Assessment of Learning during Library Instruction: Practices, Prevalence, and Preparation

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Library instruction serves a critical function in the operation of the contemporary academic library environment. Librarians are asked to provide instruction and information literacy training using a range of tools and modes of delivery. The current literature presents an array of instruments used for assessing student learning and for delivering instruction. However, there is little consensus about best practices for assessment of both student learning and assessment of the instruction itself. In addition, a few studies have investigated how librarians are prepared for conducting assessment exercises. Therefore, this research presents the results of a nation-wide survey of practices of assessment and preparation for assessment. The results provide a state-of-the-art description of the prevalence of instruction librarians, the types of assessments they conduct, and the methods by which they learn assessment skills and tools. Implications for instruction librarians, administrators, and educators are provided.

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Introduction

Library instructors are characteristically cool under pressure. Twenty-four rowdy freshman comp students? An Internet crash in the instruction lab? Having to teach PubMed on the spot? No problem—these crises are all in a day's work. What, then, causes conflicts, crises of confidence, and confusion? One answer: assessment. Librarians are under pressure from numerous angles to incorporate assessment into their practice of library instruction: assessment of student learning and literacy, assessment of the instruction itself, and assessment of the instruction program. Many of the pressures are altruistic: faculty and administrators concerned with improving the literacy of today's students and librarians seeking to improve the quality of the instruction provided. However, other pressures are financial: for example, at present, many libraries are working to better incorporate the information literacy into standards of higher education yet unable to hire additional teaching personnel. To these varied pressures is the added complexity of a lack of consensus: while many librarians advocate for assessment, there is not a unified view on how to instruct, evaluate learning and literacy, assess instruction and instructors, or train future instruction librarians.

Therefore, this exploratory study seeks to examine the practices and preparation of instruction librarians across a range of academic libraries in the United States. In particular, this study seeks to answer the following sets of questions:

1. What patron groups' learning do you assess?
2. What components of learning do you assess, and how?
3. What additional assessment-related skills do you wish you possessed?
4. How do you share the data you gather?

To address these, librarians from a stratified sample of academic libraries were surveyed regarding the state of instruction at their institutions as well as practices, preparation, and the degree to which they disseminate their results. As an exploratory study, the goal is not to arrive at a generalizable consensus regarding instruction practices, but rather to illustrate the range and types of practices and preparation of instruction librarians at academic institutions. This research will be informative for students of library science [1] seeking to prepare themselves for positions in academic libraries; for librarians conducting library instruction to gain a sense of the range of practices; for administrators seeking to evaluate instruction programs; and for faculty members in schools of library science as they prepare future library instructors.

Literature Review

Many of the complexities of assessing information literacy lie in the varieties of options available for the delivery of information literacy

instruction, multiple tools for assessing student learning, and the inconsistencies in assessing both the delivery and assessment tools. Therefore, the literature review will provide an overview of previous literature in these areas and discuss the curricular implications of this review.

Delivering Information Literacy Instruction

The delivery of information literacy instruction comes in many forms. For years, the provision of information literacy (formerly referred to as "bibliographic instruction") has come in the form of single delivery, or "one-shot" sessions. While this form continues to be practiced [2], the integration of online technologies into library practice has brought new forms of delivery [3]. In addition, there is a growing emphasis on providing instruction over longer periods of time, through sequential sessions of instruction [4] and the delivery of full courses in information literacy [5].

Strong relationships with faculty and administrators are necessary for librarians to provide these extended literacy sessions. This is reflected in much of the contemporary literature with a move to collaborative information literacy [6], that is, librarians, faculty, and administrators working together to embed information literacy into the educational experience. Advocates for this approach cite both improvement in student learning when literacy training is integrated into the curriculum and the ability for librarians to stress to faculty the importance of such instruction. Previous studies have shown that faculty members either think their students possess higher levels or information literacy than they actually do or will obtain it, passively, as they move through the academic curriculum. Therefore, demonstrating the results of assessment can be illustrative for these faculty members [7].

The impetus for this integration has been simultaneously driven by library associations and by commissions on higher education. The Association for College and Research Libraries (ACRL) has been at the forefront of promoting standards for information literacy and the integration of these standards into the college curriculum. Commissions on higher education have followed suit; incorporating many of these proficiencies into their standards [8]. With this added accountability, universities feel pressure not only to provide this instruction, but also to assess the outcome of this instruction.

Assessing Information Literacy

In order to address this need for accountability, many have referred to ACRL's "Information Literacy Competency Standards for Higher Education." These standards demonstrate the proficiencies that a college student should be able to demonstrate in order to be considered information literate. To measure these proficiencies, a few standard assessment tools have arisen: for example, Project SAILS from Kent State University and the i-Critical Thinking Certification from ETS [9]. However, despite the call for standards in assessment, the types of assessment tools vary dramatically and, in many cases, the instruments have been designed for the local community and have not been tested or validated. Walsh [10] surveyed more than a hundred studies on information literacy assessment and identified ten types of assessments, including analysis of bibliographies, essays, final grades, multiple choice tests, questionnaires, observation, portfolios, tests, self-assessment, and simulations. Many of these are not exclusive categories: for example, self-assessment could come in the form of a questionnaire [11]. In addition, this list does not examine the way in which the assessments are given, such as the popular pre-test/post-test format [12] or the way in which the document types (bibliographies, portfolios, etc.) might be assessed. One way to assess these documents is through the use of a rubric [13]. Oakleaf, Millet, and Kraus [14] provide an overview of the rubric approach to assessment and note the large degree of variation, including different types of models (checklists, Likert scales, scoring guides, and full-model rubrics), various scopes (general vs. task, holistic vs. analytic), and components (criteria and performance levels). In addition, rubrics can be applied to many types of products, including bibliographies [15]. In addition to the products that typically arise from a course, information literacy assessment can also involve assignments particularly tailored to assess information literacy skills [16]. Other methods tend to focus on the process, rather than an end product, for example Gilstrap and Dupree's [17] critical incident questionnaire and the use of reflection papers and journaling found in a number of studies [18]. Some research has also looked at interactive texts; for example, examining discussion boards from a class [19].

In many assessments, there was no difference found between those who had received instruction and those who had not or between the various types of delivery provided [20]. Many researchers assumed this demonstrated something lacking in the quality of the instruction or in the learning of the students [21]. While this is one explanation, it does not address the possibility that the instruments were invalid, that is, not measuring the constructs they intended. As noted by Portmann and Roush [22], librarians should focus on ensuring that the instrumentation is reliable and valid, that the sample is properly selected, and that the research design is not flawed when assessing instruction. In some cases, the assessment tools combine or conflate whether the assessment is of literacy or the instruction session. For example, a large number of the assessment tools are essentially user satisfaction surveys [23]. As Cull [24] found in interviews with instruction librarians: "most librarians interviewed did not objectively assess student learning at all but only solicited student reactions to instructional content, methods, and instructor effectiveness, typically using brief end-of-class student evaluation forms." There is a need, therefore, for more adequate assessments of both the delivery and the assessment of information literacy.

Assessing Delivery and Assessment of Information Literacy

This paper is not the first to suggest that more assessment is needed. Walsh [25] summarized the many criticisms that have been leveled against information literacy assessment, many of which question whether the tools used to measure assessment are actually measuring the appropriate constructs. To know this, instructors must first distinguish the goals of information literacy. As Oakleaf and Kaske state, instructors assess for three reasons: to "increase student learning…respond to calls for accountability…[and] improve library instruction programs [26]." These reasons imply three things: 1) instructors must be assured that their assessment tools can measure a *change* in student learning, 2) that instructors document and can present valid and reliable results to stakeholders, and that 3) instructors evaluate, and use these evaluations to improve, the instruction programs. ACRL's list of proficiencies has been assumed to be a conceptualization of literacy; what is lacking however, is an operationalization of literacy that allows for adequate measurements.

Many studies, using the assessment tools presented above, are focused on change; that is, an increase in scores from one instance of testing to the next. Testing is used here loosely, as it could mean an actual test, or producing a product that is measured against a rubric at two different times. The time between testing can vary, from the start and finish of a one-hour instruction session, to the start and finish of an undergraduate career. These tests are meant to assess student learning. In order to assess the instruction itself, however, it is necessary to provide some baseline for comparison. Some do this by providing a true control group; that is, measuring the learning of those who did not receive instruction training. However, many studies in the literature focus instead on an examination between modes of delivery, evaluating which mode has the greatest relationship with student learning [27].