CARLI Instruction Committee Annual Project

2015-2016

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Introduction

This year, the Instruction Committee chose to explore ways to implement the new Framework for Information Literacy for Higher Education. Our theme, "Framing the Big Picture of Library Instruction," was selected to provide a structure that explored how the new Framework impacts library instruction programs. The committee planned and delivered several events to help educate librarians as they began to implement the new Framework at their own institutions.

In the fall, the committee hosted a webinar presented by Deb Gilchrist (ACRL Immersion instructor and VP of Learning and Student Success at Pierce College, Puyallup, WA) on writing learning outcomes. In the spring, the committee organized a workshop on curriculum mapping, with presentations by Anne Zald (Head, Government, Geospatial, Business Information, and Data Services, Northwestern University Libraries) and Lisa Janicke Hinchliffe (Coordinator for Information Literacy Services and Instruction, University of Illinois at Urbana-Champaign).

These events were well received by attendees and influenced the committee's decision to create an annual project that presented an outline and accompanying materials of the year's events to be hosted on CARLI's website, https://www.carli.illinois.edu/products-services/pub-serv/instruction. These resources will provide information for instruction librarians who were unable to attend the events or for those who would like to refer to ideas shared about implementing and assessing the Framework.

- Learning Outcomes: From the Big Picture to the Classroom: https://www.carli.illinois.edu/products-services/pub-serv/instruction/LearningOutcomes-Gilchrist
- Curriculum Mapping: A CARLI-sponsored IACRL Preconference: https://www.carli.illinois.edu/products-services/pub-serv/instruction/CurriculumMapping

Contents

Introduction

We've become accustomed to talking about assessment and assessment of student learning. However, assessment is the measure or test. Let's rather focus on the outcome, on the student, on what we want to see, and what students are learning.

Philosophy of Outcomes Assessment

Outcomes assessment is foundational to our teaching. They help assist in designing our library sessions. Sometimes our carefully planned library sessions are done so from the teacher's perspective. Outcomes and assessment help us look through the student lens. They give us a guide to what we want to teach and set the stage for assessing that outcome. The foundational question when drafting an outcome is "What do you want the student to be able to do?"

Metaphor of the Puzzle
We often look at the products (i.e. bibliography) of student work, but we also need to look at the individual elements that make up that composition. The pieces of the puzzle that comprise the puzzle as a whole. You are encouraged to look at the process students use to get to the final design. Process (that critical thinking element) and product are equally important. For example:

- When students had an opportunity to make a choice about what direction to take with their research, why did they choose resource A instead of resource B?
- What criteria did they use to make that decision to choose that resource?
- How did they decide to stop their search and determine they had sufficient information?

5 Questions to Instructional Design

Questions that will get at the instructional design process and help you take theory into practice. Since outcomes set the stage for design, it is where we need to begin.

1. Outcome: What do you want the student to be able to do?
    - Inspired by the institutional/library mission, values, goals, strategic plans, curriculum or gen ed / information literacy definition / information literacy program goals
2. Content: What does the student need to know to do this well?
    - This is the content or curriculum that you are going to work with. What are you deciding to incorporate to help the student get there?
3. Pedagogy: What's the activity that will enhance the learning?
    - For example, lecture? Hands-on work? What are the things that you are going to do in designing the experience for students?
4. Assignment: How will the student demonstrate the learning?
    - This is the assessment or the assignment. What is the opportunity you are going to give the student so that you can see the learning?
5. Criteria: How will you know the student has done this well?
    - What criteria will you use to determine what is a great answer and what is an answer that doesn't quite get there?

Definitions to Use to Frame Outcomes Assessment Work

- "Assessment is the ongoing process aimed at understanding and improving student learning" – Tom Angelo, AAHE Bulletin, 1996.
- Knowing WHAT you are doing, WHY you are doing it, what students are LEARNING as a result, and CHANGING because of the information -- Deb Gilchrist

Outcomes are the foundation. They are our guides. They are the agreed upon elements of our curriculum.

2 Foundational Rules

1. *Work backwards.* Think about the end product first, the ideal information literate student. What do we want them to be able to do as a result of the teaching? How do we get to that point?
2. *The work is about the student.* This is not about what we teach, but what they will learn.

Checklist for Good Learning Outcomes

- ✓ Measurable or "judgeable"
- ✓ Set the stage for learning that is clear to the student, faculty, and librarian
- ✓ Integrated, Developmental, Transferable
  - ➢ Integrated: Information literacy instruction needs to be integrated within the session, within the course, within the program, within the degree, not something the library owns by itself
  - ➢ Developmental: Asking different things of first year students as opposed to 2nd, 3rd, 4th year or grads students
  - ➢ Transferable: Students understand that it is not something that they are doing just for today or for this course, but for lifelong learning
- ✓ Relates to institutional definitions and documents
  - ➢ Inspired by something that already exists for the institution or the library, i.e. definition of information literacy within the library or for general education
- ✓ Matches the level (course, 50 minute session, program, etc.)
- ✓ Use variety of levels of Bloom Taxonomy
- ✓ "In order to" gets to the uniqueness of the learning – they are "balanced" statements
- ✓ Describes what the students will do

Formula for Writing Outcomes

Verb or Action Phrase + IN ORDER TO = Great Outcomes

- ➢ All outcomes begin with a **verb** or **action phrase** -- an intentional or strong verb
  For example: identifies multiple perspectives; distinguish between general and special databases; analyzes information
- ➢ In order to: the why statement. Sets up a good assessment. Helps you to think about what action you want to see from students.

Examples of outcomes using the formula:

- Brainstorm topic-relevant vocabulary in order to search databases with maximum flexibility and effectiveness.
- Distinguish between general and specialized databases in order to select the best database for the topic and level of specialization.
- Utilize knowledge of the inequalities of information and information power in order to strategically select where to search for sources.

Another example:

- Develop student learning outcomes
- Design measureable assessments of student learning

But it is much more powerful to talk about what it is you want students to do and why

- Develop measurable outcomes, clear criteria, and valid assessment tools in order to impact student learning and improve teaching

Balance the verb and the why statements

Balance the "verb phrase" and the "in order to phrase" to capture the uniqueness of the verb phrase. Or find the unique reason WHY you want the student to DO the verb phrase.

Example of Balancing:

- Describe criteria for evaluating sources > In order to assess the quality of information
- Determine bias and perspective > In order to gauge the author's audience, point of view, and what might be missing from the discussion

Writing Outcomes: 5 Things to Remember (or In Order to Pitfalls)

1. Balance the verb and the why statements.
    - NO: Evaluate websites IN ORDER TO search databases
    - YES: Evaluate websites IN ORDER TO distinguish quality from unreliable online information
2. Avoid using broad phrases. Be descriptive and focused.
    - NO: Search periodical databases in order to retrieve good information
    - YES: Describe criteria for evaluating sources in order to assess the quality of information
3. Avoid multiple verbs. Separate out the outcomes if you have three or more verbs.
    - NO: Define, identify, and formulate vocabulary in order to conduct successful online searches
4. Transferability: Write outcomes, not just for the class assignment, but for what students will doing beyond the class.
    - NO: Find 2 scholarly articles in order to write a 10 page paper in psychology
    - YES: Distinguish between popular and scholarly literature in order to match quality and validity of information to the type of inquiry
5. Avoid "understand." Outcomes go beyond "understanding" to get at what students will be doing. You cannot see understanding.
    - NO: Understand the increasingly social nature of the information ecosystem where authorities actively connect with one another and sources develop over time (Framework)
    - YES: Describe the information ecosystem in order to assess how experts collaborate informally and formally to develop a network of information on a subject

Practice Applying the Checklist

For a 100 level Business course, the instructor asks you to emphasize use of scholarly articles.

- Outcome: Differentiate between popular and scholarly articles in order to use them in the right setting

What's wrong with this outcome?

- In order to phrase is way too broad, unclear: what does "right" mean?
- Also, try using a different level of Bloom's Taxonomy. For example:
  - Students apply their ability to distinguish between the two types of sources
  - Categorize according to satisfaction of need
  - Identify the difference between popular and scholarly articles

A 100 level Business course assignment: Research a company you might consider employment with, including size, structure, earnings, philosophy, history, and competition. **Include information that indicates how the company sees itself, and how others (on the outside) perceive the company.**

How would you write the outcome? Examples:

- Compare impressions of a company to evidence in order to determine acceptability for potential employment
- Evaluate the perspective/point of view in a given source in order to determine how that viewpoint effects ones' understanding of the topic

Example: All Inclusive Outcome

Introduce the concepts of information literacy to the student population in order that they will improve their ability in writing research papers in all classes which require them, experience greater academic success, will be more likely to persist in completing degrees, will view the library as an environment as helpful in meeting academic needs, and will experience the mission of the College providing education to all who may profit from it.

- Needs to be broken down into individual concepts

Writing Outcomes in Context

Remember to think about the context for the outcome and at what level you want to write them.

> General Education: Information Literacy & Critical thinking
>> Library Definition
>>> Course
>>>> Instruction Session

Critical Thinking Competency Learning Outcomes Example

Students will:

- Define the concepts of critical thinking, logic, and argument;
- Assess the function of clarity in arguments;
- Compare and contrast the purposes of language in persuasive statements;
- Evaluate different types of inductive and deductive arguments:
- Distinguish fallacies from good arguments; and
- Apply critical reasoning concepts in order to evaluate issues of contemporary importance

Degree Level Example: Pierce College

The information competent student acquires and applies information in order to impact change, inform perspective, make decisions, and frame context.

- Values inquiry and information needs in order to continually engage in learning
- Applies a repertoire of creative and flexible information seeking strategies in order to navigate the unfamiliar, take action, or solve a problem.
- Identifies appropriate sources in order to access relevant information.

- Notice the broad nature of these outcomes that thread through courses and classes – what faculty will turn to when preparing classes

Program Level Example: Criminal Justice, Pierce College
How the department applied the broader degree outcomes (above) to their list of program outcomes.

- Seek, use, and be informed by information to understand and to decrease problems and crime in society and keep current in the field as a professional [Intended Outcome(s)]
- Ability to go beyond one's own opinion and construct an argument with meaningful points on multiple aspects of a topic [Skills & Strategies]

The Content of Outcomes

So many sophisticated to think about and approach information literacy. This is not just about picking a verb, but thinking about the content of what you are trying to frame for students.

For example, three ways in which students could be asked to search for Information:

- Utilize search terms, Boolean operators, and database limiters in order to focus a search
  - Skills
- Utilize citation chaining in order to determine what's missing from a bibliography and develop next steps in a search.
  - Context & connectivity
- Analyze biases in search algorithms in order to seek out information beyond the readily available and determine the power relationships in info availability.
  - Transformative thinking

Another example, for evaluating information:

- Apply the CRAP TEST in order to evaluate information for appropriate use
  - Skills
- Critically read a work in order to evaluate the claims, methods, and strength of evidence
  - Context & connectivity
- Determine the power behind the standards of evidence in order to consider who is heard and not heard in evidence
  - Transformative thinking

Documents from our professional organizations can be used as inspiration for outcomes content

- Information Literacy Competency Standards for Higher Education
- Framework for Information Literacy for Higher Education

Additional Resources/Examples Noted

- Battersby, Mark. "So, What's A Learning Outcome Anyway?" (1999): ERIC. Web. 19 Apr. 2016. http://eric.ed.gov/?id=ED430611

- Rubric for the Analytical of Critical Thinking across the Curriculum, Valencia College. https://valenciacollege.edu/academic-affairs/institutional-effectiveness-planning/institutional-assessment/documents/CriticalThinkingandGEWorktoDate10-9-2014FINALupdated2.pdf

- Ruth Stiehl's work on curriculum design and mapping.

Part I: Curriculum Mapping to Integrate and Communicate Information Literacy

Presented by Anne Zald, Head, Northwestern University Libraries.
http://libguides.northwestern.edu/IACRL2016

What is curriculum mapping?

Definitions of curriculum mapping range from focusing on it as a map or diagram, to a process, to a method of visualizing.

- Charles defines curriculum mapping as a diagram, which shows how disparate pieces of information relate to each other: "…a diagrammatic representation of the curriculum displaying the different elements of the curriculum and the interrelationships between these different elements." (Charles, L.H. 2015. Using an informational literacy curriculum map as a means of communication and accountability for stakeholders in higher education. *Journal of Information Literacy*, 9(1):47-61. http://dx.doi.org/10.11645/9.1.1959)

- Buchanan defines curriculum mapping as an action: "… a process for evaluating the various components of a curriculum for cohesiveness, proper sequencing, and goal achievement." (Buchanan, H., Webb, K.K., Houk, A.H., & Tingelstad, C. 2015. Curriculum mapping in academic libraries. *New Review of Academic Librarianship*, 21: 94-111. DOI: 10.1080/13614533.2014.1001413)

- Booth & Matthews define curriculum mapping from a user-centered view of learning: "Curriculum mapping is a method of visualizing insight into the steps, requirements, and communities a learner negotiates as they engage with a particular learning experience or degree path." (Booth, C. & Matthews, B. 2012. Understanding the learner experience: threshold concepts & curriculum mapping. Invited paper presented at the California Academic & Research Libraries Conference, April 7, 2012, San Diego, California.)

Why do curriculum mapping?

Before creating a curriculum map, it is important that those involved understand the purposes of the map. Curriculum mapping is not an end itself.

- One purpose for curriculum mapping is to map library instruction to larger institutional or departmental learning outcomes.
    - This allows for strategic alignment of information literacy learning with discipline-specific and general education curricula. Integrating information literacy into the curriculum allows students to receive cumulative, scaffolded experiences, rather than simply an isolated one-shot class. The curriculum map can be used in talking with faculty to explain the need for a developmental approach to information literacy learning. It can also serve as the framework for assessing the library instructional program, which in turn demonstrates the value of library instruction to the institution.

- Another purpose of curriculum mapping is to focus on the student experience.
    - Looking at the pathways to degree completion might show areas outside of classes (e.g. thesis or capstone), where information literacy is needed. Additionally, it integrates curricular and co-curricular learning, as much of what students learn happens outside the classroom. Even within classes, curriculum mapping reveals patterns, such as where there are gaps in student learning, versus where there are redundancies. These patterns can show both where library interventions currently are, and also where they should be in the future.

- A third purpose of curriculum mapping is to create a curriculum content analysis.
    - A syllabus study can provide a snapshot view of exams, types of assignments, how assignments are communicated to students, methods used for analysis, etc. This analysis can also provide information for collection development, in that it can allow librarians to identify strategic priorities for collections that may have otherwise not been obvious.

How to create a curriculum map

1. Determine the type of map

There is no set format for a curriculum map. One method is a concept map or spider style, which depicts a holistic view of the student experience. By charting disparate pieces of information, it can show commonalities and differences between different departments. Others take a more organic approach, thinking of curriculum mapping as a conversation. Most of the worksheets provided at this workshop were in the matrix style, such as mapping classes to outcomes. For more information and examples, please see Zald's LibGuide.

Materials needed (at a minimum - additional, local information sources may be useful)

- ✓ National standards, disciplinary standards, framework
- ✓ Accreditation standards
- ✓ Institutional learning outcomes
- ✓ Assessment office reports/tools
- ✓ Program documentation
    - Course sequences
    - Large enrollment
    - "Gateway" courses
    - Learning outcomes
- ✓ Courses
    - Syllabus
    - Outcomes
    - Assignments
    - Assessments

2. Map out the process

An example was provided for creating five matrix maps, each of which builds on the previous maps. For blank worksheets (as described below), see Zald's LibGuide.

a. Mapping outcomes
   - Where: See Worksheet 1: Outcome Mapping
   - What: Map library outcomes to institutional, and institutional to professional/national outcomes.
   - How: First, gather pertinent documentation. Also consider at what level of sophistication the library is meeting each outcome (e.g. **I**ntroduce/**R**einforce/**E**nhance). This progression can also be shown within the map. This map is looking at the picture with a wide-angle lens.

b. Course View
   - Where: See Worksheet 2: Course View
   - What: At a more granular level, look at a specific course. Map the learning outcomes for the library instruction to the university's learning outcomes.
   - How: For each learning outcome, list informal and formal assessments for library instruction, as well as the teaching strategy used.

c. Current Program
   - Where: See Worksheet 3: Current Program
   - What: Look across multiple courses to show where there are gaps, duplication, lack of increasing sophistication over courses, quantity of "touches", and any lack of strategy. Maps current program
   - How: Using the first two maps, this map includes multiple courses, and aims to look across them for what method of library instruction is used (e.g. **T**utorial, **L**ibguide, **C**lassroom, **P**artnership with program coordinator), which learning outcome is covered, and to what level of sophistication (**I**ntroduce/**R**einforce/**E**nhance).

d. Strategic Courses
   - Where: See Worksheet 4: Strategic Courses
   - What: Show which courses are strategic to reach
   - How: In deciding whether a course is strategic, consider the following:
     - What courses are prerequisites?
     - What courses do all students in a degree program have to take?
     - What courses would be excluded from mapping (e.g. independent study, etc.)?
     - Are there special student characteristics to keep in mind (e.g. large number of transfers, international students, a high need for remediation)?

e. Proposed Program
   - Where: Worksheet 5
   - What: Maps a proposed program. Shell is identical to current program map of worksheet 3
   - How: Having seen where the gaps/redundancies lie and decided on which courses are strategic, this map can be created.

3. Planning

- Consider who needs to be involved at which steps.

- Decide the scope of the curriculum map (e.g. particular division, specific department, general education courses, etc.)

Example: Incorporating the ACRL Framework for Information Literacy in Higher Education

Using the University of Minnesota as an example, Zald defined a few sample outcomes for students when they have completed a bachelor's degree.

For example, at the time of receiving a bachelor's degree, students:

1. Can identify, define, and solve problems
2. Can locate and critically evaluate information
3. Have mastered a body of knowledge and a mode of inquiry

These outcomes can be defined based on an institution's baccalaureate or other institutional student learning goals. The next step would be to map these institutional goals to the information literacy definitions, standards, and frames (or knowledge practices and/or dispositions) provided by ACRL.

Incorporating the Framework

Mapping student learning goals to the Framework proved somewhat challenging, but not impossible. The Framework supports the teaching of the concepts that comprise information literacy, and for that reason, many of the knowledge practices and dispositions within frames could be applied to each student outcome.

For example, working with just one frame, "Research as Inquiry," and applying it to the outcomes listed above:

1. Students can identify, define, and solve problems.
   - Corresponding frame: Research as Inquiry.
   - Corresponding knowledge practice(s): Learners formulate questions for research, determine an appropriate scope of investigation, deal with complex research by breaking complex questions into simple ones, use various research methods, organize information in meaningful ways, synthesize ideas from multiple sources, and draw reasonable conclusions based on the analysis and interpretation of information (Research as Inquiry Knowledge Practices 1-8).
   - Corresponding disposition(s): Learners consider research as open-ended exploration and engagement with information, value persistence, adaptability, and flexibility and recognize that ambiguity can benefit the research process, seek multiple perspectives, and seek appropriate help. (Research as Inquiry Dispositions

Using this one example, it's easy to see how mapping a curriculum map to the Framework can be a complicated process due to its conceptual nature. However, doing so does also allow you to become more familiar with the concepts you do and/or should be teaching to achieve your institution's student learning goals. You can do this same approach with the ACRL Standards for Information Literacy.

Part II: Information Literacy Leadership and Program Evaluation: Using a Curriculum Map for Program Development

Lisa Janicke Hinchliffe, University of Illinois at Urbana-Champaign

After Creating a Curriculum Map, What Do You Use It For?

Hinchliffe led a curriculum mapping project at the University of Illinois at Urbana-Champaign, and used the project as a jumping off point for advocacy for the library's instruction program. Advocacy includes developing leadership proficiencies among instruction librarians, and using a logic model to articulate the intended results of the library instruction program.

- All Hinchliffe's handouts are available through the University of Illinois at Urbana-Champaign institutional repository: https://www.ideals.illinois.edu/handle/2142/89697.

Regarding developing leadership proficiencies, Hinchliffe distributed a handout on the Standards for Proficiencies for Instruction Librarians and Coordinators, from the Association of College and Research Libraries (http://www.ala.org/acrl/standards/profstandards), focusing on category number seven, Leadership Skills. These Proficiencies state:

> The effective instruction librarian:
>
> 7.1. Demonstrates initiative by actively seeking out instruction opportunities or instruction committee work within the library, at the institution, and in regional or national organizations.
>
> 7.2. Encourages librarians and classroom faculty to participate in discussions, ask questions, and to share ideas regarding instruction.
>
> The effective coordinator of instruction:
>
> 7.3. Mentors librarians and provides constructive feedback to improve instruction.
>
> 7.4. Works effectively with the head of the library and other supervisors to promote and develop library instruction on campus.
>
> 7.5. Seeks leadership roles within the library and institution that promote library instruction initiatives.
>
> 7.6. Advocates for improving instructional services through support for training or improving skills of instruction librarians, better facilities, increased emphasis on library instruction by library administration, and dedication of resources to these areas.

She asked participants to consider their strengths, areas in which they may improve, and key people who might help them improve.

Using a Logic Model

Logic models link Planned Work including Resources/Inputs and Program Activities to Intended Results including Outputs, Outcomes, and Impact. See links below to Hinchliffe's handouts for a definition and visual representation of the logic model. Below are excerpts from the Logic Model Basics handout provided by Hinchliffe.

> Your Planned Work:
>
> - Resources/Inputs include human, financial, organizational, and community resources a program has available to direct toward doing work. Leadership proficiencies of instruction librarians are included as resources or inputs in planned work for a library instruction program, as are instructional spaces, software programs, training or professional development for librarians, and curriculum maps.

- Program Activities are what a program does with its resources. This includes classes taught, faculty outreach, outreach to programs, course coordinators, advisors, or learning support, assignment design, changes made to curriculum maps, and student learning assessment.

Your Intended Results:

- Outputs are the direct products of program activities. Outputs of a library instruction program can include statistics on student learning, library instruction services embedded in curriculum, number of instruction sessions, how often spaces are used, and how often librarians are consulted. In assessment, this includes asking the question: Did library instruction deliver what was anticipated? And, was it high quality?
- Outcomes are the specific changes in program participants' behavior, knowledge, skills, status, and level of functioning. Short-term outcomes should be attainable within 1 to 3 years, while longer-term outcomes should be achievable within a 4 to 6 year timeframe. This includes answering the question: Did students learn? Is library instruction successful in supporting students to achieve departmental or institutional student learning outcomes for information literacy?
- Impact is the fundamental intended or unintended change occurring in organizations (i.e., universities) as a result of program activities within 7 to 10 years. For a library instruction program, this requires linking student performance, retention, and/or success to library instruction.

The logic model provides a roadmap for planning, assessing, and advocating for a library instruction program; a curriculum map and instruction librarian proficiencies are just two of the resources that go into the success of such a program.