University Library

Program Review and Assessment Committee (PRAC) Annual Report. 2022 (AY 21-22)

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Introduction/Overview

This PRAC report will cover two "units" within University Library (UL): Library Educational Services, and the University Library Student Employment Program (STEP).

Educational Services

University Library Educational Services is the teaching unit of University Library. Fourteen liaison librarians collaborate with disciplinary instructors and faculty in course-embedded instruction focused on developing undergraduate and graduate students' information literacy (IL) habits of mind. Information Literacy is the set of skills needed to find, analyze, evaluate, use, and create information effectively and ethically.

Course-embedded instruction is different from credit-bearing IL courses. Librarians partner with disciplinary instructors and faculty in their courses. What this collaboration looks like varies widely, librarians can be in roles similar to co-teachers, guest speakers, and Center for Teaching and Learning instructional consultants. Here are some examples of what librarians do in course-embedded instruction:

- Lead targeted IL instruction for disciplinary classes in-person or online.
- Make suggestions for tweaking assignments and also help with assignment design to scaffold in appropriate IL outcomes.
- Partner with instructors and faculty to review submitted student work, particularly cited sources, annotated bibliographies, etc.
- Create subject and course-specific research guides to point students to appropriate resources.
- Add assessment quizzes for library tutorials to Canvas course sites.

- Meet with students individually or in small groups for research consultations.

Student Employee Program

University Library is one of the largest employers of students on the IUPUI campus, and the nascent University Library Student Employment Program (STEP) is developing co-curricular programming and support for the library's forty-plus undergraduate and graduate student employees, who play vital roles in providing and sustaining the library's research, technology, and information services.

STEP recognizes that on-campus employment can be a key means of fostering the sense of belonging and relationship-rich environment that underpins student retention and success, and that it represents a unique experiential context for engaged learning. STEP is thus actively restructuring the student employment experience at UL from the perspective of a pedagogy of care, from hiring and onboarding, through provision of student-specific space, workshops, and events, to maintaining relationships with student employees after graduation. We are particularly concerned that all elements of STEP are built with as well as for student employees and developed through a DEI lens.

Learning Outcomes

Educational Services

University Library Educational Services developed information literacy (IL) learning outcomes in July 2015. IL learning outcomes are based on national standards, the Association of College and Research Libraries (ACRL) *Framework for Information Literacy for Higher Education.*

A full list of learning outcomes is available in our 2021 PRAC Report. Here we have only listed the learning outcomes we are assessing in this cycle/report.

The information literate IUPUI student is familiar with the following frame: 1. **Authority** of information **is constructed and contextual** and depends on where a source comes from, information need, and how the information will be used. Authority should be viewed with an attitude of informed skepticism and an openness to new and varied perspectives and changes in schools of thought.
By the time an undergraduate student graduates or at the graduate level, the information literate IUPUI student should be able to: 1. **Authority is Constructed and Contextual**   • Identify authoritative information sources in any form.   • Evaluate the authority of information from various sources (e.g., peer-reviewed journals, magazines, newspapers, websites, etc.).   • Acknowledge their own authority in certain contexts.   • Recognize that authority or credibility is contextual in relation to time, discipline, methodology, and other factors.

As noted, the context of liaison librarian instruction is course embedded. UL cannot offer credit bearing courses. Because each school, discipline, major, etc, has different learning outcomes, liaison librarians map the disciplinary curriculum and outcomes to the UL IL Learning Outcomes. Additionally, librarians work to scaffold IL through the curriculum (from first-year through senior and graduate) so that students are exposed to increasingly complex concepts. Here are examples of liaison curriculum maps for the School of Science Departments of Chemistry and Psychology.

Student Employment Program

The working learning outcomes for STEP are provisional and still in development, but are informed by the IUPUI Profiles of Learning for Undergraduate Success, the Association of American Colleges and Universities' (AAC&U) Essential Learning Outcomes and supporting VALUE Rubrics, and the National Association of Colleges and Employers' (NACE) Career Readiness Competencies.

Organizational Purpose and Understanding
- Describe the mission and purpose of University Library and Herron Art Library.
- Identify how your work connects and contributes to that mission.
- Share information about UL services and resources.

Information Literacy
- Locate and evaluate credible information to meet a need or accomplish a purpose.
- Access and use information ethically.

Communication
- Communicate effectively by listening actively and asking questions.
- Choose language and presentation options that are clear, concise, and appropriate for your purpose and intended audience.

Problem Solving and Teamwork
- Identify problems and develop appropriate solutions.
- Implement and evaluate solutions.
- Collaborate with others to define and achieve shared goals.

Knowledge Transfer
- Identify connections and parallels between academic, work, and career skills and knowledge.
- Adapt and apply skills or knowledge gained in one situation to different situations or problems.

Reflection and Self-Assessment
- Identify changes in your learning and understanding.
- Articulate specific personal strengths and challenges.
- Identify and analyze your own assumptions and biases, as well as those of others.

Intercultural Competency
- Demonstrate awareness of your own positionality.
- Recognize and appreciate cultural differences.
- Engage others with civility, respect, and in ways that preserve the dignity of all people.

Connection to the Profiles of Learning for Undergraduate Success

Educational Services

University Library Educational Services has aligned our learning outcomes with the IUPUI Profiles of Learning for Undergraduate Success. A complete mapping is available in our 2021 PRAC Report. Here we have only provided the mapping for the outcomes we are assessing in this cycle/report.

Information Literacy Framework Concepts	IUPUI UL Learning Outcomes By the time undergraduate students graduate, they will be able to:	IUPUI Profiles of Learning for Undergraduate Success
Authority Is Constructed and Contextual	• Identify authoritative information sources in any form. • Evaluate the authority of information from various sources (e.g., peer-reviewed journals, magazines, newspapers, website, etc.). • Acknowledge their own authority in certain contexts. • Recognize that authority or credibility is contextual in relation to time, discipline, methodology, and other factors.	*Communicator* • Evaluates information. • Conveys ideas effectively.

Student Employment Program

The provisional STEP learning outcomes were developed with reference to, and aligned with, the IUPUI Profiles of Learning for Undergraduate Success and the AAC&U Essential Learning Outcomes.

STEP Learning Outcomes	IUPUI Profiles	AAC&U Essential Learning Outcomes
Organizational Purpose and Understanding • Describe the mission and purpose of University Library and Herron Art Library. • Identify how your work connects and contributes to that mission. • Share information about UL services and resources.		
Information Literacy • Locate and evaluate credible information to meet a need or accomplish a purpose. • Access and use information ethically.	**Communicator** • Evaluates information • Conveys ideas effectively	**Intellectual and Practical Skills** • Information literacy • Inquiry and analysis **Personal and Social Responsibility** • Ethical reasoning and action.
Communication • Communicate effectively by listening actively and asking questions. • Choose language and presentation options that are clear, concise, and appropriate for your purpose and intended audience.	**Communicator** • Listens actively • Builds relationships • Conveys ideas effectively **Problem solver** • Collaborates **Community contributor** • Builds relationships	**Intellectual and Practical Skills** • Written and Oral Communication
Knowledge Transfer	**Problem solver**	**Personal and Social Responsibility**

• Identify connections and parallels between academic, work, and career skills and knowledge. • Adapt and apply skills or knowledge gained in one situation to different situations or problems.	• Perseveres **Innovator** • Creates/designs • Confronts challenges **Community contributor** • Builds community	• Foundations and skills for lifelong learning **Integrative and Applied Learning** • Synthesis and advanced accomplishment across general and specialized studies
Reflection and Self-Assessment • Identify changes in your learning and understanding. • Articulate specific personal strengths and challenges. • Identify and analyze your own assumptions and biases, as well as those of others.	**Communicator** • Listens actively • Builds relationships • Evaluates information **Community contributor** • Anticipates consequences • Builds community	**Personal and Social Responsibility** • Foundations and skills for lifelong learning **Intellectual and Practical Skills** • Critical and creative thinking **Integrative and Applied Learning** • Synthesis and advanced accomplishment across general and specialized studies
Intercultural Competency • Demonstrate awareness of your own positionality. • Recognize and appreciate cultural differences. • Engage others with civility, respect, and in ways that preserve the dignity of all people.	**Communicator** • Listens actively • Builds relationships **Problem solver** • Collaborates **Community contributor** • Respectfully engages own and other cultures • Behaves ethically	**Personal and Social Responsibility** • Intercultural knowledge and competence • Civic knowledge and engagement—local and global • Ethical reasoning and action **Intellectual and Practical Skills** • Critical and creative thinking

Brief discussion of curriculum or co-curricular experiences

Educational Services

Liaison librarians collaborate with disciplinary instructors and faculty to teach IL competencies. We teach both undergraduate and graduate students primarily through their disciplinary curriculum via the following methods/mediums:

- In-person
- Online synchronous via Zoom.
- Asynchronous via Canvas modules, videos, and/or tutorials.

In AY 2021-22, librarians taught N=357 instruction sessions. Forty-six percent were in-person, 27% were online-synchronous, and 27% were online-asynchronous. Instruction is always aligned with course assignments. For example, a course has a research paper assignment so the liaison librarian will teach or develop asynchronous learning objects to develop students' IL competencies in areas such as developing

a research question, searching relevant databases to find sources to support an argument, and evaluating the information found.

One major change brought by COVID-19 still impacting teaching librarians was a dramatic swing in teaching modalities. Prior to the pandemic, librarians taught 97% of classes in-person. During the first year of COVID that flipped to 96.5% online (synchronous or asynchronous). With a return to campus in Fall 2021, in-person instruction accounted for 64% of sessions. Although outside the scope of this report, in Fall 2022, we are creeping back towards pre-pandemic norms with 73% of instruction in-person. It is unlikely we will ever return to 97% in-person since the pandemic has shown us that we can meet student learning outcomes through asynchronous modalities (see section Direct Assessment Individual Examples for examples from both asynchronous and hybrid).

In addition to course-embedded instruction liaison librarians also provide point-of-need instruction via research consultations. These are normally with one or a small group of students and are targeted towards specific aspects of an assignment. For example, a student is having trouble narrowing their topic into a research question, a student needs help finding relevant sources, etc. In AY 2021-22, librarians recorded N=765 research consultations.

Student Employment Program

During AY 2021-22 University Library appointed a full-time Director of Student Employment as Engaged Learning and hired two part-time student assistants to coordinate development of STEP. Fostering learning and belonging in ways that foreground equity and inclusion in a student employment context requires engaging both student employees and their supervisors, and not just providing additional learning and professional development opportunities for both students and supervisors, but also rethinking the administrative processes which structure student employment.

STEP therefore provided student-developed events across AY 2021-22 that engaged student employees from all eight of the library departments who employed students during that time; supported a student-produced bi-weekly newsletter in Fall 2021; and with the guidance of the STEP assistants and the input of other student employees, created a designated student staff lounge in support of community building and cohort development.

The program also ran a series of workshops for supervisors in Spring 2022 focused on providing effective feedback for student employees; with a group of supervisor liaisons to the program worked on creating a standardized process and tool for student employee evaluations; and developed a Canvas module for supervisors with resources and guidance on hiring student employees with an emphasis on equitable and inclusive position descriptions and hiring practices, and framing student positions as learning experiences.

While the continued impact of COVID-19 and the switch to remote learning meant that University Library employed fewer students in AY 2021-22 than pre-pandemic, the library still employed a total of 60 students across that time, 30% of whom received Federal Work-Study support. University Library student employees typically show high rates of retention. Overall, 89% (25 out of 28) of the Fall 2020 student hourly employees were retained at IUPUI or had graduated by Fall 2021. Furthermore, of those 25, 16 of them were still employed by the University Library in Fall 2021.

Overview of our assessment cycle

Educational Services

As [mentioned last year](), 2021 was the first year for Library Educational Services to submit a PRAC Report. In the past we have not had a formal assessment cycle of our UL IL Learning Outcomes. While the 2021 PRAC Report reported assessment of all learning outcomes, this year we are assessing only the IL frame Authority is Constructed and Contextual as well as some general overall assessment results.

IL Frame	Assessment Year
Authority is Constructed and Contextual	2022
Information Creation is a Process	2023
Information has Value	2024
Research as Inquiry	2025
Scholarship is a Conversation	2026
Searching is a Strategic Exploration	2027

As noted above, there are four Information Literacy learning outcomes connected to the Authority Frame:
- Identify authoritative information sources in any form.
- Evaluate the authority of information from various sources (e.g., peer-reviewed journals, magazines, newspapers, website, etc.).
- Acknowledge their own authority in certain contexts.
- Recognize that authority or credibility is contextual in relation to time, discipline, methodology, and other factors.

Student Employment Program

Given that the Student Employment Program and its learning outcomes are still in a developmental stage, we do not currently have a formal assessment cycle. However, University Library has surveyed its student employees annually since 2018, a survey which in part has sought to determine what student employees identify that they are learning or gaining from their time working at the library.

Outside of a learning outcomes framework, assessment of student learning also occurs in the course of specific workshops and events, and at the level of individual departments as part of training programs and student employee performance review and evaluation. However, department-level assessment has not hitherto been standardized or consistent.

Description of assessment methods and approaches

Educational Services

Librarians employ a range of assessment methods and approaches. They are encouraged, when possible, to use both direct and indirect assessments to assess student learning. One common method librarians use to gather both direct and indirect assessment of student learning is via a worksheet (direct) and end-of-class evaluation (indirect).

Due to the nature of our instruction (e.g., course-embedded not stand-alone credit bearing courses) our assessments are generally formative. We do not regularly have access to summative assessment measures (e.g., final projects or papers) and end-of-class course evaluations (e.g., Blue).

Direct Assessments

Librarians most commonly use worksheets (both in-person and online) as a direct assessment of student learning. Sometimes worksheets are evaluated using rubrics. For a worksheet example, see this first-year seminar example. For a rubric example, see this first-year worksheet rubric. Another common direct assessment is via classroom assessment techniques such as 3-2-1 and one-minute reflections. Librarians sometimes also utilize pre- and post-tests. Asynchronously, librarians use Canvas quizzes, Quick Checks, and discussions.

Indirect Assessments

Library Educational Services has common end-of-class and post-research consultation evaluation surveys. Both of these evaluations are intended to assess in-person teaching and in-person, or Zoom, research consultations.

In response to the pivot to more online-asynchronous instruction, Educational Services developed two new evaluations, one for students and one for instructors, specifically targeted towards Canvas integrated learning objects.

Librarians regularly review end-of-class evaluations to help inform future instruction. Librarians also self-report which IL Frames they are teaching to in each instruction session.

Student Employment Program

Assessment of student employee learning currently occurs primarily through indirect, self-reported means. At the program level these include the annual student employee survey and evaluations distributed at the end of workshops or events, and at department level involve end-of-semester or annual performance reviews and reflections, and one-on-one check-in conversations with supervisors.

Direct assessment of learning happens less frequently at the program level, and mostly via quick knowledge checks and classroom assessment techniques during workshops or events; individual supervisors or departments use a variety of direct assessment methods (quizzes, role-play, worksheets) to assess learning in the context of job training.

Key findings from assessments of learning

Educational Services

End-of-Class Evaluation (N=583)

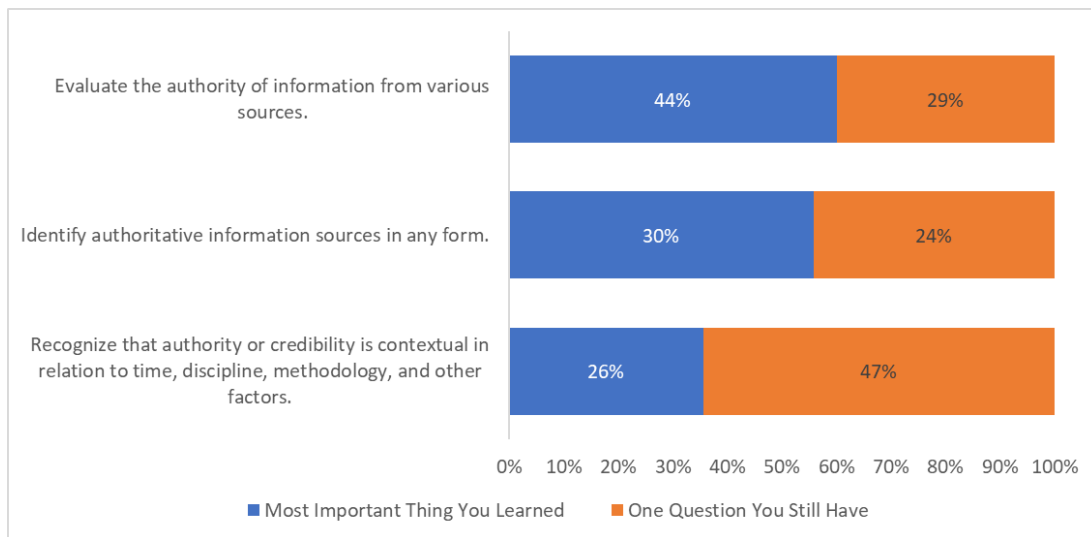|	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I learned something new that will help me succeed in my classes.	61%	35%	4%	0%	0%
I feel more confident about completing my assignment(s).	53%	42%	5%	0%	0%
I intend to apply what I just learned.	65%	33%	2%	0%	0%
I am more aware of the library's resources and services.	61%	36%	3%	0%	0%

	Excellent	Very Good	Average	Poor
How would you rate the librarian's overall teaching effectiveness?	73%	24%	3%	0%

The End-of-Class Evaluation includes two open ended questions. (1) What was the most important thing you learned during this class? (2) What is one question that remains unanswered? Responses were categorized into the six Frames to determine which broad concepts students identified. Responses related to the Frame Authority is Constructed and Contextual were then analyzed to determine trends and patterns.

Of the N=536 responses to the question "What was the most important thing you learned during this class?, 20% (n=104) mentioned concepts related to learning outcomes under the frame Authority is Constructed and Contextual. Of the n=106 substantive responses (of N=448 total) to the second open-ended question, "What is one question that remains unanswered?", 16% (n=17) mentioned concepts related to learning outcomes under the Authority frame. See chart (below) for percent of responses related to learning outcomes.

Overall, students most identified learning related to the outcome evaluating information (for example, determining if a source is scholarly, credible, and/or reliable). Students also report learning how to identify authoritative information (for example, "The most effective way to check if a source is credible is NOT to look or .org or.edu," "The difference between research and opinion articles.").

Their unanswered questions primarily related to the outcome related to recognizing authority is contextual. For example, "Can we have bad sources?"; "Can a source be opinionated and scholarly at the same time?"; "Do some sources become more reliable over years?" These questions all relate to the difficult grey areas around the authority of information. The learning outcome that students "acknowledge their own authority in certain contexts" was not mentioned at all. Both gaps, "authority is contextual," and "recognizing their own authority," need to be explored.

Asynchronous (Learning Object) Student Evaluation (N=58)

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
From library materials in Canvas, I learned something new that will help me succeed in my classes.	36%	58%	7%	0%	0%

From the library research materials in Canvas, I felt more confident about completing my assignment(s).	33%	50%	12%	5%	0%
I have applied or intend to apply what I learned in the library research materials in Canvas.	32%	49%	17%	2%	0%

The Asynchronous Evaluation also includes two open ended questions. (1) What was the most important thing you learned from the library research materials in Canvas? (2) What is one question that remains unanswered? Of the N=54 responses to the question "What was the most important thing you learned during this class?, 15% (n=8) mentioned concepts related to learning outcomes under the frame Authority is Constructed and Contextual. Of the N=14 substantive responses to the second open-ended question, "What is one question that remains unanswered?", 14% (n=2) mentioned concepts related to learning outcomes under the Authority frame. For both, students most identified the evaluate and identify outcomes.

Librarian Self-Reported Data

Here is the breakdown of self-reported data of which IL Frames librarians taught to in AY 2021-22. As with the 2021 PRAC report, librarians are self-reporting teaching the Searching frame more than the others. Again, this year's report is only focusing on the IL Frame Authority is Constructed and Contextual which librarians reported teaching in 11% of classes.
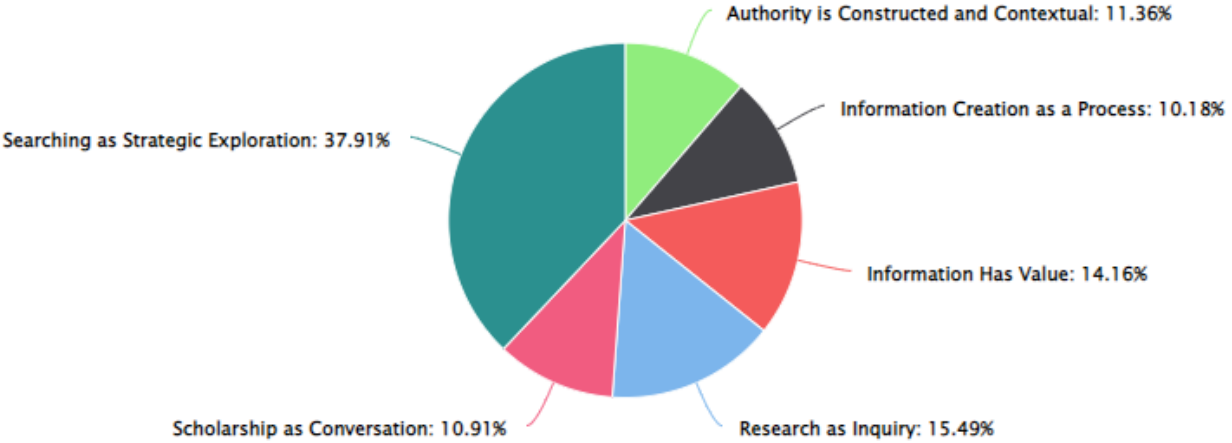
When analyzed by course level, learning outcomes related to Authority is Constructed and Contextual were taught more often than any other frame in first-year seminars. This was the only type of course (the others being 100- and 200-level courses, 300- and 400-level courses; capstone, and graduate) where Authority was taught more than other frames.

Research Consultations (N=26)

Although librarians recorded N=765 research consultations in AY 2021-22, only N=26 students completed the post-research consultation evaluation. Of respondents, students reported the research consultation helped them feel more confident in their research. Students indicated they felt better prepared to meet IL learning outcomes related to the Authority Frame, specifically evaluating information.

	Very Confident	Confident	Average	Not Confident
How confident in your research did you feel before the session?	4%	11%	50%	35%
How confident in research are you now, after your session?	35%	61%	4%	0%

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Overall, I feel the session was helpful for my needs.	88%	12%	0%	0%	0%

As a result of the session, I feel better prepared to…[Check all that apply]	Frame	
Evaluate the information I encounter (for example, finding appropriate sources for your assignment, distinguishing between primary and secondary or popular and scholarly sources).	Authority is Constructed and Contextual	20%
Select and use sources that best meet my information need (aka my thesis, topic, or research question).	Information Creation is a Process	26%
Cite my sources.	Information has Value	11%
Formulate a research question.	Research as Inquiry	9%
Recognize differences and changes in a topic or discipline (for example, knowing theories change and evolve over time and that there are different perspectives on the same topic, identifying landmark works and authors on a topic).	Scholarship is a Conversation	5%
Design or refine searches.	Searching is a Strategic Exploration	28%

Faculty End-of-Semester Evaluation (N=27)

In the 2021 PRAC Report, one of the areas we noted as missing from our assessment was feedback from the instructors with whom librarians' partner for course-embedded instruction. In Spring 2022, we implemented an end-of-semester evaluation to help us better understand the connections between our teaching and student course performance. Librarian instruction statistics were mined to identify instructors who collaborated with librarians in Spring (N=45, 60% response rate).

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Library instruction in my course supported my students' abilities to complete the course assignment(s).	78%	18%	4%	0%	0%
I saw evidence of application of the library instruction in my students' work.	70%	30%	0%	0%	0%

Open-ended responses were coded for comments related to the Authority frame. Asked "In your opinion, did librarian involvement in your course have a positive impact on students' course experience and/or classwork?" (N=24) several comments specifically noted learning related to Authority.

- "I ask [the librarian] to keep coming back because I notice a difference in the quality and understanding of sources used by students."

- "Yes. Some students also consult with librarians throughout the semester if they have trouble finding appropriate sources."
- "Yes. Students are consciously using databases for research with an understanding of what counts as a legitimate source."
- "Yes, [the librarian] was able to show them some practical ways to fact check the resources they're relying on for information. I know several of them were surprised by how easily they were misled.
- "Yes, students were able to find and use credible scholarly sources for their major assignments."

Direct Assessment

First-Year Seminar

Library Educational Services does not have any common direct assessments among librarians. We do have a common rubric for first-year worksheets. The rubric scores students on a scale of 0-3 (0 (not present), 1 (initial), 2 (emerging), and 3 (developed)) on their research question, appropriateness of source, evaluation of the source, and source citation. The learning outcomes to which this rubric is targeted are:

- [Research Question] Formulate research question of an appropriate scope (Research as Inquiry)
- [Article] Design a search and identify potential sources of information (Searching is a Strategic Exploration)
- **[Evaluation] Evaluate the authority of information (Authority is Constructed and Contextual)**
- [Citation] Cite sources through proper attribution (Information has Value)

The worksheet prompts related to the evaluation learning outcome ask students to explain why they thought the source they chose was credible. This allows the librarian to see how students are evaluating the information they find. Because the rubric is intended to evaluate first-year worksheets, students are expected to score close to 3-*developed*.

A sample of worksheets (n=69) from first-year courses found students scored an average of 1.9 on the evaluation learning outcome. This is troublesome and something Educational Services needs to examine especially, as noted in the 2021 PRAC report, evaluation was the lowest scoring area of the rubric.

Individual Examples

Here we've highlighted two examples, both results of course embedded sessions. Additional examples of assignments and learning objects librarians have created which teach learning outcomes related to the Authority Frame are available here.

POLS Y380/WOST W300

An upper-level liberal arts course included a hybrid module where students evaluated sources in a Canvas discussion post assignment and then expanded on that learning in an in-person class session. The learning outcomes for the hybrid assignment were: one, evaluate the authority of information from various sources; two, identify authoritative information sources in any form; and three, recognize that authority or credibility is contextual in relation to time, discipline, methodology, and other factors. For the discussion post, students were asked to:

Find:

1. A scholarly source.
2. Any other type of source.

For each of your sources:
1. Cite your source and provide a link to it.
2. Identify what type of source you think it is (e.g., scholarly, popular, newspaper, website, etc.)
3. Compare and contrast your sources. What are some reasons why you would use each source? What are some caveats (warnings) for using it? How you might or might not use that type of source to support an argument?

Students were given minimal evaluation guidance in the module. There were videos explaining how to search library databases for information. The rationale was that this flipped approach would allow students to wrestle a bit with the complexities of legal information sources and the in-class discussion would dive into nuance. Overall, students correctly identified source types in their discussion posts. Although some identified examples were not correct. The librarian read the discussion posts and identified examples to discuss in class. For example, sources #1, #2, #7, and #12 were misidentified as scholarly legal articles (instead of, respectively, newspaper article, "encyclopedia" article, "encyclopedia" article, and government hearing. Correctly understanding what type of source something is matters because different sources are used in different ways to support a legal argument. Misidentifying a primary source like a government hearing for a secondary, scholarly legal article has ramifications when using that source in an argument. Some of the incorrect source identification (for example, #2 and #7) was due to the organization of databases in the course research guide. The librarian reorganized the list of databases based on these findings to highlight the "most appropriate" legal resources.

After the module and in-person session, students then had an assignment to "Find a scholarly article you could use in your Research Paper." The professor followed-up with the librarian after that assignment was due and indicated that students had done some of the best work she'd ever seen and that that was due to the hybrid library assignment.

I-CORE Project (BUS F371/374, BUS M371/374, BUS P371/374, BUS Z371/Z374)
Upon entry into the Kelley School of Business at Indianapolis, students are placed in cohorts that take Finance, Marketing, Operations, and Teamwork/Leadership courses together in an integrated program called I-CORE. As part of this experience, students are assigned teams to do a product/service feasibility study which allows students to gain experience putting the concepts learned in coursework into practice while working with a local company. This project has a heavy secondary research and business analysis component. During I-CORE students participate in a 2.5-hour research workshop that has components that are offered asynchronously as well as synchronously in person, which covers learning objectives that support several frames from the ACRL Framework for Information Literacy for Higher Education. Regarding the frame Authority is Constructed and Contextual, there are three specific learning outcomes: Evaluate the authority of information from various sources, recognize that authority and credibility are contextual, and acknowledge their own authority in certain contexts. During the asynchronous and synchronous portions of the workshop students discuss the different types of business information and the authority those sources may have in different situations. The library instructor emphasizes that students are learning to be business analysts and sometimes will find conflicting information, which they will need to use judgement and be able to explain what information they decide to use when they synthesize data into models they construct.

Learning is assessed in two ways:
1. The library instructor uses online non-graded quizzes to ascertain whether students understand the authority of specific types of resources
2. The I-CORE Course instructors evaluate the synthesis of the data and the reasoning used when grading student assignments, providing feedback to the library instructor on areas that they see students struggling. The library instructor samples student assignments periodically as well to gauge gain formative feedback which can inform research consultations through the semester, as well as synchronous help sessions that are offered prior to the next assignment due date.

Two sample questions from a quiz that students complete:

- Financial information is not required to be published for private companies; however, you may find revenue numbers. Which statements are true (select all that apply)?
  - The numbers may be different across the databases. (True)
  - The company provided the database with their revenue numbers (False)
  - It is an estimate and may have been calculated by an algorithm. (True)
  - It may be the best financial information on revenue you can find but you should be critical of it even if you decide to use it. (True)

Students can take the quiz multiple times if they choose to, could score between 0 and 1 point depending on how they selected the answers. In Spring 2022, the average was 0.71 on their first attempt (n= 200, attempts = 257, average 1.4 attempts).

- When researching private companies one strategy is to research a public company in the same industry as a proxy this can allow you to find: (select all that apply) - (Note all answers are true)
  - find consumer trends
  - industry opportunities and threats
  - identify supply chain issues
  - calculate financial ratios

Scores were between 0 and 1 point. In Spring 2022, the average was 0.75 on their first attempt.

COVID-19 Impact

Librarian reported results of direct student assessment continue to show the impact of the COVID-19 pandemic on student learning in a couple of areas. One, integral to teaching IL concepts is to link the instruction to the point of need (aka the assignment in which those competencies will be applied). However, some classes that moved instruction online shifted the IL assessment to modules and times that were more convenient for the instructor rather than student learning. In other words, with asynchronous IL instruction sometimes students are taught the competencies before they understand how those competencies will be applied. Thus the instruction is less likely to be retained, leading to poorer student performance in the course assignment. Two, librarians have reported a dramatic decrease in student engagement with asynchronous Canvas modules and videos. Students are reaching out to librarians for research assistance with questions that are answered in modules and videos. While some disengagement is to be expected, levels seem particularly high in comparison to the height of the pandemic. For instance, the librarian who supported the I-CORE project noticed a decline in quality of student assignments she sampled throughout the pandemic, as well as engagement with materials presented in the asynchronous

materials created to support the project during the height of the pandemic when the workshop went entirely to an asynchronous mode, so she conducted a pre-test / post-test student in Fall 2021 which she could compare to data gathered from prior to the pandemic. Using the data gathered she made the case to the Kelley Faculty supporting I-CORE to move to a hybrid format where some content would be offered asynchronously to prepare for a more focused synchronous workshop. Scores on the post-test did increase in slightly Spring 2022 from Fall 2021 and, anecdotally, students research quality in assignments tied to the project seems to have improved.

Student Employment Program

STEP administered the fourth annual survey of University Library student employees in Fall 2021. The survey had a noticeably lower response rate than in previous years (n=20, 54% response rate). Broadly, those students who responded agreed that they were learning skills useful to them both in terms of their academic and professional career, identified a range of specific skills they were learning, and affirmed that gaining skills and experience was one of their primary motivations for working at the library.

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
Skills I am learning in the library are helping me academically.	58%	32%	11%	0%	0%	0%	0%
Working in the library has improved my marketable job skills.	47%	42%	0%	5%	0%	5%	0%

When asked to specify particular skills they had developed through their work at the library, the top skills respondents identified were: communication skills (79% of respondents); teamwork and collaboration skills (74%); problem solving skills (74%); research and information-finding skills (68%); applied technology skills (68%); and the ability to analyze information and use it to make decisions (63%).

84% of respondents said that one of their motivations for coming to work at the library each day was gaining skills and experience. Reported learning about the resources and services the library provides was also strong.

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
Through my job, I have learned enough to be able to tell others about the resources and services of University Library.	79%	21%	0%	0%	0%	0%	0%

There was a broader range of responses to questions regarding the supportive nature of the library as a work-learning environment, and the degree to which students consider it to be welcoming and inclusive.

	Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree

It's clear that library staff value diversity, and respect the ideas and experiences of people from different backgrounds.	68%	16%	5%	11%	0%	0%	0%
In my experience, University Library is a welcoming place to work.	74%	16%	5%	5%	0%	0%	0%
I have received the training necessary for me to do my job with confidence.	60%	15%	15%	0%	5%	5%	0%
I regularly receive feedback from my supervisor or other library staff when I'm at work.	55%	20%	25%	0%	0%	0%	0%
I feel comfortable asking for help when I'm at work.	90%	5%	0%	5%	0%	0%	0%

Discussion

Educational Services

This is the second year Library Educational Services has submitted a PRAC report, and the first where we focused on learning outcomes related to the Information Literacy Frame *Authority is Constructed and Contextual*. This first full assessment cycle has helped us to identify gaps and weaknesses in our instruction and student learning. In this assessment cycle, focused on the Authority frame, from indirect and direct evidence, students seem to be identifying learning related to the outcomes: Identify authoritative information sources in any form; and, Evaluate the authority of information from various sources. Where learning is lacking is in the other two learning outcomes: Acknowledge their own authority in certain contexts; and, Recognize that authority or credibility is contextual in relation to time, discipline, methodology, and other factors. Specifically, student responses on evaluations indicate they are still struggling with the nuance of authority. Most worrisome is that, in general, students are not recognizing their own authority. This connects to critical pedagogy as well as DEIJA, actively engaging students in their learning process and students finding and developing their own opinions and positions on concepts. Another concerning finding is the low rubric scores in evaluation on first-year worksheets. Finally, declining student engagement with asynchronous learning objects is a trend observed in AY 2021-22.

Student Employment Program

The STEP student employee survey is distributed in October, relatively early in the year and student employee hiring cycle; this, added to the fact that after the pandemic hiring hiatus the library had fewer long-serving student employees, may explain the lower response rate on this occasion. However, even prior to the full development of structured learning outcomes and programmatic support for them, University Library student employees reported their work at the library as contributing to their academic success and career preparedness, and identified specific areas of learning to which their library job contributed.

Student employees' positive reports of their own learning, and their strong assertion that learning is one of the reasons they value their library job, provide an encouraging base on which to build a more intentionally learner- and learning-centered student employment program at the library. In regard to student learning, the survey results point, however, to a particular need for more attention to intercultural

competency. The ability to relate to people from different backgrounds was one of the skills fewest respondents (47%) identified that they had developed through their work at the library—work which in many instances requires student employees to interact extensively with the library's diverse community of staff and users. Whether this is a skill area in which students are less confident in general, or they are less able to identify as connected to their work, it's one where the context of University Library should provide significant scope for student learning and growth.

The other particular area of concern the survey highlights is the environment in which student employees learn and work. While mostly falling on the right part of the Likert scale, students' responses to questions such as whether they receive regular feedback and are given the training they need to do their jobs are much more mixed, as are those pertaining to whether the library values diversity and is inclusive and welcoming. These results have fluctuated over the years of the survey and not consistently moved in a positive direction. They informed the provision of workshops for supervisors on providing feedback to student employees in Spring 2022, and a broader shift to focus on students' work-learning environment in AY 2022-2023 which was reflected in revisions to the Fall 2022 survey.

Planned Improvement Initiatives

There are several improvement areas University Library has identified from this assessment cycle that we will be implementing or discussing how to implement in AY 2022-23.

Educational Services

Educational Services will strategize and engage in professional development to determine how best to teach the learning outcomes related to "authority is contextual" and "students recognizing their own authority." To address low first-year student rubric scores in evaluation, we plan to examine common first-year learning objects as well as remap our general education learning outcomes.

In Spring 2023, we will also begin the process of better documenting direct assessment of student learning in course embedded instruction. Additionally, Educational Services is exploring connections between Information Literacy and DEIJA, IUPUI Dimensions of Global Learning, and the UN Sustainable Development Goals. Goals include mapping DEIJA outcomes to our IL outcomes as well as developing learning objects linking library resources to UN Sustainable Development Goals. We will also examine our research guides supporting the IUPUI University Library Equity, Diversity, Inclusion Strategic Plan DEI Performance Indicator 1, Action 1.10: Sustain and develop new LibGuides (research and teaching guides) supporting researching and teaching topics that help meet IUPUI's DEI goals to, "Ensure curriculum content and pedagogical strategies reflect a commitment to diversity… that reflect the full diversity of the human experience and commentary on it…and Promote culturally competent practices."

Student Employment Program

To better match outcomes and assessment, STEP will revise the annual student employee survey in AY 2022-2023 to align questions related to skill attainment more closely with the IUPUI Profiles. Recognizing the centrality of questions of equity and inclusion to the program's larger goals around contributing to student belonging, persistence, and success, we will have an increased focus on the library as a safe and welcoming work-learning space, and on developing a clearer picture of the financial puzzle student employees are managing.

In addition, to achieve a more detailed understanding of the context in which University Library student employees work and learn, in the coming year we will develop a highly participatory, student-spearheaded, qualitative study of University Library as a welcoming and inclusive work-learning environment. As we continue to determine learning outcomes and assessments for STEP it is imperative that we consider whether we are providing student employees with the work-learning conditions and environment conducive to achieving those outcomes, and to identify where that environment might be running counter to our desired learning outcomes, and to our commitment to diversity, equity, inclusion, and anti-racism as an organization.

In order to continue the work of extending best practices around equitable, inclusive, and accessible hiring and on-boarding to student employees, and to meet the library's DEI strategic priority to have a "consistent and personal onboarding process," we will continue to standardize student employee hiring documentation and processes, and develop an assessment of students' hiring experience to parallel that for applicants for full-time library positions which was developed as part of the library's Diversity, Equity, and Inclusion Plan. As well as assessing how equitable and inclusive our student hiring process is, connecting with applicants for student jobs will also enable us to see how successful our attempts are to embed learning in each element of the student employment experience.

We will follow through with implementation of a standardized evaluation process and tool for student employees to ensure that all student employees have an opportunity to reflect on their learning and receive constructive feedback in support of their learning on a regular basis.

University Library and the Record

In 2023 Library Administration plans to develop a process or procedure for identifying Record experiences within University Library.

Educational Services

Library Educational Services has one experience on the Record, Student Peer Teacher. Student Peer Teachers are trained to assist librarians in teaching information literacy and research skills in 100- & 200-level undergraduate courses.

The position is designed to build students leadership, presentation, communication, and IL competencies. The first semester students work through a curriculum designed to develop their teaching and IL competencies. During the first semester, students have the opportunity to shadow teaching librarians and begin to co-teach. After completing the curriculum in the first semester, students enter the peer student teacher pool and can volunteer to teach or co-teach classes as well as meet with students 1-1 in research consultations and participate in our chat reference service.

The curriculum involves direct assessment of student learning of IL and teaching competencies through hands-on assignments. For example, create a lesson plan, develop an evaluation exercise, create a citation activity. During the curriculum and after becoming a student peer teacher, indirect assessments in the form of student reflections are used to evaluate student learning.

The mid- and end-of-curriculum reflection questions are the same and help the librarians teaching the student peer teaching curriculum to adjust the curriculum.

Mid- and End-of-Curriculum Student Peer Teacher Reflection

1. What skills have you learned through being a peer teacher?
2. What skills do you feel you could improve or still need to learn?
3. How confident do you feel in your ability to help other students? Explain.
4. Do you feel being a peer teacher has had an impact on your own coursework? Explain.
5. What would you change (and/or add and/or remove) about the curriculum?
6. How could we better support your experience as a peer teacher?

The experience is approved as both internship (while students are learning the curriculum) and leadership (after students have completed the curriculum and are teaching). To date, five students have completed the curriculum and entered the student peer teaching pool. As this experience is paid, due to budget restrictions, the program is on hold for AY 2021-22 which is why no student assessment data is provided.

Student Employment Program

In AY 2022-23 STEP will review existing student positions within the library to determine which currently have the potential to constitute a high-impact co-curricular experience and warrant addition to the Record.