

A More Perfect Union: Campus Collaborations for Curriculum Mapping Information Literacy Outcomes

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Introduction

Librarians, faculty, and administration have long recognized that information literacy instruction cannot exist in isolation—and that the most successful information literacy programs involve collaborative efforts from all campus constituents. By now, however, faculty-librarian collaborations in individual courses are the norm. One librarian's review of the literature from 2000–2009 analyzed 133 documented examples of such collaborations.¹ The movement now is for information literacy instruction and assessment to be happening at the programmatic level and involve continual dialogue between all campus stakeholders—librarians, faculty, and administrators—about the place of information literacy in the curriculum as a whole. This paper describes our efforts to find where information literacy skills are being taught across the curriculum by embarking on a collaborative curriculum mapping project.

Background

Oxford College of Emory University is a two-year division of Emory University with 900 FTE students. After two years of liberal arts-intensive general education, most students continue to the Atlanta campus of Emory to complete their baccalaureate degrees.

Coursework at Oxford College is foundational, preparing students for the upper-level courses at Emory. A significant part of that preparation is helping students develop critical analysis skills and become information literate—a skillset which is not limited to any one particular discipline.

Oxford College librarians initiated a library instruction program in the late 1980s, focusing on one-shot lectures, course-specific research guides, and individual research consultations with students. At the time, faculty-librarian collaborations to help students develop research skills were scarce.

The first attempt at the assessment of this program was completed as part of a Scholarship of Teaching and Learning (SoTL) project and paved the way for more collaboration with faculty. A key outcome of the SoTL project was an understanding that librarians need to work with faculty to define information literacy competencies and further develop the library instruction program.² Participation in the College's SoTL initiative also allowed librarians to be at the table for conversations about the curriculum. Andrea Heisel, librarian, and Nitya Jacob, Biology professor, took the SoTL work further by “develop[ing] a layered approach that enables students to build on experiences during the semester, helping them to in-

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ternalize research skills and transfer their knowledge into the next course.”³ This collaborative work set the direction for Oxford’s Research Practices library instruction program: Not only do we want students to excel in the assignments for an individual course, but we also want students to be able to transfer and develop these information skills throughout their time at Oxford, regardless of the course discipline or assignment. As we build our program, more and more faculty members recognize that this goal cannot be accomplished at the level of individual courses alone but must now be a part of the general education curriculum as a whole.

Problem

Our instruction program is busier than ever: from the 2008–09 academic year to 2009–10, we saw a 47% increase in the number of library instruction sessions we taught, a 67% increase in the number of student contacts during those sessions, and a 47% increase in the number of one-on-one research consultations with students. We are also reaching a wider audience than ever, expanding our program to departments with whom we have not worked in the past, such as Physical Education and Spanish, and newly developing campus initiatives, such as an orientation for international students. Information literacy is even included in the College’s general education curriculum as one of three primary outcomes. Oxford College’s assessment plan states: “An Oxford College graduate will understand and be skilled in literature-based research. Specifically, a graduate will be able to write a research paper that begins with a skillfully constructed thesis statement that is evaluated, supported, and defended by appropriately interpreted and cited authoritative information sources.”

However, while information literacy has a significant stated role in the college’s general education curriculum, our instruction program lacks cohesiveness, leading to a lack of transference of skills between classes. And because our instruction efforts are not currently coordinated at the general education program level, in many cases, students do not receive enough library instruction (a small number of students graduate from Oxford without having written even one research paper) or encounter too much duplication—many students attend three, four, or even more library instruction sessions during their time at Oxford, with significant duplication of content.

In addition to inconsistency in library instruction, several iterations of the Research Practices Survey (RPS), developed by liberal arts schools and the National Institute for Technology in Liberal Education (NITLE), over the course of two years helped us to identify many underlying assumptions held by the librarians, faculty, and students at Oxford College.

FACULTY

Assumptions:

- One or two library instruction sessions is sufficient for students
- Library instruction students receive in freshman writing classes is sufficient for all subsequent classes as well

Opportunities:

- Share RPS data in which students ask for more research instruction, more practice, and more feedback on their progress from both librarians and faculty
- Work with faculty to make library instruction an organic and immersive process, not a one-time effort

STUDENTS

Assumptions:

- If they sit through a library instruction session for one class, they do not need more library instruction in other classes

Opportunities:

- Librarians need to do a better job of differentiating library instruction for individual classes
- Librarians need to work with students and faculty to show how IL skills can be transferred and built upon between courses and disciplines

LIBRARIANS

Assumptions:

- Students automatically build information literacy skills sequentially across a two-year curriculum

Opportunities:

- The planning and scaffolding of our library instruction program needs to happen at the curricular level

The main issue is that while faculty and librarians are working hard to teach students research skills, little is being done to hold students accountable for the research skills they learned in previous classes—and to help students connect the dots between the research skills they learned in Freshman Writing and the research skills they need to have for, say, a History project—a true liberal arts experience.

Key Questions and Outcomes

Any talk of improving student learning cannot be separated from the tenets of assessment. As Oakleaf specifies, “Not only do assessment as learning theorists believe that assessment and teaching are inseparable, and that students can learn and be assessed simultaneously; they also contend that the connection between teaching and assessment can lead to a substantial increase in instructional effectiveness.”⁴

In addition to our desire to build a stronger information literacy instruction program, we also saw a need to strengthen our assessment efforts by developing a meaningful and systematic assessment plan, such as the Information Literacy Instruction Assessment Cycle (ILIAC) developed by Megan Oakleaf⁵ to help us understand “how and what and which students learn.”⁶

Emory University’s Pitts School of Theology recently completed a curriculum mapping project that charted the program’s learning outcomes and the courses in which they were being taught. Following this model, and with the help of Oxford’s and Emory’s Institutional Research Offices, we decided to embark on our own curriculum mapping project: librarians meet with faculty one-on-one and match each of the five major ACRL information literacy standards to each course that is taught at Oxford, noting where a standard is either introduced or reinforced. This data can then be assembled into a map of where information literacy skills are taught throughout the curriculum, which will help us locate gaps in student learning as well as places where instruction is being needlessly repeated. By knowing which skills students have learned in other classes, professors will be able to hold students accountable for that knowledge (also noted by Uchiyama and Radin⁷) as well as help students transfer those skills to another course, topic, or discipline.

If we teach all students at the same level, regardless of their previous experiences, our students are

held back from reaching higher-level research and information skills. By building our program on what students have previously been exposed to, we can help students understand that research is a process that builds on itself. We can then model that process by helping students systematically reach for more refined and increasingly more advanced research skills.

In addition to charting learning outcomes and skills progression, curriculum mapping has been shown to help “identify collaborative possibilities”⁸ and “[make] the curriculum more transparent to all stakeholders”⁹—all important considerations for curricular discussions.

Identifying Partners for Collaboration

As our questions began to evolve, we saw the need for involving all campus constituents in these discussions. Sterngold emphasizes the importance of involving faculty: “To elicit greater faculty understanding and support, more members of the academic community must participate in the dialogue.”¹⁰ The student survey respondents encouraged us to pursue more active classroom collaborations with faculty members, which also gave faculty increased motivation for working with us. And as we began to identify learning goals and outcomes, we hosted focus groups to get faculty perspectives about these goals and their role in the curriculum.

In addition to the faculty, we expanded our outreach efforts to include the College and Academic Deans, since any conversations involving the academic curriculum need to involve campus policymakers. As Maki says, “These kinds of changes need to be recognized and addressed at an institution’s highest decision-making levels to assure that an institution commits the appropriate finances or resources to enact... changes or innovations.”¹¹

The librarians have built a strong partnership with the College’s Institutional Research Associate through implementing the Research Practices Survey (RPS) and interpreting the data. Mary Moser, librarian, and Satu Riutta, Institutional Research Associate, presented some of their work at a general education conference, describing how trends in the RPS data illuminated opportunities for faculty collaboration and refinement of our library instruction program.¹² The Institutional Research Associate helps to keep us informed of College curriculum assessment efforts and how the library fits into the programmatic assessment.

Methodology

Our curriculum mapping project, and overall assessment cycle, began first with the Research Practices Survey data. After we had compiled and analyzed the data, we began to think about directions for our program. As Uchiyama and Radin emphasize the importance of “using data to inform practice,”¹³ we also let the data guide us to the most immediate issues that needed to be addressed. We wanted to create an information literacy program that is both compatible with the current academic structure and campus mindset and also based on national standards, so we pared down the ACRL Information Literacy Competency Standards¹⁴ into a list of prioritized goals for student learning. This list reflects what is absolutely necessary for students to know, what is realistic for us to accomplish at our two-year, liberal arts institution, and incorporates the language of current Oxford College academic initiatives (see Appendix 1).

We then conducted focus groups with faculty to share with them both our RPS findings and our preliminary list of information literacy goals. We collected valuable feedback about where our priorities should be in terms of teaching students transferable skills. We also refined our list of goals based on the faculty’s feedback so that all participants contributed to the refinement of our shared goals for student learning.

With our newly refined goals, we developed a curriculum mapping worksheet (see Appendix 2) that is compatible with WeaveONLINE, the assessment management system used by Emory University. Other curriculum mapping projects have been completed using WebCT,¹⁵ paper-based matrices with the goal of quantitative analysis,¹⁶ Microsoft Access and SPSS,¹⁷ and Microsoft Word,¹⁸ but assessment management systems provide a great breadth of information and mapping capabilities. Oakleaf cites Keeling et al., who explain that “assessment management systems allow higher education institutions to link outcomes vertically (within units) and horizontally (across divisions, colleges, departments, programs, and libraries)... [and] enable institutions to capture student learning through all their interactions with institutional units.”¹⁹

We took paper-based worksheets to individual meetings with faculty members in which we discussed each of the five broad learning goals—Step 1 in Oakleaf’s ILIAC is “review learning goals”²⁰—and

used specific outcomes to decide if those skills are either introduced (assumes the student has no prior exposure to that skill) or reinforced (assumes prior exposure to these skills) in courses that are regularly taught in the curriculum. We then input this data into our curriculum map in WeaveONLINE to get a visual representation of where the skills are being introduced and reinforced—or not addressed at all, in some cases, or repeated needlessly in other cases.

Findings

There are approximately 60 full-time faculty members at Oxford College and three librarians who are conducting these curriculum mapping interviews. We assumed that we could get through one-on-one meetings with the majority of the faculty members through summer and fall 2010. However, what we found was that the meetings were much more time-intensive than we had originally anticipated.

While we started our project with faculty members with whom we have a history of library collaboration, we still noticed some anxiety on their part. Some felt they were being assessed for the quality of their information literacy instruction and were reluctant to admit that a topic is not covered in their course. One faculty member said, “I don’t usually cover that skill, but I guess I could if it would make your job easier,” and another faculty member expressed a feeling of inadequacy over not covering enough information literacy content. Sumsion and Goodfellow noticed this tendency, too, saying, “We needed to reassure staff that the curriculum mapping process would be neither a threatening exercise or an administrative burden...It was essential, therefore, to avoid giving the erroneous impression that our intention was to evaluate their unit(s).”²¹ We had to assure faculty members that there was no right or wrong answer and that we just wanted to get a picture of what skills are being taught and where students are exposed to them.

Because of the time and scheduling issues involved in each of these meetings, we have had to re-adjust our timeline and scope for the project. By the end of the spring 2011 semester, we will have met with faculty from each department on campus, if not every single faculty member. We are planning to complete comprehensive meetings with all faculty members during the fall 2011 semester.

The findings that have surprised us the most are not the actual data from the curriculum mapping

worksheets, but the individual conversations we are having with faculty members about the role of information literacy in Oxford's liberal arts-intensive curriculum. We are able to share information with the faculty about the instruction students receive and projects students complete in other classes and divisions. Many faculty members are surprised about what students are or are not doing in other departments. We are able to hear from the faculty about the barriers they see to integrating information literacy into their classes. Almost all of them cite time as an issue, and several say that research skills just are not relevant to the course level. Hearing about the faculty's difficulties first-hand helps us enter into an assessment of our library instruction program and identify opportunities for approaching and collaborating with faculty over a sequence of courses, to try to address a frustrating problem together, or to format our instruction in a way that fits within the professor's time limitations. As the curriculum mapping meetings continue, so will the understanding between librarians and faculty as we realize that we are all working toward the same goals for student learning.

Continuing the Assessment Cycle

In her description of the steps of the assessment cycle, Oakleaf cites Maki, who defined the step of "closing the loop." Oakleaf describes this stage of the cycle as the "Enact Decisions" stage, in which "librarians make decisions and take actions...To close the loop, librarians move from enacting decisions to a new review of learning goals. This process ensures improvement by continuing the assessment cycle."²² With the curriculum mapping data, we will be able to close our assessment loop by using our findings to identify new goals and new opportunities for maximizing student learning.

With our Institutional Research Associate, we also will be able to analyze a sample of transcripts from students engaged in typical programs of study (e.g. Biology, English, Religion) to see which classes students on a particular program track take and in what order they take them. For us to know what skills students have been exposed to before coming to our classroom for library instruction, we need to determine what classes they have previously taken and what research skills they have been asked to exercise.

The library is also maintaining a place at the table by staying involved in curriculum discussions. The li-

brary director is on the College Educational Programs Committee and on the Educational Programs Inquiry Committee. The College's Communication Support Committee has embarked on a pilot of a Portfolio Assessment Program in which student writing and research skills will be evaluated by looking at writing samples from a student's two years of coursework, which will include a research paper. The Committee is in the process of adapting the American Association of Colleges and Universities' Information Literacy VALUE Rubric to use in assessing the research skills demonstrated by the writing samples.

Conclusion

An effective educational program cannot exist without an information literacy component, and the information literacy program has to fit within the organizational and academic culture. The program must be couched in terms that are relevant to all campus stakeholders, not just to librarians. The overarching mission of a curriculum mapping project should be to achieve an understanding of shared goals, clarify how those goals fit within an educational program, and generate collaborative ideas for how to accomplish those goals. Now more than ever, faculty and librarians should be working together at the programmatic level to close the assessment loop and strive for continuous improvement in our teaching and in students' learning.

Appendix 1

Oxford College Library Student Learning Outcomes

The Association of College & Research Libraries' *Information Literacy Competency Standards for Higher Education* quotes the Boyer Commission Report, *Reinventing Undergraduate Education*, "which recommends strategies that require the student to engage actively in 'framing of a significant question or set of questions, the research or creative exploration to find answers, and the communication skills to convey the results.' Courses structured in such a way create student-centered learning environments where inquiry is the norm, problem solving becomes the focus, and thinking critically is part of the process."

Upon leaving Oxford College, students should be able to:

1. Identify what type of information, evidence, or knowledge is needed to answer a question or solve a problem

Outcomes:

- Develop a research question
- Recognize that existing information sources can be combined to create new information
- Identify the purpose and audience of potential resources
- Differentiate between primary and secondary sources and their applications
- Define a plan and timeline to acquire information resources
- Review initial information found to clarify, revise, or refine the research question

2. Discover and locate information or evidence effectively within or across the disciplines

Outcomes:

- Select efficient and effective approaches for accessing needed information
- Identify key concepts and terms related to the research question
- Select controlled vocabulary specific to discipline or information source
- Construct an appropriate search strategy, including the use of Boolean connectors
- Adapt search strategy across various interfaces and search engines, refining search strategy when necessary
- Locate specific resources in a library (physically and electronically as necessary)
- Record necessary citation information

3. Evaluate and analyze information critically and incorporate it into their knowledge base and value system

Outcomes:

- Read the text and select main ideas
- Recognize bias in published information and apply that information appropriately
- Differentiate between fact and opinion, both in published information and in students' own work
- Critically evaluate information for its quality, accuracy, bias, authority, and relevance
- Develop a focused, original thesis statement
- Restate the concepts in students' own words and select data accurately
- Identify verbatim material to be appropriately quoted
- Recognize relationships among concepts and combine them into original statements with supporting evidence
- Determine when more information needs to be found to satisfy research question
- Differentiate between the types of sources used, both online and in print

4. Demonstrate effective application and communication of written knowledge to accomplish a specific purpose

Outcomes:

- Integrate the new and prior information in a manner that supports the purposes of the project
- Use a range of information technology applications in creating the project
- Communicate the project clearly and with a style appropriate for the intended audience

5. Understand the economic, social, and legal issues surrounding the use of information; access and use information ethically and legally

Outcomes:

- Differentiate between free and fee-based information
- Demonstrate an understanding of intellectual property, copyright, and fair use of copyrighted material
- Demonstrate an understanding of what constitutes plagiarism and does not represent work attributable to others as student's own
- Apply ethical considerations in dealing with all information sources, including human subjects
- Select an appropriate documentation style and use it consistently and correctly to cite sources

Appendix 2 Oxford College Curriculum Mapping Worksheet

Professor Name	Goal 1		Goal 2		Goal 3		Goal 4		Goal 5	
	I/R	Evaluation								
Course 1										
Course 2										
Course 3										
Course 4										
Course 5										

I = Introduced: The skill is taught in your course and assumes this is the students' first college-level exposure to the topic

R = Reinforced: The skill is addressed in your class, but prior experience with and exposure to this topic is assumed

Goal 1: Identify what type of information, evidence, or knowledge is needed to answer a question or solve a problem

Goal 2: Discover and locate information or evidence effectively within or across the disciplines

Goal 3: Evaluate and analyze information critically and incorporate it into their knowledge base and value system

Goal 4: Demonstrate effective application and communication of written knowledge to accomplish a specific purpose

Goal 5: Understand the economic, social, and legal issues surrounding the use of information; access and use information ethically and legally

Please indicate where, in each of the classes you teach, any of the 5 research skills goal areas are either introduced (mark with an "I") or reinforced (mark with an "R"). Then tell us briefly how each of the goal areas you marked are assessed. Some examples of assignments for evaluation are: portfolio, pre- or post-test; presentation; video or audiotape project; written assignment or exam; research paper; capstone assignment; standardized test

Notes

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4. Megan Oakleaf, "The Information Literacy Assessment Cycle: A Guide for Increasing Student Learning and Improving Librarian Instructional Skills," *Journal of Documentation* 65, no. 4 (2009): 540, doi:10.1108/00220410910970249.
5. Ibid.
6. Peggy L. Maki, "Developing an Assessment Plan to Learn about Student Learning," *The Journal of Academic Librarianship* 28, no. 1 (2002): 13.
7. Kay Pippin Uchiyama and Jean L. Radin, "Curriculum Mapping in Higher Education: A Vehicle for Collaboration," *Innovative Higher Education* 33 (2009): 277, doi:10.1007/s10755-008-9078-8.
8. Sandra Martin et al., "Charting Instruction: Curriculum Mapping for Planning and Documenting an Instructional Program," in *Managing Library Instruction Programs in Academic Libraries*, ed. Julia K. Nims and Eric Owen (Ypsilanti, MI: Pieran Press, 2002), 119.
9. Cecilia M. Plaza et al., "Curriculum Mapping in Program Assessment and Evaluation," *American Journal of Pharmaceutical Education* 71, no. 2 (2007): 1, <http://www.ajpe.org/view.asp?art=aj710220&pdf=yes>.
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11. Maki, "Developing an Assessment Plan," 12.
12. Mary Moser and Satu Riutta, "Bridging the Information Gap: Partnerships for Student Learning in the Digital Age," presented at the annual meeting for the Association for General and Liberal Studies, St. Louis, MO, October 1–3, 2009.
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14. "Information Literacy Competency Standards for Higher Education," Association for College and Research Libraries, accessed January 10, 2011, <http://www.ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm>.
15. Uchiyama, and Radin, "Curriculum Mapping in Higher Education," 275.
16. Jennifer Sumsion, and Joy Goodfellow, "Identifying Generic Skills through Curriculum Mapping: A Critical Evaluation," *Higher Education Research & Development* 23, no. 3 (2004), doi:10.1080/0729436042000235436.
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18. Plaza et al., "Curriculum Mapping in Program Assessment and Evaluation."
19. Megan Oakleaf, *The Value of Academic Libraries: A Comprehensive Research Review and Report* (Chicago: Association of College and Research Libraries, 2010), 45, <http://www.acrl.ala.org/value/>.
20. Oakleaf, "The Information Literacy Assessment Cycle," 543.
21. Sumsion and Goodfellow, "Identifying Generic Skills through Curriculum Mapping," 336.
22. Oakleaf, "The Information Literacy Assessment Cycle," 545.

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