A Melting Pot of Fondue:
Embedding a Librarian into a FYE Course

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NUTRITION INFORMATION

This set of lesson plans was originally designed for a freshman First-Year Experience (FYE) course in the College of Natural Resources and Environment, but the examples used can be adjusted to other disciplines as needed. It is comprised of three distinct sessions (servings) with specific learning objectives and activities to guide students through the literature review and research process. Each serving includes a set of online videos and corresponding quiz which are to be completed before the in-class presentation and corresponding activities are delivered.

Learning outcomes for serving 1:

- Explain the general process to conduct a literature review about a topic.
- Select a topic of interest to research that follows course guidelines.
- Identify current self-knowledge and gaps of self-knowledge about the topic.
- Examine background sources to develop a knowledge base regarding the topic.
- Create research questions and refine the research topic.
- Identify synonyms and additional concepts to use as keywords.

Learning outcomes for serving 2:

- Identify specific characteristics of a variety of information sources in order to locate appropriate and credible information sources for the project.
- Describe how the information timeline influences what types of information sources are available for a topic.
- Construct a search statement using Boolean operators appropriately.
- Select relevant databases to search about the topic.
- Demonstrate how to access information sources found through the library's databases and discovery search engine.

Learning outcomes for serving 3:

- Apply evaluation criteria to select appropriate information sources for the project.
- Discuss the importance of properly citing sources.
- Demonstrate how to find an information source using a citation.
- Identify the necessary components to construct a citation for different types of information sources.
- Illustrate how to cite a source using the assigned citation style.
- Construct an annotated bibliography for each cited item used in the literature review.

NUMBERS SERVED

80–100, but can be scaled as needed

COOKING TIME

- Three 50-minute in-person sessions
- Three online modules (< 30 minutes each)
- Four worksheets to be completed outside of class

DIETARY GUIDELINES

The purpose of this recipe is to expose students to the skills necessary for conducting literature reviews as a part of the research process, along with developing critical thinking skills, ability to synthesize content, and create new scholarly products.

ACRL FRAMEWORK ADDRESSED

The information literacy skills that are addressed through the online videos, lecture content, and activities directly correspond to all six attributes outlined in ACRL's Framework (http://www.ala.org/acrl/standards/ilframework). The focus is on "Research as Inquiry," but each area is covered at an introductory level. This approach was used to familiarize students with several concepts across the framework and create a foundational knowledge base to be built upon throughout their academic careers.

MAIN INGREDIENTS
- ☐ Pre-class videos and quiz for each serving (described in the "Preparation" section)
- ☐ A classroom with a computer and projector to display presentation slides
- ☐ Presentation slides with content that addresses the learning outcomes for each serving (described in the "Cooking Method" section)
- ☐ Corresponding worksheets for each serving (described in the "Cooking Method" section)

MAIN COOKING TECHNIQUE
Flipped classroom, in-person lecture with discussions, and worksheets

PREPARATION
Prior to each in-class presentation, students are required to watch three videos (available through YouTube) and take a corresponding 5-point online quiz. Quizzes are a mix of multiple choice and true/false questions. Several questions per video are incorporated into a randomized question pool, designed so at least one question from each video is included as a part of each serving's quiz. Students are granted two attempts to complete the quiz, but they may not see the same questions. The highest quiz score is recorded. Answers to commonly missed questions are addressed during the corresponding in-class presentations for each serving.
Note: It is best if these quizzes can be administered and automatically graded through a Learning/Course Management System.

Serving 1 pre-class work:
- Developing your topic (https://www.youtube.com/watch?v=x4XZxIqSuyY) (2:42) by UNC-Chapel Hill
- Building your knowledge base (https://www.youtube.com/watch?v=15f0r2fi0y8) (3:34) by UNC-Chapel Hill
- Recognizing the potential in your search results (https://www.youtube.com/watch?v=57TSl69l9Qs)(3:02) by UNC-Chapel Hill

Serving 2 pre-class work:
- The information cycle (https://www.youtube.com/watch?v=drej6K44avl) (4:49) by UW-Oshkosh Polk Library
- Popular vs. Scholarly sources (https://www.youtube.com/watch?v=Qlw6PuR8oBk)(4:03) by Hartness Library
- Basics of Boolean operators (https://www.youtube.com/watch?v=4qKDQKJCp-s)(2:14) by Douglas College

Serving 3 pre-class work:
- Me? Plagiarize? (https://www.youtube.com/watch?v=TdMg7Yu4mPs)(3:39) by Hartness Library
- Using sources (https://www.youtube.com/watch?v=6_O6m4FDkxQ)(4:56) by Hartness Library
- Why we cite (https://www.youtube.com/watch?v=mkn4SyhjylM)(2:30) by University of North Carolina

COOKING METHOD
The following steps are employed for each of the servings, with the corresponding content and worksheets assigned as noted:
- Step 1: Create slides that incorporate the learning outcomes for each serving, with holding places for student responses to the online quizzes. Use the same example research topic across all three servings. Include screenshots of filled-out worksheets for each corresponding serving, so students see how the content of the slides and in-class demonstrations fit in with the expectations of the worksheets they are to complete.
- Step 2: Provide students with a link to (or embed in an online learning management system) the three videos and quiz associated for the corresponding serving. The due date for completion of the quiz should be (at a minimum) the day before the librarian-led in-class presentation is given.
- Step 3: Incorporate quiz responses of the most incorrectly answered questions into the slide presentation for discussion during the in-class session.
- Step 4: Give the in-class presentations for each serving, incorporate the learning outcomes relating to:
  - » Serving 1:
    - Topic selection; using background resources; refining the topic; developing specific research questions to be addressed; identifying appropriate keywords

» Serving 2:
  – Recognizing different types of information sources; selecting appropriate resources (e.g. databases, search engines) to search; developing effective search statements; accessing desired information sources
» Serving 3:
  – Locating information sources from a bibliography; evaluating sources; creating an annotated bibliography; citing sources using the assigned citation style for the course
• Step 5: Assign corresponding worksheets for each serving:
» Serving 1:
  – "What do I want to know?"
    ○ Acknowledges current self-knowledge, detects gaps in self-knowledgebase, and identifies areas to explore about the topic.
  – "Concept Table"
    ○ Walks students through developing research questions and creating keywords for their concepts.
» Serving 2:
  – "Building Search Strategies & Research log"
    ○ Shows students how to use the "Search Strategy Builder" (http://www.lib.vt.edu/help/portal/search-strategy-builder.html) to copy and paste searches into library databases.

■ Search Strategy Builder was created by University of Arizona Libraries and is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
  ○ Shows students how to keep track of what was searched and what databases provided the most useful results about their topic.
» Serving 3:
  – "Evaluating sources"
    ○ Provides a list of the seven evaluation criteria that students are to use to analyze each source initially selected about the topic.
    ○ Students are to integrate their evaluation criteria as part of their annotated bibliographies in order to justify the sources ultimately chosen for the research project.
• Step 6: Be available after the librarian-led sessions have concluded to assist students with any questions they may have about the research project (e.g. identifying appropriate databases, assist with search strategies, provide feedback regarding the assigned citation style, etc.).

ALLERGY WARNINGS
This is a time-intensive embedded experience as it includes: continually updating content, identifying alternative videos, refining quiz questions, meeting weekly with course instructors, analyzing and incorporating quiz responses into lectures, and consulting with students that request additional assistance outside of class.

CHEF'S NOTE
Demonstrating with a research topic that ties in with another related activity the students will do later in the course is extremely helpful. In this course, the research topic ultimately chosen as the demonstration topic was about white-tailed deer. This was selected because the exercises in a lab session midway through the semester require students to read a short article on white-tailed deer management and then build a conceptual map as a practice activity for what they will turn in regarding their own research projects. Having been exposed to different research aspects about white-tailed deer during the library instruction sessions, students were better able to connect the conceptual model exercise to the information and skills they obtained during the library instruction sessions.

ADDITIONAL RESOURCES
University of Arizona. (2009). Search Strategy Builder. http://www.library.arizona.edu/applications/quickHelp/tutorials/view_information/152/page:6 [Last accessed: June 6, 2016]

ATTACHMENTS
• Concept Table Worksheet
• Evaluating Sources Worksheet

INFORMATION RESEARCH
Developing your topic

1. Choose a research idea. Refine it into a clear, one sentence statement of what you will be investigating. Write a list of questions that you need your research to answer.
   a. Research statement (thesis/topic statement, research question):
   b. Research Questions:
      i.

      ii.

      iii.

2. Identify the essential concepts (ideas) in your research statement and complete the Concept Table below. Enter your essential concepts (nouns) in the Concept Categories cells—the most important concept is the Primary one. Secondary concepts modify or tell you something about the Primary concept. Enter synonyms for each concept in the column below that concept term.

CONCEPT TABLE

	Primary Concept	Secondary Concepts			
Concept Categories		1	2	3	4
Synonyms					

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RELIABILITY EVALUATION CHECKLIST

Evaluating resource reliability
Evaluation criteria
Usefulness/Relevance/Coverage
Contains detailed information one specific aspect of your topic
Contains a clear overview of your topic
What part of this resource did you find addresses your topic that you will most likely use/cite in your paper or presentation?
Authority/Authorship
Author(s) are clearly identified
Credentials of the author(s) are identified
Author'(s) credentials are appropriate for the subject
Type of source is easily determined (e.g. website, blog, scholarly article, news article, etc)
Accuracy
Author(s) are recognized expert(s) on the subject
Information is well-organize and well-written (no typos/errors)
Information is clearly documented and sources are cited
Sources cited are generally recognized as reliable

Objectivity
Source explicitly states its purpose and/or audience
Information addresses multiple points of view on the topic
A variety of reliable sources are cited
Currency
Publication or copyright date is given
The publication date is appropriate to your information need
Audience
Intended audience is easy to identify
Intended audience is scholarly, professional, or knowledgeable about the topic
Logical Fallacies
No logical fallacies can be found in the text
Presents logical conclusions supported by documentation