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

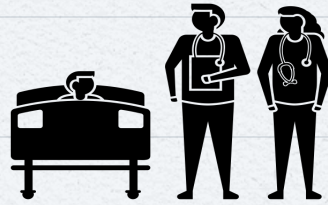**Quick writes to build your own toolkit**

01   **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

297

Answer patient questions

245

Determine best practices for patient care

244

Consult clinical guidelines
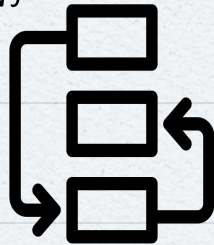
243

Check clinical procedures

235

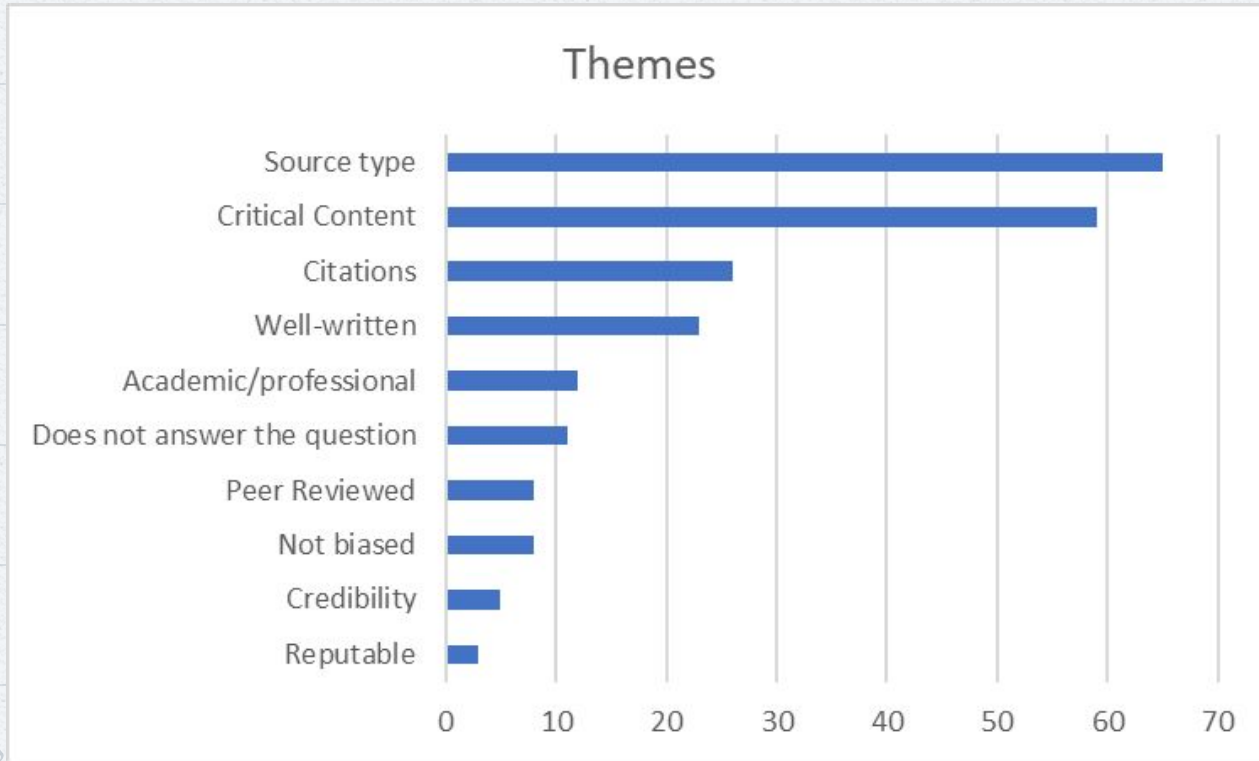Interpret lab data

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

Theme	Value
Source type	65
Critical Content	59
Citations	26
Well-written	23
Academic/professional	12
Does not answer the question	11
Peer Reviewed	8
Not biased	8
Credibility	5
Reputable	3

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?

02   **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…)

Example: Case-Based Scenarios

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

DATABASE THROWDOWN!

Based on an activity by Hanna Schmillen

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.

Your Librarian

Betsy Hopkins

Email Me

Schedule an Appointment

Contact:
betsy_hopkins@byu.edu
2317 HBLL and 400 KMBL
801-422-6777

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 legal, 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.
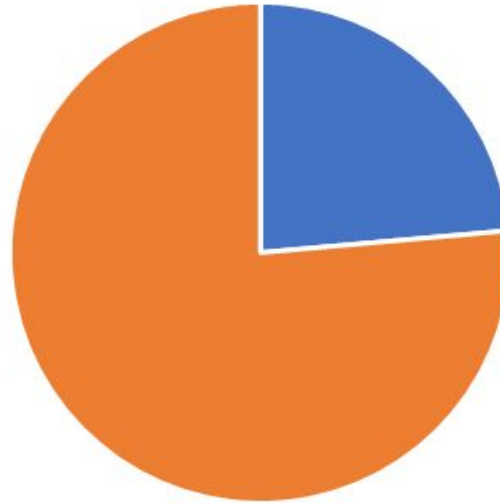
- Professional Organizations in Nursing

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 guideline

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 Narratives**

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 then they realize

Example: Choose Your Own Adventure

① 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**

Q7

Assume you have the following information to make a clinical decision. Please evaluate it.

Cagle, P. J. (2021). Shoulder injury after vaccination: A systematic review. Revista Brasileira de Ortopedia, 56(3), 299-306. https://doi.org/10.1055/s-0040-1719086

"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
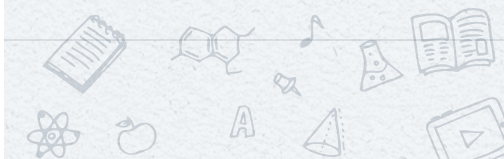
Quickwrite – Convincing Research-Based Narratives

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 Changes**

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

Example: Embedded Classes

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

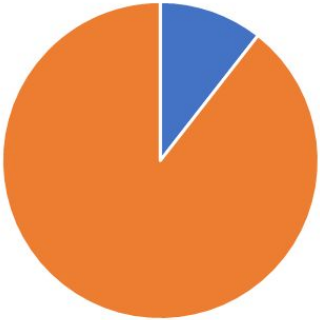# Hidden Data: Nurses not clicking on source

Popular Clicked on Source

■ Yes ■ No

Article Clicked on Source
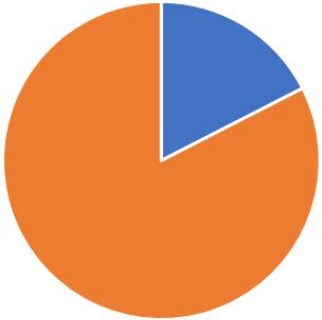
■ Yes ■ No

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?

Conclusion

- 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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References

Adams, N. E. (2014). A comparison of evidence-based practice and the ACRL Information Literacy Standards: Implications for information literacy practice. College & Research Libraries, 75(2), 232-248. https://doi.org/10.5860/crl12-417

Diekema, A. R., Hopkins, E. S., Patterson, B., Schvaneveldt, N. (2020). Listening to alumni voices: Using empirical evidence to enhance disciplinary information literacy. In: Sengupta, E., Blessenger, P., Cox, M. (Eds.), Advances in Library Practices in Higher Education: International Perspectives on Improving Student Engagement, (pp. 129-143). Emerald Publishing Limited. https://doi.org/10.1108/S2055-364120200000026008

Diekema, A. R., Hopkins, E. S., Patterson, B., and Schvaneveldt, N. (2019). Using information practices of nurses to reform information literacy instruction in baccalaureate nursing programs. Evidence Based Library & Information Practice, 14(4), 72-102. https://doi.org/10.18438/eblip29588

Peterson, M. H., Barnason, S., Donnelly, B., Hill, K., Miley, H., Riggs, L., & Whiteman, K. (2014). Choosing the best evidence to guide clinical practice: application of AACN levels of evidence. Critical care nurse, 34(2), 58-68.

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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