Exploring the Evidence-Based Information Literacy Instruction Toolkit
Who we are

University of Utah
Large public

Roseman University
Small private

Brigham Young University
Large private

Southern Utah University
Small public

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Today we will...

- Employ mixed methods research to inform information literacy instruction
- Discuss evaluation criteria used by healthcare professionals
- Design information literacy instruction to address evidence-based needs

Link to slides: tinyurl.com/loex2022
OUTLINE

First stop: The what, the why, and the how

Next: Toolkit, and steps towards evidence-based instruction

Finally: Review and time for questions
### The What, the Why, and the How

- **Information literacy instruction**
  - Searching, finding, evaluating information
  - Academic information literacy - sufficient?

- **Preparing for professional information practices**
  - What is the information behavior of <insert group>?
  - What are their research practices?
  - Do these match our instruction?

- **Toolkit**
  - Process to establish information behavior
  - Inform instructional practices
  - Advocating for curricular change
Building an Evidence-Based Information Literacy Instruction Toolkit

01. Extracting Evidence
02. Translating into Instruction
03. Creating Narratives
04. Advocating for Changes

Things to consider based on previous research

Instruction examples

Future research directions

Quick writes to build your own toolkit
Extracting Evidence
01: Extracting Evidence from Literature & Research

- Workplace information literacy from library organizations, like ACRL Framework for Information Literacy in Higher Education (ACRL, 2016)
- Professional Information Literacy Competency Standards (Phelps, 2013)
- Levels of evidence to evaluate resources (Peterson et al, 2014)
- Step back and say to yourself, do my findings represent the profession accurately?
Do your own research

× **2017:** Comprehensive survey to recent alumni of four nursing programs in Utah to capture Information practices as nurses (Diekema et al., 2019).

× **2021:** Same survey doing a deeper dive on evaluation criteria they provided and nurses’ confidence levels about their evaluation ability (Schvaneveldt et al., 2021).

× **2022:** New survey specifically geared towards source evaluation.
Why nurses seek information

- Answer patient questions: 297
- Determine best practices for patient care: 245
- Consult clinical guidelines: 244
- Check clinical procedures: 243
- Interpret lab data: 235
Example: PICO

Let’s make this into a question

- **Patient or Population:** Low-income pregnant adolescents
- **Intervention:** Nurse home visits along with in-school interventions
- **Comparison or Control:** In-school interventions alone
- **Outcome:** Completion of high school

In low-income pregnant adolescents, do nurse home visits adjunct to in-school interventions, compared to in-school interventions alone, increase high school graduation rate?
Preliminary Data from New Study:
Nursing Comments on Evaluating an Article

Themes

- Source type
- Critical Content
- Citations
- Well-written
- Academic/professional
- Does not answer the question
- Peer Reviewed
- Not biased
- Credibility
- Reputable
Quickwrite - Extracting Evidence

Take a few minutes to write down your thoughts

- What are the professional information practices of the discipline your students are in? That is, how will your graduates in the workforce use information? Do you know? What are ways to find out?
- What frames within the ACRL Framework for Information Literacy in Higher Education would be a good fit for your discipline?
- What type of study can you dream up to learn more about professional information practices?
Translating into Instruction
02: Translating Research Results into Evidence-Based Instruction

- Time constraints: Develop timed in-class information seeking activities
- Loss of access: Going beyond traditional subscription databases to freely available resources and including colleagues as information sources
- Unmoored: Building a lifelong learning ethos where we encourage seeking librarian assistance or looking at other proprietary sources to help make decisions
Example: Lightning Round

Lightning Round!

You have three minutes and a case
Try to find an answer!

Pick three places you will search:
1. Bibliographic database (CINAHL OR PubMed)
2. Point of care tool (UpToDate OR Dynamed)
3. Whatever you want (Google, Wikipedia, Yahoo! Answers...
Case 11:
One of your new patients is a 62-year-old man with Chronic Obstructive Pulmonary Disease (COPD) who is currently using bronchodilators to manage his intermittent symptoms. One of his cousins, who also has COPD, recently mentioned to him that she does breathing exercises that were helping her manage symptoms. Your patient thinks breathing exercises are a bit woo-woo, but wants to know if it could actually help him.
Example: Database Throwdown!

Based on an activity by Hanna Schmilen
Example: Free Resources
Example: Guides Geared Toward Alumni

Nursing Alumni Guide

It’s hard to lose access to the databases and journals you’ve been able to use while at BYU. This page provides some free resources and other tips for navigating the information landscape in nursing.

Alumni Privileges

Come to campus for access to most databases and journal full text. UpToDate is one exception; it requires a current BYU login.

- Use a guest computer or a guest login in the Harold B. Lee Library.
- Visit a different campus if you are moving away from Provo—many academic libraries also offer on-campus access to their online collections.
- Join the Friends of the Library to maintain checkout privileges.

Scholarly Literature

Though these databases are free, article full text may not be available. Try Unpaywall for free, free access to articles.

- PubMed
  The public, free version of Medline: a database of biomedical literature.
- Trip Medical Database
  A database of evidence for health care providers.
- Google Scholar
  Google’s attempt to bring together scholarly resources across the Internet.

People Resources

Your hospital will have information resources. Look for a hospital library and hospital librarians.

Professional organizations will help you connect with other nurses in your field, and often provide information resources, too.

- Professional Organizations in Nursing

Guidelines

The National Guideline Clearinghouse went offline in July 2018, and there are a couple of replacements in development. Both links below are free, but require registration to access clinical practice guidelines.

- Guideline-Plus
- ASCCI Knowledge Center

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Example: Search Process
DEEPER DIVE IN WHAT NEEDS TO CHANGE

nearly 1/4 mentioned source type

Source Type  Other Comments
Quickwrite - Translating Research Results into Instruction

Take a few minutes to write down your thoughts

- How would you incorporate workplace or professional information practices into future research assignments?
- How can your research assignments help introduce your students to their future discipline’s information practices?
03: Creating Convincing Research-Based Narratives

- Learners creating narratives for themselves - imagining themselves in the profession
- Connect with instructors to build stories together - authentic stories provide enriching research experiences
- What are the most talked about topics? Most useful evidence in the profession?
- Nuances will help you connect to your audience and help reinforce that librarians understand more about them than they realize
Your story begins

You're a first-year college student in an ethics class. Your final project is a paper on biomedical ethics. You weren't terribly thrilled about this, because writing isn't your strong suit, but you're in college, after all. You're going to have to write a paper eventually.

Even worse, it's a group project with two other people: A, who is really smart but also super busy this semester, and B, who is kind of a wildcard. Sometimes they say something really good in class, but sometimes they're just not there.

From Dr. Professor:

For your final project, you're going to write a group paper.

- Each group member will find 3 scholarly articles and 2 websites.
- If there aren't 15 references on your final paper, you'll lose points.
- Your paper is on an ethical topic I've selected for you.
- You can write on any issue within your topic, as long as it's a coherent analysis.
- Your final paper should be 7 pages double-spaced, with references in APA format.
- Your references can be a mix of empirical studies and informed opinion pieces (no conspiracy theories please!).
- Remember you can use the Writing Center and the librarians for help.

Your topic is vaccine ethics. Your group discusses how to tackle it.

A wants to analyze all the various arguments in the paper to get the full view. B wants to choose a smaller bit of it and analyze it more deeply, especially since they really have opinions about anti-vaxxers.

What do you do?

Keep your topic broad OR Narrow the topic down
Assume you have the following information to make a clinical decision. Please evaluate it.


"Adverse reactions to vaccine injections are usually mild and incredibly rare in nature, but multiple cases of shoulder events including bursitis, generalized pain or decreased range of motion have been reported following routine vaccine administrations. These events are known as Shoulder Injury Related to Vaccine Administration or SIRVA.

A systematic review of literature was performed to identify all published accounts of SIRVA. Twenty-seven papers reporting one or more accounts of SIRVA were identified. The most common vaccination involved was the Influenza vaccine. The most common symptoms were pain that began in 48 hours or less and loss of shoulder range of motion. The most common treatment modalities were physical therapy, corticosteroid injections and anti-inflammatory medication; but in some patients, surgery was required. Regardless of intervention, the vast majority of outcomes demonstrated improved pain and functional except in the occasions of nerve injury.

The etiology of SIRVA injuries has multiple possibilities including needle length, mechanical injury from needle overpenetration and the possibility of an immune inflammatory response from the vaccine components, but a unique definitive test or quantifiably result does not yet exist:"

- This is bad information
- This is not very good information
- This information is neutral or mixed
- This is pretty good information
- This is good information
- I am not sure
QUICKWRITE - CONVINCING RESEARCH-BASED NARRATIVES

Take a few minutes to write down your thoughts

- What are some topic ideas for research-based scenarios in your area?
- Do you have colleagues in the discipline you could partner with to create scenarios?
- What aspects would you like to include in your scenario for your students to wrestle with?
04: Advocating for Curricular Change

✘ Knowing librarians often get pulled into sessions about
library resources and citations, consider curricular
changes ahead of time
✘ Report back on findings and resulting ideas
✘ Follow up with individual faculty members to share
assignment ideas and teaching activities
## Embedded Classes

### Fall Semester
- Introduction and getting to know the main library
- Evaluating Information
- Search Strategies
- General Databases (Google Scholar, Library Catalog)
- MLA Citation
- One-on-one meeting with Librarians to prepare for class presentation on health disparities of marginalized population

### Spring Semester
- Review of previous semester
- Discipline-specific databases (PubMed, CINAHL)
- Citation Management (Endnote Basic)
- Tour and exploration of Health Sciences Library
- Privacy, Security, and Data
- Prepare for Final Debate
- Assessment

**Example: Embedded Classes**
Hidden Data: Nurses not clicking on source

86 clicked on source

54 clicked on source
Quickwrite - Advocating for Curricular Change

Take a few minutes to write down your thoughts

- Who is your target audience? What arguments might work well for this group?
- What are important points to get across?
- How will you avoid being the outsider coming in to tell people what to do?
PUTTING THE TOOLKIT TOGETHER
● What’s next? Who are you going to talk to when you get back to campus?

● What literature can you look at that explains information habits in the workplace of your discipline? Might there be a way to ask a population about their information habits in the discipline you teach?

● What are some ways you can make your information literacy instruction more relevant?

● Who might be a good partner to help create an authentic, discipline-specific assignment?
A collaborative group of colleagues can keep projects moving and make the process fun!
Making changes to information literacy instruction is challenging without buy-in from course instructors and administrators.
Studying literature and carrying out research in information literacy in a profession can be enlightening for you and your students.
If changes to curriculum are warranted, make the case using evidence!
Questions

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Schvaneveldt, N., Diekema, A. R., Hopkins, E. S., Patterson, B. (2021). New nurses apply only basic source evaluation criteria but realize their skills are lacking: More sophisticated approaches to teaching evaluation skills are required. Health Information and Libraries Journal. Advance online publication. https://doi.org/10.1111/hir.12395

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