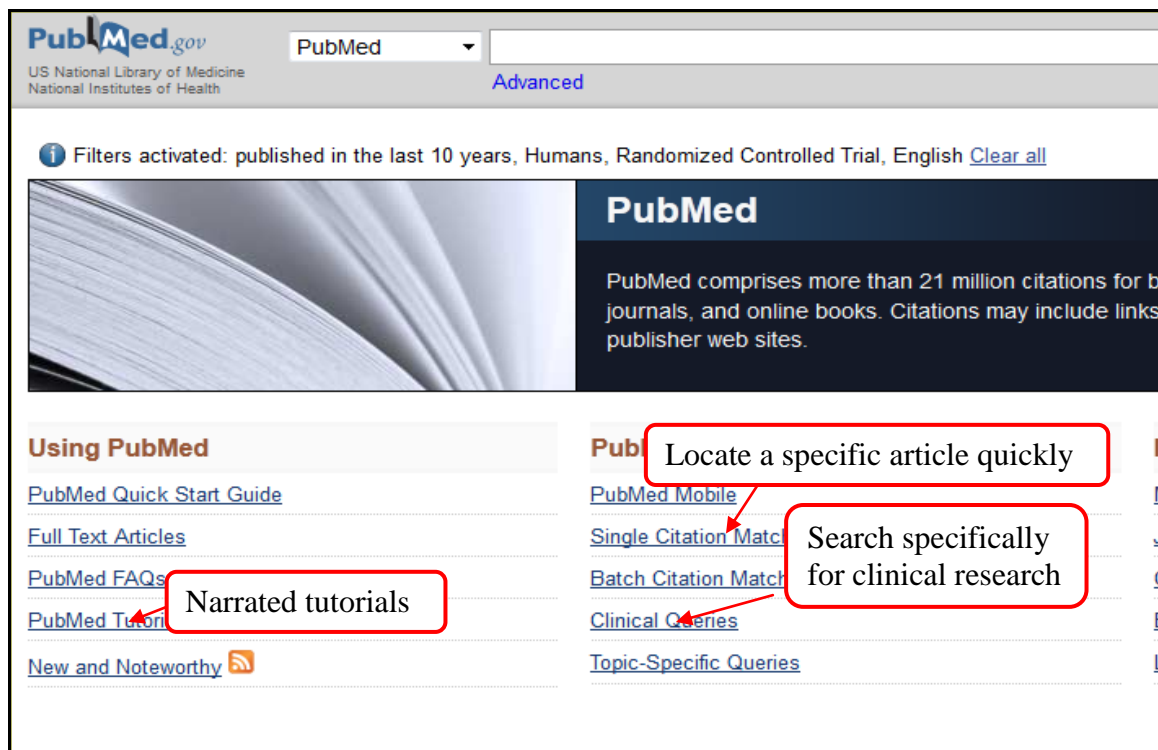# Medical Education Literature Searching

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> ### THE ADVANCED LITERATURE SEARCHING APPROACH

1. Run a quick search with your own keywords

   - Use **OR** to connect similar concepts
   - Use **AND** to connect different concepts
   - Use **"quotation marks"** to look for an exact phrase
   - Use **[tiab]** to find word/phrase in the article title/abstract
   - Use **[ti]** to find word/phrase in the article title
   - Use * to find possible endings to a word   *(i.e., discover\* finds discovery, discoveries, etc.)*

2. View the abstract to "fish" for medical subject headings (MeSH) terms to enhance your search

3. Create a search line for each separate concept

4. Use the Search History (found on the *Advanced Search* link) to formulate searches incorporating the MeSH terms you found

5. Search the Web of Science database to see who has cited interesting articles that you found in your Pubmed search

Callout labels on the image: "Locate a specific article quickly", "Search specifically for clinical research", "Narrated tutorials"

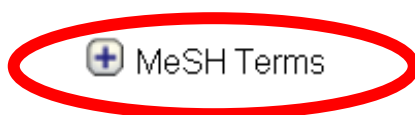## Step 1: Run a quick search with your own keywords

Sample research question:

How effective are interactive learning materials on medical student learning?

Sample "quick and dirty" PubMed search phrase:

effective* **AND** (interactive learning materials **OR** online tutorials) **AND** medical students

## Step 2:  View the abstract to "fish" for medical subject headings (MeSH) Terms to enhance your search



⊕ MeSH Terms

- MeSH terms are assigned to every article in PubMed to help classify the topics of a paper

- Select **+ MeSH Terms** below the abstract to see the MeSH terms for that article

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**TIP**:   • Jot down the different MeSH terms that you are interested in searching as you peruse several articles of interest.

• Can also use the **MeSH Database** to browse terms (located on the homepage of PubMed)

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research question : How effective are interactive learning materials on medical student learning?

Sample search terms:

| Concept A | Concept B | Concept C | Concept D |
|---|---|---|---|
| Computer-assisted instruction<br>Educational technology | Education, medical, undergraduate | Teaching<br>Learning | Program development<br>Program evaluation<br>Data collection<br>Educational Measurement |

## Step 3:  Create a search line for each separate concept

Sophisticated search strategy utilitizing PubMed's **Advanced link**:

#1  computer-assisted instruction OR educational technology
#2  education, medical, undergraduate
#3  teaching OR learning
#4  program development OR program evaluation OR data collection OR educational measurement
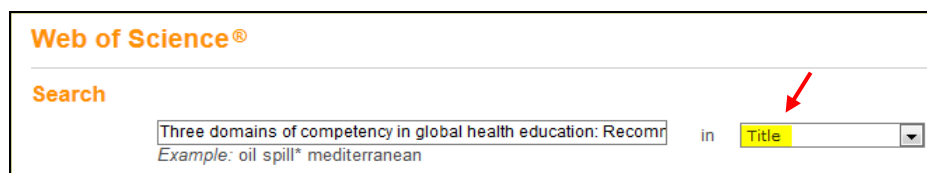
## Step 4: Use the Search History to formulate searches incorporating the MeSH terms you found (fine to also include non-MeSH terms)

Sample search strategies can be mixed and matched in the advanced Search builder boxes :

#1 AND #2 AND #3 AND #4
#1 AND #2 AND #3
(use **filters** to narrow your search results, if necessary)

## Step 5: Search the Web of Science database to see who has cited interesting articles that you found in your PubMed search

1.  Connect to the **Web of Science** database on the Library's homepage

2.  Enter the title of an article and run a title search.



3.  Click the Times Cited link to get a full list of articles citing this paper

## MANAGING YOUR PUBMED RESULTS

(a) Use the **Advanced Search Builder** screen to review and refine your searches.

| History ← | The searches you've run will remain here for the next 8 hours |
|---|---|

Example of a more complex search:
1. Create a search line for each of you concepts
2. Combine the topic lines to find more specific results

| Search | Add to builder | Query |
|---|---|---|
| #5 | Add | Search (((#1) AND #2) AND #3) AND #4 Filters: Randomized Controlled Trial; English |
| #4 | Add | Search teaching OR learning Filters: published in the last 10 years; Humans; Randomized Controlled Trial; English |
| #3 | Add | Search program development OR program evaluation OR data collection OR educational measurement Filters: published in the last 10 years; Humans; Randomized Controlled Trial; English |
| #2 | Add | Search education, medical, undergraduate Filters: published in the last 10 years; Humans; Randomized Controlled Trial; English |
| #1 | Add | Search computer-assisted instruction OR educational technology Filters: published in the last 10 years; Humans; Randomized Controlled Trial; English |

(b) Send items to the **Clipboard** to collect articles of interest from different searches and then send those results via email, print them, save them (to "Collections" or "My bibliography") or import them to Reference Manager (RefWorks or Endnote)

PubM

- Check the box of any items you want to send to the Clipboard
- Click the "Send to" dropdown & select "Clipboard"

Disp... ...y Added    Send to: ☑    Filters: Manage F...

**Choose Destination**
- ○ File          ○ Clipboard
- ○ Collections   ○ E-mail
- ○ Order         ○ My Bibliography
- ○ Citation manager

**Results: 1 to 20 of 63**   << First  < Prev

ⓘ Filters activated: published in the last 10 years, Humans, Rand...
Clear all

☐ Video-based cases disrupt deep critical thinking in proble...

c) **Save Searches** and setting up an **automatic updates** using **MyNCBI**

| PubMed ▼ | (((#1) AND #2) AND #3) AND #4 |
|---|---|
| | 🔊 RSS  Save search  Advanced |

- Select the "**Save search**" link to save your search strategy.
- Choose how often you'd like new search results sent to your email

| Repositories for Online Learning Materials | |
|---|---|
| MedEd Portal | www.aamc.org/mededportal |
| Merlot | www.merlot.org |
| Heal | http://www.healcentral.org |
| Collection of Learning Modules created by UCSF faculty and students: http://medschool.ucsf.edu/irocket/resources/lm/ | |

## Electronic Journals Related to Medical Education

Academic Medicine

BMC Medical Education

Clinical Teacher

JAMA (September Medical Education issues, starting from 2004)

Medical Education (also check out their May & Nov issues for the "Really Good Stuff" section

Medical Education Online

Medical Teacher

Teaching & Learning in Medicine

**Other medical specialty journals:**

Academic Emergency Medicine

Advances in Health Sciences Education

## OTHER RESOURCES

Medical Education Literature Searching Blog — http://mededlit.blogspot.com
Super Searching — http://guides.library.ucsf.edu/supersearching
Medical Education Subject Guide — http://guides.library.ucsf.edu/meded

Questions?  Contact:  Min-Lin Fang, 476-3397, min-lin.fang@ucsf.edu