

INSTITUTIONAL ASSESSMENT OF INFORMATION LITERACY - 2014-15

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INTRODUCTION

Information literacy and the ways it is understood, taught, and emphasized have understandably morphed since the term was coined in the 1970s. Though the rhetoric around the concept has and continues to evolve, its importance, particularly in our increasingly information-rich world, has not diminished. Information seeking is a basic human activity: Where can I find food and shelter? Where can I find comfort and belonging? In our academic niche of the world, in which we seek to engage young adults in the life of thought, ideas, and discovery, information seeking is very basic, too.

In this cultural moment, where “information” (or “data”) might seek to nudge “knowledge” or “wisdom” out of their rightful places of prominence, a liberal arts institution like Westmont has the opportunity to maintain our support for, and continued emphasis on, the latter over the former. Which means that in our institutional assessment of information literacy, we did not simply concern ourselves with students’ ability to gather information and data, but extended our inquiry to their ability to understand and scrutinize information, and to put it to good and meaningful use. Students who are able to do these things well will not only be better prepared for a life of engagement with and contribution to the world of knowledge, but will be equipped to grow in wisdom too.

ASSESSMENT OF THE INFORMATION LITERACY ILO

Graduates of Westmont College will be able to identify, evaluate, and integrate sources effectively and ethically in various contexts.

Design and Methods

In 2014-15, information literacy was the focus of Westmont’s institutional learning outcome assessment. As the language of the ILO (above) implies, information literacy is not only concerned with how students use tools to find information, but more importantly with what they do with that information once they’ve found it. In the course of their academic studies, students are constantly required, whether implicitly or explicitly, to make use of whatever information literacy skills they have at their disposal to write research papers, design and run experiments, or solve problems. The use of these skills takes a particular shape in a college setting, but the hope and expectation is that if students are well equipped upon graduation, these skills will transfer to life and vocation.

This assessment was carried out by a team of librarians and faculty who met occasionally to plan and prepare for the assessment, particularly in the initial planning stages in the fall. This assessment’s design focused on the language of the ILO, essentially using the ILO as a guiding research question, and seeking to answer it: Can graduating students “identify, evaluate, and integrate sources effectively and ethically in various contexts?” Students “identify” sources when looking for resources to support an argument, or when looking for a particular synthesis of a

molecule. Students “evaluate” sources by reading critically and asking critical questions about a source’s content, purpose, audience, or genre. Students “integrate” sources when they actively describe and compare the ideas of one expert with another in an oral presentation, or when they can succinctly synthesize the findings of an empirical study and explain how those findings relate to their own. Not only do we expect our students to be able to do these things effectively, but we expect them to do them “ethically,” principally demonstrated by acknowledging the ideas and intent of the original authors whose writings and thoughts they use, and by providing sufficient and correct citation information.

Direct Assessment - Information Literacy in Student Writing

The project’s cornerstone was direct assessment of information literacy in student writing. By gathering student writing from courses in which source-based assignments are routinely assigned, this direct assessment provided an authentic look at the sort of student writing produced in the everyday context of the classroom. The papers collected were all source-based assignments, meaning simply that students were required to find and incorporate outside sources into their own writing. Other than this unifying characteristic, the papers varied in terms of disciplinary conventions, citation style, and other assignment particulars. These assignments were given independently of the assessment project, so no changes were made to the structure of the assignments for the purposes of this assessment.

Writing samples were collected during both fall and spring semesters: 37 samples from three sections of *ENG 002/Composition*; and 49 total samples from the following upper-division classes: *HIS 198/Senior Research Seminar*, *PHI 195/Senior Seminar*, *PSY 111/History and Systems of Psychology*, *RS 114/The World of the New Testament*, *SOC/AN 195/Senior Seminar*, and *ENG 158/Literature of the English Renaissance 1485-1600*.

A locally-created rubric served as the main measure against which the samples of student writing were assessed, and was designed with the language of the ILO in mind. Of the many rubrics consulted during the rubric-creation process, the two most heavily drawn on were those from Carleton College and from the Association of American Colleges & Universities (AAC&U). Additionally, members of the assessment team and other Westmont faculty and librarians gave significant input on the language and structure of the rubric. (The work of librarians and faculty at Carleton College, a small liberal arts college in Minnesota, to regularly assess information literacy in student writing was a large inspiration for the design of our local assessment in general.) The rubric used in this project looked at three primary aspects of information literacy, discussed above: source evaluation, source integration, and source attribution (see Appendix A).

In most cases, the Lead Assessment Specialist for the assessment project met with each class involved in the project to explain the project, allow students the chance to opt out, and then collect the papers. A few methods were used to collect the papers: classes submitted their work directly into LiveText (a cloud-based assessment software tool), emailed their work directly to the Lead Assessment Specialist, or the faculty member provided electronic copies of the papers. All personal identifying information was removed from the papers before being read by assessors.

Two assessment reading sessions were held, the first in January 2015 to assess the lower-division writing samples, and the second in May 2015 to assess the upper-division writing samples. A cadre of faculty and librarians (see Appendix B) worked together at each session to first discuss and norm the rubric, then read and rate the papers against the rubric, and finally to discuss general impressions and initial findings at the close of each session.

Indirect Assessment - Research Process Survey

As a companion to the direct assessment piece of the project, students whose writing was collected and assessed also responded to a Research Process Survey, in which they reflected on their approach to the assignment, and identified the pieces of the research process they perceived as most challenging or most straightforward. This indirect assessment afforded a critical look at how students' perception of the research process compares to their actual writing. This survey was administered online via SurveyMonkey.

Indirect Assessment - NSSE Survey

Lastly, a group of first-year and senior students were given NSSE's "Experiences with Information Literacy" survey in 2014. This additional indirect assessment provides further insight into students' experiences with skill development and in-class assignments related to information literacy. The students who participated in this survey were not necessarily the same as those involved in the other assessment efforts described above.

Results and Discussion

Direct Assessment - Information Literacy in Student Writing

Lower-Division Course Data

Of the 37 lower-division course papers read and assessed, more than 85% were written by first- or second-year students (see Appendix C for a more thorough breakdown of data by class standing). The majority of students rated in the lowest two portions of the rubric across all three areas assessed (see Figure 1). Of the three aspects of information literacy addressed by the rubric, students did best with source evaluation, scoring primarily "competent" (3) and "developing" (2). They struggled most with source integration, scoring primarily "developing" (2) and "beginning" (1). A trend did not necessarily emerge for source attribution; the data demonstrate students' skills in this area are much more varied.

It is perhaps not surprising that, of the three aspects of information literacy addressed by this project, students did best with source evaluation. If students are given a checklist for the sort of sources they're permitted to use in a paper (e.g. books from a university press, articles published in peer-reviewed journals, no (or very few) website sources, etc.), they can be generally successful at meeting those criteria. They might overlook some key sources in their scan of all the information available on a given topic, but they have an easier time meeting the basic criteria for what counts as a "reliable" or "trustworthy" source.

And similarly, it is not surprising that the other two aspects of information literacy assessed here were more challenging for students. It is the activity of putting sources to use - reading them critically, grappling with the ideas contained in them, navigating how to incorporate them in support of an argument - that is both harder to teach and harder to learn.

	4 - Proficient	3 - Competent	2 - Developing	1 - Beginning
Source Evaluation	1.5%	24.2%	56.1%	18.2%
Source Integration	1.4%	14.1%	53.5%	31%
Source Attribution	1.5%	20.9%	35.8%	41.8%

Figure 1 - Aggregate data from 37 lower-division course papers (written in ENG 002)

Upper-Division Course Data

Of the 49 upper-division course papers read and assessed, more than 95% were written by graduating seniors. Students in this sample of upper-division writing show a marked improvement over the writing samples taken from lower-division students across all areas of information literacy assessed by this project (see Figure 2). If a benchmark is set for 70% of seniors scoring either “proficient” (4) or “competent” (3), then students are more than meeting that mark in source evaluation and source integration. However, a benchmark used in other assessment work on campus sets and prefers something in the 85-95% range. If this benchmark is set, our students have not quite reached it in this assessment.

The upper-division data demonstrate a very similar trend to the lower-division data described above. Students did best with source evaluation, as lower-division students were found to do. The faculty and librarians involved in this project agree that source integration is the most challenging aspect of source use, so it is significant and heartening that 23.5% of students in upper-division courses rated “proficient” (4) and 55.1% rated “competent” (3) in this area, even if it would be preferable for a greater concentration of students to score “proficient” than did in this assessment. And again, a less visible trend emerged for source attribution, as students’ scores were dispersed more widely across the rubric in this area.

	4 - Proficient	3 - Competent	2 - Developing	1 - Beginning
Source Evaluation	36.7%	48%	15.3%	0%
Source Integration	23.5%	55.1%	21.4%	0%
Source Attribution	16.3%	46%	30.6%	7.1%

Figure 2 - Aggregate data from 49 upper-division course papers (written in HIS 198, PSY 111, RS 114, ENG 158, PHI 195, SOC/AN 195)

Upper-Division Course Data By Division

Breaking down this aggregate data by division (Humanities, Natural and Behavioral Sciences, and Social Sciences) demonstrates some unique trends within each division (see Figures 3, 4, and 5; see Appendix D for a breakdown of data by individual course). Students writing in Social Science courses were clearly the strongest in all areas of information literacy. The most notable areas of challenge for students in the Natural and Behavioral Sciences were with both source integration and attribution. Though the papers from PSY 111 were certainly examples of source-based writing, they also represent a unique piece of writing for psychology students, one that is different from the other sort of writing or research students tend to do within the major. This may account for some of the lower trend in their scores.

It is also interesting to observe that though History is grouped with the Social Sciences at Westmont, it is often designated with humanities at other institutions, and many of the History papers used in this project were written with a more humanist approach.

A question this raises for future consideration is whether or not the rubric used in the assessment, or the lens through which raters read student papers, favored students writing in the social sciences, or whether enough care was taken to consider disciplinary conventions for each paper. However, the faculty readers who participated in this rating session were all from either the Humanities or the Natural and Behavioral Sciences. The librarians tend not to be as disciplinarily focused, though librarianship itself is typically considered a social science. So it’s

difficult to determine whether this was or was not the case. Care was taken to create a rubric generic enough to apply to all sorts of source-based writing, regardless of the disciplinary bent.

	4 - Proficient	3 - Competent	2 - Developing	1 - Beginning
Source Evaluation	18.2%	45.4%	36.4%	0%
Source Integration	18.2%	59.1%	22.7%	0%
Source Attribution	22.7%	36.4%	36.4%	4.5%

Figure 3 - Data from 11 Humanities course papers (written in RS 114, ENG 158, PHI 195)

	4 - Proficient	3 - Competent	2 - Developing	1 - Beginning
Source Evaluation	26.2%	57.1%	16.7%	0%
Source Integration	9.5%	54.8%	35.7%	0%
Source Attribution	7%	40.5%	40.5%	12%

Figure 4 - Data from 21 Natural and Behavioral Sciences course papers (written in PSY 111)

	4 - Proficient	3 - Competent	2 - Developing	1 - Beginning
Source Evaluation	61.8%	38.2%	0%	0%
Source Integration	44%	53%	3%	0%
Source Attribution	23.5%	58.8%	14.7%	3%

Figure 5 - Data from 17 Social Sciences course papers (written in HIS 198, SOC/AN 195)

Indirect Assessment - Research Process Survey

The Research Process Survey served primarily as a companion piece to the direct assessment of student writing. A number of trends emerged from the data gathered (see Appendices E and F for complete survey data).

About 20% of lower-division students reported talking to some member of their family for help with their research, compared to just 2% of students in upper-division classes. This demonstrates that a much greater portion of lower-division students are seeking to fill a need through family members that is not being met, or sought, on campus.

More than 40% of upper-division students consulted a librarian in the course of the research process, but only 20% of lower-division students did so. Very few students overall, regardless of class standing, reported consulting the Writers' Corner during the course of their research. However, a vast majority of upper-division students report that "writing my paper" is either "hard" (41%) or "very hard" (22%).

Far more upper-division students (43%) than lower-division students (17%) report that "picking a topic" is either "hard" or "very hard" which may show that upper-division students are actually more deeply engaged with the research process, and with this important aspect of it.

Only 23% of lower-division students report that “incorporating source into my paper” is “hard” or “very hard.” Lower-division students may not understand the extent to which they need to grow in this area.

Indirect Assessment - NSSE Survey

Westmont senior students’ survey responses were at or above the national mean scores for almost every question asked on the NSSE survey (see Appendix G for complete survey data, including first-year data). Though this is an encouraging sign, some trends among seniors are worth noting.

The majority (58%) of seniors reported that professors emphasized “appropriately citing the sources used in a paper or project” “very much.” However, our assessment of student writing found that this is the area in which we see students struggle the most. This seems to demonstrate a disparity between what is emphasized in the classroom and how students actually perform with that task.

Seniors reported that 46% of the time they “sometimes” exclude a source due to its “questionable quality,” suggesting this isn’t a terribly habitual practice for them. The responses to this survey question seem to suggest that either students are usually finding reliable sources, thus reducing the need to exclude poor sources, or students are not thinking as critically about the content of the sources they use.

Seniors also reported that 47% of the time they only “sometimes” change the focus of a paper based on information gathered in the research process, which may demonstrate a reluctance on the part of many students to be open to considering new ideas or directions for their research, which is an important part of the research process.

Recommendations

Source integration is the most challenging and most important aspect of information literacy assessed by this project. Source integration requires students to read sources critically and to then think critically about how to draw an author’s argument or work into conversation with their own writing. Source integration is not something that comes easily or quickly, and doing it well is by no means intuitive for anyone making a first foray into the research process. It may be that some of the ways assignments are designed demand that students attempt this, but students may not then be given sufficient opportunity to practice it, or in the case of a large final assignment, are not given feedback on this aspect of their writing. Furthermore, while students are engaging with sources and asking meaningful questions, they report that they only occasionally change direction while in the midst of the research process, perhaps even if they encounter a competing or complicating source. What does this say about their information literacy skill development or their understanding of the research process? If this is something faculty agree ought to be addressed, how might it be? Would it be useful to survey faculty on the ways they already teach information literacy, how assignments tend to be structured (e.g. do they require a literature review or an annotated bibliography)? In what sorts of contexts or assignments do they expect students to employ information literacy skills?

Several “Brown Bag Conversations” are planned for the coming year to provide faculty and librarians a forum for discussing questions like these raised by the assessment, reviewing the data, and collaborating on ways to improve students’ information literacy skills, especially when it comes to source integration. By opening conversation among faculty and librarians, we can discuss where, or if, these skills are already explicitly taught, and strategize further about where else they might be integrated. These discussions are being arranged in partnership with the Dean of Curriculum and Office for Educational Effectiveness. These conversations will, among other

things, focus on information literacy skill development, assignment design considerations, potential future assessments, and “embedded librarianship” models (discussed in more detail below).

Of the many pieces of the research process, students are most often flying solo at those points they also report are most difficult: “organizing / outlining my paper” and “writing my paper.” And even though student survey responses don’t indicate they find source integration inordinately challenging, our assessment of their writing shows that this is still an area in which students can improve and continue to grow. In light of this, the library has consulted with the Writers’ Corner and has developed a (still nascent) plan to pilot a series of workshops in the spring designed to meet students at more points along the continuum of the research process, paying particular attention to supporting students in their understanding of how sources work together and can be integrated into their own writing, and how to organize and outline a paper. The library will seek feedback from faculty in preparation for these pilot workshops, and the hope is to collaborate with faculty teaching key lower-division and GE courses to particularly reach students in those courses.

Anecdotally, it seems that too often students talk to a librarian about finding sources before they’ve really had a chance to explore their topic or research question, and then come to the Writers’ Corner or to the Research Help Desk so late in the process that it becomes difficult to make substantive changes. One senior student commented on the Research Process Survey that “[librarians] visiting classes isn’t enough; mandatory one-on-one meetings [with a librarian] was more effective.” And many librarians have reported the perceived benefits of meeting individually or in small groups with students, even at the cost of the time involved on the part of the librarian. Though it’s of course not realistic to require every single student to meet one-on-one with a librarian for every single source-based assignment they’re given, librarians are committed to continuing to explore this and other creative ways of working with students to help them develop and refine their information literacy skills, particularly focusing efforts on embedded librarianship.

There has been an increasing focus in librarianship in recent years on the notion of “embedded librarianship.” A growing and somewhat fluid concept, embedded librarianship seeks ways to make librarians “an integral part to the whole.”¹ The form this takes varies greatly, depending on the type of community the librarian serves and the particular needs of that community. But regardless, embedded librarianship emphasizes relationships, and creating strong relationships between librarians and those who would benefit from their expertise.² Westmont librarians are already functionally doing the work of “embedded librarianship” in a few discrete instances (most notably in collaborations with the history department). Departmentally, one of our goals for 2015/16 is to think more strategically about engaging in this work: which courses are the most logical places for deeper partnership between faculty, students, and librarians? Where are students likely to receive the most benefits from librarian support beyond the traditional “one-shot” instruction session? It’s too early to propose a particular pilot of embedded librarianship endeavors, but this concept will be covered in one of the Brown Bag Conversations, as well as departmentally in the library.

¹ Jezmyne Dene, “Embedded librarianship at the Claremont Colleges,” in *Embedded Librarians: Moving Beyond One-Shot Instruction*, eds. Cassandra Kvenild and Kaijsa Calkins (Chicago: Association of College and Research Libraries, 2011), 225.

² David Shumaker, *The Embedded Librarian: Innovative Strategies for Taking Knowledge Where It’s Needed* (Medford: Information Today, 2012), 4, ProQuest ebrary.

All this being said, as far as we've seen through this snapshot, the results from this assessment reveal that students aren't doing terribly in relation to the information literacy ILO. Are there aspects of information literacy that this assessment didn't capture? Was the rubric designed in such a way to favor students writing in the social sciences? How might the rubric be further developed to look at more minute or distinct pieces of source evaluation and integration? At this point, even before the various Brown Bag Conversations have taken place, it is safe to assert that future assessments would be improved by seeking greater disciplinary diversity in the student writing collected and assessed, and simply including a larger number of samples. Additionally, it would be ideal if lower-division course writing and upper-division course writing could be assessed all together, with the hope that raters might not be swayed by the knowledge that they're reading a paper from ENG 002 rather than HIS 198, for example. Given the nature of the papers written in lower- and upper-division courses, this might not be possible, but is worth considering all the same.

CONCLUSION

Beginning in 2013, the Association of College and Research Libraries (ACRL), the academic librarianship arm of the American Library Association, began to seriously review their *Information Literacy Competency Standards for Higher Education*, originally published in 2000. Given the rapid technological changes of the past fifteen years, ACRL sought to bring new life and language to the discussion of information literacy as it particularly, but not exclusively, relates to the academic life and learning of college and university students.

Focusing on "threshold concepts" rather than standards or outcomes, this new document, the *Framework for Information Literacy for Higher Education*³, seeks "to create wider conversations about student learning, the scholarship of teaching and learning, and the assessment of learning on local campuses and beyond." This large work, and the nation-wide conversation it's begun among librarians and educators, is worth paying attention to, especially as Westmont looks forward to the directions information literacy assessment might take in the future. This assessment has provided us with just such an opportunity to discuss and consider ways to serve students well, as we equip them to lead information literate, knowledgeable, and wise lives.

³ "Framework for Information Literacy for Higher Education," *Association of College and Research Libraries*, 2015, <http://www.ala.org/acrl/standards/ilframework>.

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