Against the Grain

Asking the Right Questions: Bridging Gaps Between Information Literacy Assessment Approaches

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Abstract

A large volume of research on information literacy assessment has measured students' skills and competencies against librarians' expectations. Far fewer studies have reported on the holistic experiences of students with finding, using, and creating information to fulfill their academic and personal needs. Consequently, the picture emerging from the assessment literature often portrays students as unskilled, uncreative, and uninterested when fulfilling course research assignments. Drawing on our combined experience at community colleges and universities in the U.S. and Canada and **Project Information Literacy (PIL)**, this article introduces a typology for classifying and critiquing four levels of information literacy assessment — micro, meso, macro, and mega, and presents a series of reflective questions to spark useful connections among these approaches, while maximizing librarians' teaching, learning, and assessment outcomes.

Introduction

How students find, use, and create information has intrigued librarians for decades. As the Internet and social media have rapidly and dramatically redefined what it means to be part of an informed society, academic librarians have turned even more of their attention to teaching, learning, and information literacy assessments. In the past ten years, the sheer number of assessment articles, books, and conference presentations has increased exponentially, signaling the importance of this inquiry.[1]

The quality and potential usefulness of the assessment literature, however, remains a topic of discussion and debate among librarians.[2] According to some critics, much of the literature is anecdotal and relies on methods that lack replicability from one class or library setting to the next. Others have noted a preponderance of research based on deficit-based tests that measure students' atomized skills against librarians' expectations for information literacy competencies. Critics claim there needs instead to be strengths-based assessment focused on how students solve their information problems.

In this article, we draw upon our combined assessment experience at U.S. and Canadian community colleges and universities and in conducting multi-institutional studies at **Project Information Literacy (PIL)**, a national research institute on students' research practices, to introduce a typology for classifying four approaches to information literacy assessment. Reflective questions are featured for strengthening the ties among these approaches, so that librarian practices, instruction methods, and student learning may ultimately advance and improve teaching and learning outcomes.

Levels of Assessment

Information literacy assessment methods are as varied as the librarians who have developed and shared their creative tools for measuring student success. To summarize the individuality of these accounts and categorize the breadth and depth of the assessment fields, we have developed a typology that draws on a broad swath of assessment literature.

We define four levels of assessment: (1) micro: in a single course; (2) meso: at a program or institutional level; (3) macro: assessment of skill sets across multiple institutions; and (4) mega: contextualized against larger trends within society.[3] Table 1 summarizes each assessment category in our typology and the related details. (See Table 1 above.)

Table 1: Typology of Information Literacy Assessment Approaches

Assessment Approach	Goal: Measuring Effectiveness	Rationale: Validating Need	Unit of Measure: Examining Student Practices	Data Collection Methods: Techniques	Tools and Examples
1. Micro	Measuring effectiveness at meeting learning outcomes	Prove and justify short-term impact and intervention	Single course or class	"Think-pair-share," Questionnaires, "Poll Anywhere" surveys, CATs (Classroom Assessment Techniques)	Learning Management Systems, e.g., Blackboard Learn™ and Canvas, IL rubrics, pre- and post-testing, ACRL Framework[4]
2. Meso	Validating need for information literacy instruction	Prove and justify longer-term impact of interventions within a range of classes or programs	Program or institution	Correlation with learning analytics data, e.g., retention, GPA; examination of IL data and materials; comparative or "ethnographish" analysis over time	ACRL's "Academic Library Value: The Impact Starter Kit,"[5] AAC&U's "VALUE Rubrics,"[6] ACRL Framework
3. Macro	Benchmarking and comparing student achievement of outcomes	Compare impact of interventions across different institutions	Multiple institutions; often members of consortia or geographic affiliation groups	Online surveys, computational analysis of datasets	SAILS[7], NSSE[8], WASSAIL[9], ERIAL[10]
4. Mega	Analyzing trends, viewing practices through the lens of student experience	Understand wider trends of information use and implications for student success	Multiple institutions; often chosen for broad spectrum of sample	Online surveys, interviews, focus groups	PIL[11], Ithaka S+R[12], Pew[13], Gallup[14]

Each assessment approach in our typology has its own goals, methods, motivations, and desired outcomes. For instance, micro-level classroom assessments provide insights into more specific measures of student learning in classroom situations. In many cases, libraries use these assessment methods to document the impact of our instructional efforts. Much of this assessment is done quickly and to check the validity of instructional approaches. In class, librarians frequently use assessment tools like "think-pair-share" surveys embedded in learning management systems, "Poll Anywhere" surveys, and one-minute papers to identify keywords that all check for quick understanding of surface-level concepts.

Meso-level assessment methods gather data to measure how effective librarians have been at reaching all students with information literacy instruction. Data can include percentages of classes taught in a department, total number of students reached plotted against overall trends in retention or GPA, types of items taught in different types and levels of courses as well as student performance of particular outcomes. This approach often incorporates data on the achievement of particular institutional outcomes. Meso methods often look at information literacy instruction

from the specific perspective of proving the need to retain information literacy instruction. In some cases, this kind of data is compiled across institutions as a macro-level assessment to reveal comparisons between academic libraries. These macro efforts often use standardized question banks and are often implemented by consortia of libraries.

With the constant threat to library funding, it is understandable why librarians assess from a strategic, and some might even say defensive, mindset. Libraries are under relentless public scrutiny. They are subject to reduced funding, whether it is on a campus, in a county, or nationwide. In academia, we are always expected to do more with less. In a society focused on data-driven decision making, as librarians, we are constantly trying to justify why and how our work has impact. Embracing assessment has allowed us to come to the negotiations prepared to discuss our impact, and back our statements up with data.

One departure from factors like these that drive library-centered assessments are the ongoing mega studies we have conducted with **PIL**. Unlike macro studies among pre-existing groups of institutions, **PIL** works to ensure a wide representation of institutional types and locations. To date, there have been ten large-scale analytical research studies about student research in the digital age. We collect data about how students solve information problems for coursework and in their daily lives. We look for robust relationships between students' research practices from across schools that suggest generalizable trends (e.g., the growing use of Wikipedia for course research).[15] In this sense, we examine what students *actually do*, rather than *what we think they should do*.

At **PIL**, we have used interviews, surveys, and, most recently, in our news study,[16] direct observation and a computational analysis of social media as methods for assessing information practices through the lens of the student experience. These methods allow for a deeper understanding of human experiences, attitudes, and opinions about the research process, from the *students'* perspective. Since 2009, more than 22,000 young adults enrolled in 89 U.S. public and private colleges and universities, community colleges, and 34 high schools have been interviewed or surveyed. PIL's research goal is to fill in missing pieces of the information literacy puzzle by finding out how early adults (in their own words and based on their own experiences) put their information literacy competencies into practice in learning environments in a digital age, regardless of how they may measure up to standards for being information-literate.

Minding the Gaps

Even though there are different rationales for each of these four levels of assessment, a symbiotic relationship does exist among the approaches in our typology. We definitely see where each level can borrow from the others to enrich the entire assessment process. Still, assessment data may end up being incomplete. Even when the data seem very straightforward in terms of an assessment of students' skills, the results may not always point clearly to the next step. While assessment data points are effective as bargaining tools, they are less helpful in leading to a more thorough understanding of information literacy and promoting change. A deeper understanding of this interplay and knowing the "right questions" to ask for reconciling these approaches, we argue, has the great possibility of maximizing information literacy teaching, learning, and assessment outcomes.

In recent years, there has been an increase in interest in moving beyond the status quo assessment models. For instance, **Magnus**, **Belanger**, and **Faber** have discussed the importance of incorporating feminist and critical pedagogy into assessment efforts in their 2018 article "Towards a Critical Assessment Practice."[17] Similarly, we need to critically examine the questions we ask students when developing assessments for implementing change.

The kinds of questions librarians frequently ask reveal the (often) narrow kinds of information literacy we value: the use of library terms and systems. Often, such questions are shaped more by external needs for particular kinds of data, or external pressures to prove the worth of a program than by our genuine desire to improve learning. Unsurprisingly, these questions fall into what the scholarship of teaching and learning (SoTL) would call the "what works" category.[18] Examples might be whether a particular type of teaching increases students' use of library

resources or their confidence in using library resources. The data gathered from students is often coded on whether or not, or to what extent, students demonstrate a positive emotional response to interventions.

Even when we think we are assessing learning gains in information literacy, our questions often fall short of our goals to impact teaching and learning. Instead, many times we are really only assessing the ability to memorize library jargon. In other cases, we are evaluating the identification of information containers that have limited application in the dynamic information environment where students fulfill classroom and personal research needs.

At the same time, our assessments tend to privilege certain information behaviors (e.g., ones that mimic our own professional ideals as librarians for seeking information to be used for academic assignments or learning). While these assessments may provide useful data to the librarian or about the library program, it is arguable whether that information is actually about the kind of deep learning we claim we want to support. If the questions we ask are not about learning, it is hardly surprising we struggle to implement results that improve the experience of students.

Like many undergraduate researchers, we librarians, too, may be rushing to prove a position before we understand enough about the context (similar to all of the first-year papers on why marijuana must/ must not be legalized). Before we can really tell "what works" for learning, we need to understand precisely what students actually do. SoTL would suggest asking more "what is" questions — ones that explore what is actually happening when students are doing something, regardless of whether it matches an instructor's expectations, fits into wider frameworks, or serves particular institutional goals. We cannot measure the difference instruction makes until we truly understand what is happening as students are learning.

For instance, an assessment librarian might ask questions such as these: "What are the first steps students in a freshman composition class take when searching for sources for an argumentative essay?" "Is there a difference in how students in 300-level history courses assess sources in a class where issues of equity and diversity are explicitly addressed in the readings?" "What aspects of the research process do students find most satisfying and most frustrating, and are there differences related to year of study or whether the course is in the student's main discipline?"

In these cases, data come from material generated while students experience learning, such as reflective journals, lab work, and successive drafts of papers, or may use protocols like think-alouds. PIL studies often incorporate this kind of data through focus groups and interviews that ask students to narrate their own experiences with information. The insights gained can illuminate why an intervention might have "worked" and therefore how to implement changes to create the conditions that foster learning. While they are broken down here by type of assessment, the questions in Table 2 can also spark useful connections between the approaches, and may be used outside the levels we associate them with here. Table 2 presents a framework of what some of these questions may be for each level of assessment in our typology. (See Table 2 p.22.)

To Prove and Improve

Information literacy instruction has dramatically changed as libraries have situated themselves as centers of pedagogy. Still, many of our assessment methods remain fossilized. Far too often, librarians reuse tested assessment methods that focus on proving worth rather than measuring actual learning. The typology we present in this article is intended to help us recognize where we can usefully borrow questions from different levels and types of assessments. For instance, we may want to look for tested macro questions that might identify learning gains, or micro assessments that can scale up to provide deeper insights. What can we learn from the voices of students heard in more qualitative work that can help us ask better questions? What changes when we move the focus of assessment from proving something works to understanding and improving the student experience?

In recent years, as **Donna Lanclos** and **Andrew Asher** have noted, there has been a promising expansion of work that explores IL from the student perspective.[19] These studies show the benefits of asking different questions about IL and assessment and using student experience as a lever for change. This approach has the benefit of destabilizing comfortable assumptions while deepening our understanding of learning, a necessary condition for real change.

Table 2: Asking Questions About Assessment

Assessment Approach	Reflective Questions for Maximizing Teaching and Learning Outcomes
1. Micro	Who is being asked about their library competencies and skills, and are factors related to inclusion and inequality of this population adequately addressed?
	Are the skills being assessed possible to change through instructional efforts?
	If using the ACRL framework, what would serve as markers of deeper understanding?
	What kinds of questions get at the deeper approaches to learning?
	What will the students learn in answering the questions? Is the assessment valuable enough to the students to compensate for the time and opportunity costs that it will require?
	What do the questions communicate to students about what librarians value?
	Is the assessment valuable enough to the students' to justify the time to complete it?
	Does the assessment address the aspects of information literacy that matter most?
2. Meso	Will our sample reflect the scaffolding for a structured program? How will this be reflected in the sample? In other words, is it possible to track student performance throughout a program of study?
	What are indicators that a student has mastered each level of the scaffold?
	How do the assessment questions reflect the work students actually do? Do these questions work equally well for students across the disciplines?
	How representative of all students is the data collected? Is it more than a convenience sample consisting only of students who choose to participate?
3. Macro	Will the questions work at all the institutions in a sample that uses the assessment?
	Will the results actually be comparable across institutions?
	What strategies do institutions have in place that can help them learn from each other using the results from a macro study?
	Will the results be subject to misinterpretation that may harm a participating institution?
	What is the agenda driving the assessment?
4. Mega	Are the questions reflective of skills that students will need in their lives outside the academy?
	What would successful transfer of IL skills from the academy to life beyond the academy look like?
	What are the structural/societal issues to consider in designing the questions and selecting the sample?
	Are the questions reflective of how students experience information across different contexts?

We are not saying that library assessment is broken. Instead, we contend that information literacy assessment would benefit from both ***proving*** and ***improving*** teaching and learning outcomes. In order to accomplish this, we need to change our questions. A simple example in the context of instruction is to ask two quick questions at the end of the session: "What is one thing that a student has learned? What is something that a student is unclear on, or what question does a student have?" This kind of assessment shows where students get stuck, providing useful feedback on something the librarian can actually rework and improve. It might even prompt a "what is" question, such as "what is happening in students' lived experiences that might be contributing to their confusion?" This is the kind of question that can inform that librarian's response.

Ultimately, we must bring the same intentionality to assessment as we do to teaching and learning. We need to incorporate the same kinds of reflective practices as we do in our instruction. And by doing so, we can ask questions for proving worth that also improves instruction, an all-important goal for advancing the librarian profession.

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Endnotes

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