll say you plagiarized.



I didn't cut and paste it. I printed it and then typed it in. Is that plagiarism? I mean, I typed it.



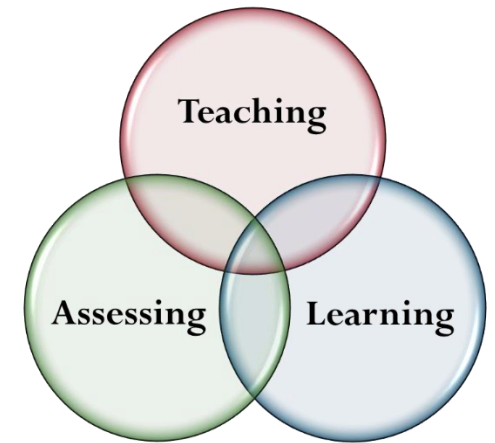
Plagiarism:

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

Assessment

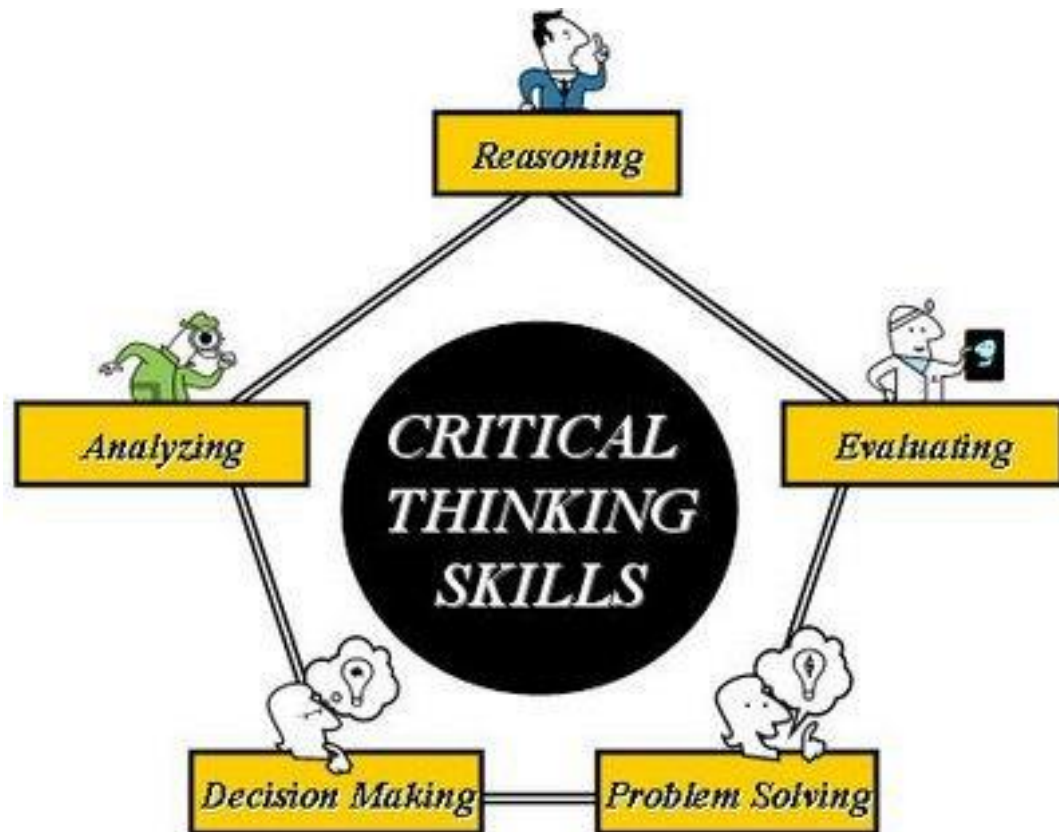


- Formative Assessment
- Summative Assessment



Nurturing Life-long Learning Skills

- ## Nurturing Life-long Learning Skills



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

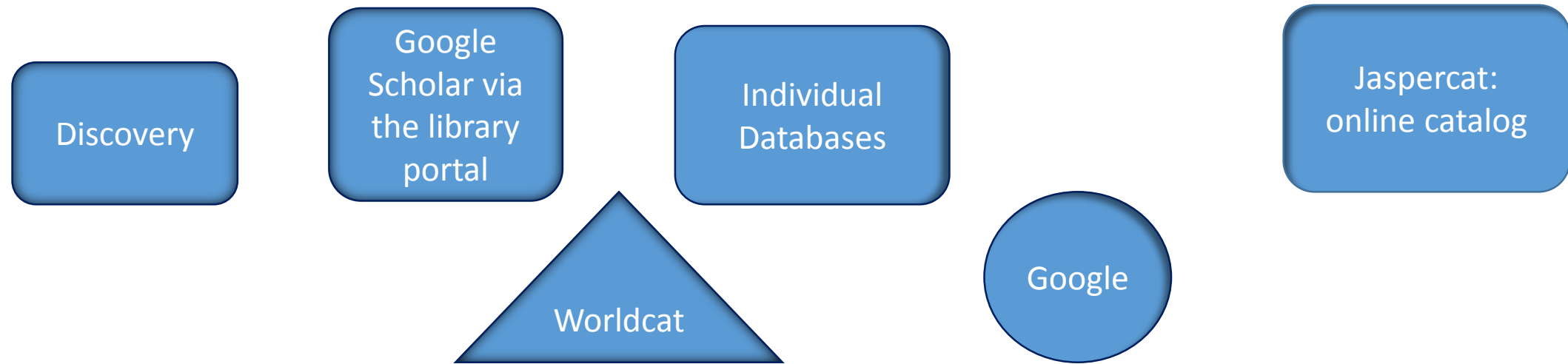
Individual databases! Worldcat!

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!

An orange oval with a dark orange border, containing the text "Concluding activity".

Concluding
activity

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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