

Examining the Relationship between Faculty-Librarian Collaboration and First-Year Students' Information Literacy Abilities

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Using surveys, interviews, and a rubric-based assessment of student research essays, the St. Mary's College of Maryland Assessment in Action team investigated the relationship between faculty-librarian collaboration in a First Year Seminar (FYS) course and students' demonstrated information literacy (IL) abilities. In gathering information on the experiences, attitudes, and behaviors of faculty, librarians, and first-year students, the project team uncovered additional questions about the integration of IL in the FYS, the ways in which faculty and librarians work towards educational goals, and just what should be expected from students in their first year of college.

Introduction

Over a decade after the publication of Raspa and Ward's seminal book on faculty-librarian relationships, the "collaborative imperative" continues to drive academic librarians' pursuit of meaningful teaching partnerships with faculty.¹ Yet despite the declaration that "collaboration has become the educational imperative of the next century,"² building and sustaining these relationships continues to be a challenge. A glance at the library literature reveals this struggle, expressed in everything from guides to collaboration to exemplars of successful teaching partnerships to the occasional just-what-are-faculty-thinking investigations.³ Implicit in these articles is the notion that faculty-librarian collaboration is worthwhile, however challenging it might be to initiate and sustain, because it is the key to improving students' research and information literacy abilities.

This assumption was the driver behind the St. Mary's College of Maryland (SMCM) Assessment in Action (AiA) project, which examined the relationship between faculty-librarian collaboration and students' demonstrated information literacy (IL) abilities in a First Year Seminar (FYS) course. Motivated by years of uneven involvement in a course central to the Core Curriculum, the librarians entered this assessment project hoping to demonstrate their value to undergraduate education and advocate for greater involvement in the FYS. To SMCM faculty and administrators, the AiA project presented an opportunity to assess student learning in

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the FYS *for the first time since its inception*. Deep in the midst of SMCM's reaccreditation self-study, they were well aware of the increasing importance of student learning assessment in higher education and saw this project a good step in that direction. Together, librarians, FYS faculty, and administrators comprised the AiA team that planned and implemented assessment methods to meet the needs of this important course.

Given the participatory nature of the team, the learning-by-doing setup of the assessment project, and the desired applicability of the results, the AiA team adopted an action research framework for this project. Using surveys, interviews, and a rubric-based assessment of student research essays, the SMCM AiA team gathered information on the experiences, attitudes, and behaviors of faculty, librarians, and first-year students that could potentially impact IL education in the FYS. This data was examined to determine whether students' demonstrated IL abilities were correlated to faculty-librarian collaboration as it actually occurred within the existing structure of the FYS program. In trying to clarify this relationship, the project team uncovered additional questions about the integration of IL in the FYS, the ways in which faculty and librarians work toward educational goals, and just what should be expected from students in their first year of college.

Literature Review

The issues at the core of the SMCM assessment project—faculty-librarian collaboration, IL education in first-year experience programs—have been the subjects of research and writing in academic librarianship since the emergence of the contemporary IL movement. But what exactly do librarians mean when they use the word *collaboration*? In *The Collaborative Imperative*, collaboration is defined as “a mutually beneficial and well-designed relationship entered into by two or more individuals or organizations to achieve common goals.”⁴ An emphasis on shared vision, mutual respect, and trust permeates discussions of collaboration in the library literature.⁵ Although activities that help build a framework for collaboration—such as creating learning outcomes, holding regular meetings, and engaging in curriculum mapping—are mentioned, there is a greater emphasis on creating meaningful relationships.⁶ This is the core of what differentiates collaboration from communication or even cooperation: a willingness on the part of both parties to listen, compromise, and potentially engage in a new way of thinking.⁷

This relationship is lauded as the foundation for effective IL education, with Cook going so far as to suggest that without collaboration, “the teaching library will cease to exist.”⁸ Less dramatically, faculty-librarian collaborative relationships appear throughout the literature in case studies illustrating successful IL integration into courses and programs of study.⁹ Most recently, Booth and colleagues, reporting on the relationship between faculty-librarian collaboration and student learning, found that “the quantity of librarian engagement was a clear correlate to the quality of student learning.”¹⁰ ACRL identifies collaboration as a characteristic of best practices in information literacy programs, and many regional higher education accrediting organizations consider it to be a component of effective IL education.¹¹ There is a consensus within the profession that investing time and energy in pursuing collaborative relationships with faculty is worthwhile, yet there remain obstacles to achieving this goal.

The literature describes approaches to faculty-librarian collaboration as existing “along a continuum from the informal and episodic or scattershot to the formal, sequential, and programmatic.”¹² Factors influencing the quality of faculty-librarian collaboration are as varied as those that affect any human relationship. Leeder emphasizes the detrimental impact of “librarian insecurity complex,” which may prevent librarians from actively seeking out educational partnerships because of a misguided sense of academic inferiority.¹³ For those librarians who are able to confidently ar-

ticulate the educational value of IL, there is often the need to overcome misinformed faculty assumptions about what librarians teach and how students become effective researchers.¹⁴ At many institutions, “small-scale situational collaboration” is the norm.¹⁵ The result is a highly individualized rather than programmatic approach to faculty-librarian collaboration, which presents many of the challenges addressed in this action research project.

A first-year experience course presents a meaningful opportunity for faculty-librarian collaboration and IL integration.¹⁶ Between 2000 and 2010, colleges and universities radically overhauled their general education programs by placing a greater emphasis on the high-school-to-college transition. Accompanying this change was a surge in academic librarians’ incorporation of IL into early college experiences.¹⁷ Through this curricular shift librarians called attention to the IL instructional needs of new college students and developed course-integrated instruction to address these shortcomings.¹⁸ To do so effectively, a renewed focus on faculty-librarian collaboration emerged. George Kuh, a figure at the epicenter of the first-year experience movement in higher education, writing with Polly D. Boruff-Jones and Amy E. Mark, observed the need for “incorporating meaningful information literacy instruction into the curriculum using library-related assignments in first year courses designed through collaboration.”¹⁹ In answer to this call to action, Molly Flaspohler wrote a compelling guide to engaging first-year students in the library, with a focus on IL curricular integration. Although she acknowledged the difficulty librarians face in developing collaborative teaching relationships with faculty, she affirmed the importance of these partnerships in creating effective IL instruction for students who are new to the expectations of college work.²⁰ The stakes are high in these early college courses, and so are the challenges, many of which are documented in this project.

Situational Context

In 2008 SMCM adopted a core curriculum centered on the four college-identified liberal arts skills of written expression, oral expression, critical thinking, and information literacy.²¹ In an attempt to better prepare students for advanced academic work, this new curriculum introduced the FYS as a required gateway course to the liberal arts. Faculty were free to develop unique, subject-based courses as seminars, as long as they incorporated the four liberal arts skills. The SMCM librarians created FYS IL learning outcomes, participated in seminar instructor workshops, and developed a liaison program whereby each seminar was assigned its own course librarian. They were optimistic that the FYS would facilitate greater collaboration with faculty and more effective IL integration, despite the fact that no library instruction session was required for the course.

Although librarians spent considerable time reflecting on building strong partnerships with seminar faculty, the variation in librarian-faculty collaboration levels indicated that not all faculty were engaged in similar reflection. Throughout the years there were always some FYS faculty-librarian pairs with the right alchemy of compatible personalities and shared educational goals. These partnerships were the collaboration ideal: faculty and librarians working together to shape assignments and classroom experiences. On the opposite end of the spectrum were pairs who had little to no contact in the months leading up to the fall semester and never worked together once the course began. Most teaching partnerships fell somewhere between these two extremes, resulting in uneven IL instruction.

Evidence of this lack of consistency could be found in classes with upper-level students, many of whom had never learned the IL skills and concepts that should have been covered in their seminars. Yet this was purely anecdotal evidence. The Core

Curriculum, and by extension the FYS, was implemented without an accompanying student learning assessment plan. An initial attempt to evaluate e-portfolios of student work was abandoned after one year; instead, students were asked to rate their perceived level of competency in each of the four liberal arts skills at the beginning and end of the FYS. Librarians tracked the number of IL instruction sessions for each section and the level of communication with seminar faculty. They did not, however, conduct outcomes-based assessment of IL. The AiA program provided a much-needed opportunity to move beyond class counting and indirect student assessment to meaningful measures of student knowledge. It also allowed the library to take the lead on student learning assessment in a critical course, modeling assessment methods that could be adopted to evaluate all liberal arts skills at SMCM.

Project Participants

Getting the right mix of participants on the assessment team was an important first step in this project. In addition to the Director of the Library and select liaison librarians, the team included the Dean of the Core Curriculum; one of the college's Liberal Arts Associates, who taught a seminar and trained FYS faculty; and the Director of the Writing Center, who also taught a seminar. This mix of librarians, administrators, and faculty were led by one of the library's reference and instruction librarians, who served as the primary contact to the AiA program. Although the team members were able to provide a breadth of perspectives and experiences related to the FYS, they did not have much practical experience with outcomes-based student learning assessment. The librarians, however, viewed this project as a means of learning-by-doing. Their motivation to carry out this project was high and sustained the team through various challenges during the academic year.

Approach

To meaningfully assess students' demonstrated IL abilities and their relationship to faculty-librarian collaboration, the team focused on all FYS participants: first-year students, faculty, and librarians. At the time of this project (fall 2013), SMCM enrolled 385 first-year students in twenty-five seminars taught by twenty-four instructors. Six librarians served as FYS liaisons.

Student Survey I: Determining Prior Experience

Inspired by the 2013 Project Information Literacy study on college freshmen, the team was interested in learning more about the IL-related high school experiences and behaviors of SMCM's newest students.²² A survey was developed to gather information on students' level of familiarity with and use of libraries and accompanying resources during high school (see appendix A). FYS teaching assistants, or Peer Mentors, distributed printed surveys to students in their seminars during the first week of classes. Print was chosen over an online survey to ensure a greater response rate. Completed survey packets were returned to the project team leader for data collection and analysis. The team's original intent was to supplement survey data with student interviews, which were not implemented once the workload of the busy fall semester set in.

Defining IL

The team was fortunate to have a working definition of IL in the form of the FYS IL learning outcomes. Based on the ACRL *Information Literacy Competency Standards for Higher Education*, these extensive outcomes focused on students' knowledge of information facilities and services, understanding of information characteristics, and ability to conduct research.²³ Assessing every outcome was not feasible during the timeline for this project, so the team selected a subset of outcomes deemed essential to IL proficiency

in the first year. These included students' knowledge of library services, collections, and librarians; ability to construct a research question or thesis; and incorporation of appropriate, relevant information sources into written research assignments.

Student Survey II: Determining Student Behavior

To assess students' knowledge and use of SMCM library services, collections, and librarians, the project team developed a second survey focused on students' self-reported interactions with library resources and librarians (see appendix A). The FYS Peer Mentors distributed paper surveys to their students during the final exam period for the seminar. The Dean of the Core Curriculum set this timing to prevent conflict with existing student satisfaction surveys and course evaluations. Unfortunately, the stress of this time of year meant that several Peer Mentors did not distribute surveys as requested, negatively impacting the response rate.

Rubric Evaluation of Student Essays

The team wanted to conduct a direct measure of student's information literacy learning, but the structure of the FYS made it challenging to implement performance assessment activities. Its decentralized nature meant that there were no shared assignments, but many seminars did culminate in some kind of written research paper. The project team collaborated with all liaison librarians to gather 106 student essays and accompanying assignment prompts from nine FYS sections. The project team librarians, Writing Center Director, and an educational studies faculty member who volunteered her time and expertise worked together to create an IL rubric broad enough to apply to all nine essay assignments, but specific enough to glean information about students' IL abilities.

The rubric focused on five dimensions of IL: the ability to construct a clear research question or thesis; the appropriateness of information sources to the assignment; the relevance of information sources to the research question or thesis; the integration of information sources into the essay; and the citation of information sources. Each dimension was judged along a continuum of four levels of performance (see appendix B). The rubric development subteam piloted the rubric using a sample of ten student papers drawn from each of the nine FYS sections. Each person scored all ten essays independently, then gathered for a group discussion. During this time, significant changes were made to the criteria used to judge integration of information sources to better suit the types of papers being evaluated.

Although the Writing Center Director and educational studies professor were integral to the creation of the rubric, they did not participate in the final essay evaluation, which took place at the end of the spring 2014 semester when faculty are overloaded with grading. The project team librarians had a relatively light teaching load during that time and agreed to take on the responsibility of reading and scoring student essays. They held an interrater reliability session during which each person read and scored the same three student essays using the rubric. Scores for each IL skill category as well as the cumulative rubric score for each essay were recorded and analyzed for internal consistency using Cronbach's Alpha. The evaluators' internal consistency score after this first round of evaluation was $\alpha = .427$, an unacceptable rate of internal consistency. The librarians discussed their differences in scoring and how they were interpreting and applying the rubric. Following this discussion, the evaluators conducted a second round of scoring with a different set of essays. The evaluators' internal consistency score after this second round was $\alpha = .927$, which is an excellent indicator of interrater agreement ($\alpha \geq 0.9$). After some additional consultation, each librarian scored one-third of the 106 student essays. Ultimately three essays were discarded because they were incomplete, leading to a total of 103 essays evaluated.

Determining Faculty-Librarian Collaboration

The project team used two different survey instruments to gather qualitative data on FYS faculty-librarian collaboration. The faculty survey focused on incorporation of IL learning outcomes into seminars and collaboration with liaison librarians (see appendix C). Printed surveys were distributed to all twenty-four FYS instructors, but only two incomplete surveys were returned. The project team was disappointed by this poor response rate but acknowledged that the length of the survey and its distribution at the end of the fall semester likely accounted for the lack of participation. There was also little accountability or incentive for faculty to complete it.

The team obtained a much better response rate from the survey distributed to all FYS liaison librarians (see appendix D). Since 2011 the librarians had been gathering information on their FYS teaching experiences using a short web-based survey distributed as a Google Form. This survey was slightly modified and distributed to the six liaison librarians at the end of the fall 2013 semester. The librarians submitted a survey response for each instructor with whom they worked, resulting in twenty-four submissions, a 100 percent response rate.

FYS faculty-librarian collaboration levels were thus determined by information gathered solely from the librarian survey. The project team recognized the lack of faculty input as a shortcoming in this analysis but chose to proceed with the information available to them. One librarian team member and the Writing Center Director developed a Faculty-Librarian Collaboration Scale reflective of the different interactions librarians had with FYS instructors throughout the fall semester:

- 5 (highest)—Librarian worked with instructor to create assignment(s) incorporating IL.
- 4—Instructor made changes to assignment(s) or syllabus based on librarian feedback.
- 3—Instructor discussed assignment(s) and/or content of library instruction with librarian but made no changes based on discussions.
- 2—Librarian received a copy of the syllabus or course assignment(s) from the instructor.
- 1 (lowest)—Librarian had contact with the instructor before the start of the fall semester.

Each FYS faculty-librarian pair was given a collaboration score based on this scale. Unlike the Claremont Colleges Library study, which assessed first-year students' IL performance in relation to both quality of faculty-librarian collaboration and level of librarian instructional engagement, this assessment project focused exclusively on the quality of faculty-librarian collaboration.²⁴

FYS Faculty Interviews

Despite the survey setback, the team was eager to learn more about faculty's FYS experiences through interviews. Five instructors with different levels of FYS teaching experience were identified as potential interview subjects. All agreed to participate and were interviewed by the Director of the Library. Questions focused on IL integration, working with librarians, and overall FYS teaching experiences (see appendix E). The Director of the Library recorded and transcribed the interviews, which were then coded by the project team leader for themes and similarities.

Assessment Findings

Student Survey I: Determining Prior Experience

Of 385 students enrolled in seminars, 98 percent ($n = 377$) responded to this survey. An overwhelming majority of respondents reported visiting their school or public library as a student in high school (98%, $n = 368$). Within this group, 83 percent ($n = 306$) went there to do research, 79 percent ($n = 290$) borrowed books or other materials, 66 percent

($n = 242$) used the library as a study space, 45 percent ($n = 167$) took an exam there, and 29 percent ($n = 106$) attended a library program.

Out of 377 total respondents, 58 percent ($n = 219$) reported asking a librarian for help with research, 64 percent ($n = 242$) received instruction from a school media specialist or librarian, and 67 percent ($n = 254$) used a library database while in high school. However, of the students who reported using a library database, 34 percent ($n = 87$) could not remember specific names.

FYS Faculty-Librarian Collaboration

From the librarian survey, the project team learned that 92 percent ($n = 22$) of FYS instructors included at least one IL-related assignment in their seminar; 83 percent ($n = 20$) gave their liaison librarian a copy of their syllabus; 67 percent ($n = 16$) requested some form of assistance from their liaison librarian; 62 percent ($n = 15$) interacted with their liaison librarian before the start of the semester; and 58 percent ($n = 14$) discussed and gave their liaison librarians copies of seminar assignments. These interactions, combined with a qualitative analysis of the liaison librarians' commentary on their teaching relationships with each instructor, were used to assign each faculty-librarian pair ($n = 24$) a score using the FYS Faculty-Librarian Collaboration Scale. See table 1 for score distribution.

Data was also collected on the number of librarian-led IL instruction sessions. Only 1 FYS section received no IL instruction. Librarians taught 1 IL session in 10 sections, 2 IL sessions in 9 sections, and 3 IL sessions in 4 sections. The mean number of IL sessions taught for the FYS was 1.6 and the mode was 1.

Collaboration Score	Number of Pairs	Percentage of Pairs
5 (highest level)	3	12%
4	7	29%
3	7	29%
2	4	17%
1 (lowest level)	3	12%

Student Survey II: Determining Student Behavior

The timing of the distribution of the second student survey resulted in a response rate of only 62 percent ($n = 237$) of FYS students. Of the respondents, 40 percent ($n = 95$) visited the library with a class other than their FYS during fall 2013, but 97 percent ($n = 229$) visited the library on their own during that period. Within that subgroup, 44 percent ($n = 101$) stated that they visited a few times a week, 29 percent ($n = 66$) a few times a month, 21 percent ($n = 49$) a few times during the semester, and a dedicated 6 percent ($n = 13$) visited the library every day. No correlation was found between the faculty-librarian collaboration score for each students' FYS and the frequency with which they visited the library, $r(227) = -.002, p = .974$.

Of most concern to the project team were students' self-reported use of library resources and services, which corresponded to several FYS IL learning outcomes. In addition to calculating descriptive statistics, independent samples *t*-tests were used to determine if there was a significant difference between the mean faculty-librarian collaboration seminar score for students who engaged in a particular activity than that of students who did not.

Of the 237 respondents, 41 percent ($n = 96$) borrowed some type of information resource (book, DVD, CD); 11 percent ($n = 25$) borrowed technology devices from the library (laptops, e-readers, etc.); 12 percent ($n = 29$) requested a book from a consortial library; and 17 percent ($n = 40$) used interlibrary loan to request a book or article. The mean faculty-librarian collaboration seminar score was significantly greater for students

who borrowed library materials ($M = 3.66$, $SD = 1.34$) than those who did not ($M = 2.82$, $SD = 1.18$), $t(235) = 5.05$, $p < .001$; students who requested a book from a consortial library ($M = 4.10$, $SD = 1.26$) compared to those who did not ($M = 3.03$, $SD = 1.27$), $t(235) = 4.28$, $p < .001$; and students who used interlibrary loan to request a book or article ($M = 3.8$, $SD = 1.14$) compared to those who did not ($M = 3.03$, $SD = 1.3$), $t(235) = 3.46$, $p = .001$. There was no significant difference in faculty-librarian collaboration seminar score means between students who borrowed technology devices from the library ($M = 3.32$, $SD = 1.34$) and those who did not ($M = 3.14$, $SD = 1.31$), $t(235) = .643$, $p = .52$. See table 2.

TABLE 2
Distribution of Number of Students Who Engaged in Library Use Behaviors by FYS Seminar Faculty-Librarian Collaboration Score

FYS Collaboration Score	Borrowed Library Materials	Borrowed Library Technology	Borrowed Consortial Books	Used Interlibrary Loan
5	30	5	14	11
4	34	8	11	18
3	15	6	0	6
2	3	2	1	2
1	14	4	3	3
<i>Total</i>	<i>96</i>	<i>25</i>	<i>29</i>	<i>40</i>

Students primarily interacted with librarians at the reference desk, with 59 percent of respondents ($n = 140$) reporting talking to a librarian there. Very few students scheduled research consultations, 7 percent ($n = 16$), and only 8 percent ($n = 18$) of students e-mailed librarians for research assistance. There was no significant difference in the faculty-librarian collaboration seminar score means between students who talked to a librarian at the reference desk ($M = 3.21$, $SD = 1.34$) and those who did not ($M = 3.09$, $SD = 1.28$), $t(235) = .659$, $p = .51$; nor was there a difference in those who scheduled research consultations ($M = 3.75$, $SD = .93$) compared to those who did not ($M = 3.12$, $SD = 1.33$), $t(235) = 1.872$, $p = .06$. A significant difference in faculty-librarian collaboration was found between those students who did e-mail a librarian for research assistance ($M = 3.83$, $SD = 1.04$) compared to those who did not ($M = 3.10$, $SD = 1.31$), $t(235) = 2.305$, $p = .022$; but the overall number of students who did so was so low as to make this comparison unreliable. See table 3.

TABLE 3
Distribution of Number of Students Who Interacted with Librarians by FYS Faculty-Librarian Collaboration Score

FYS Collaboration Score	Talked to Librarian at Reference Desk	Scheduled Research Consultation	E-mailed Librarian
5	28	5	6
4	34	2	5
3	41	9	5
2	13	0	2
1	24	0	0
<i>Total</i>	<i>140</i>	<i>16</i>	<i>18</i>

Students' reported use of online library resources was surprisingly robust: 84 percent of students ($n = 200$) reported visiting the library website; 65 percent used OneSearch—EBSCO's discovery tool ($n = 152$); 62 percent used library databases ($n = 146$); and 55 percent used the library catalog ($n = 131$). The mean faculty-librarian collaboration seminar score was significantly greater for students who visited the library website ($M = 3.29, SD = 1.28$) than those who did not ($M = 2.46, SD = 1.28$), $t(235) = 3.63, p < .001$; for those who used OneSearch ($M = 3.38, SD = 1.32$) than those who did not ($M = 2.76, SD = 1.23$), $t(235) = 3.55, p < .001$; for those who searched the library catalog for books ($M = 3.4, SD = 1.37$) than those who did not ($M = 2.86, SD = 1.17$), $t(235) = 3.25, p = .001$; and for those who searched a library database for articles ($M = 3.38, SD = 1.3$) than those who did not ($M = 2.81, SD = 1.25$), $t(235) = 3.28, p = .001$. See table 4.

TABLE 4
Distribution of Number of Students Who Used the Library's Online Resources by FYS Faculty-Librarian Collaboration Score

FYS Collaboration Score	Visited Library Website	Used OneSearch	Used Library Catalog	Used Library Databases
5	38	35	34	30
4	57	45	37	51
3	59	36	28	30
2	17	15	12	14
1	29	21	20	21
<i>Total</i>	<i>200</i>	<i>152</i>	<i>131</i>	<i>146</i>

Rubric Evaluation

Of the 103 student essays evaluated from 9 FYS sections using the IL rubric, only 9.7 percent ($n = 10$) met the total Target score of 15, indicating proficiency in each of the 5 dimensions of IL. The mean total score was 11.22, slightly above the Emerging level (10); and the mode was 13, between the Emerging (10) and Target (15) level. Mean essay scores for the individual dimensions of IL were all below the Target score of 3. The highest scoring dimension was *Clarity of Research Question or Thesis*, with a mean score of 2.54 and 59 percent ($n = 61$) of essays at Target score. The two lowest scoring dimensions were *Integration of Information Sources*, with a mean score of 2.01 and 20

TABLE 5
Distribution of Rubric Scores along the Five Dimensions of IL

IL Dimension	Mean Score	Essays at Target Level (Number)	Essays at Target Level (Percentage)
Clarity of research question or thesis	2.54	61	59%
Relevance of information sources to the research question or thesis	2.4	50	49%
Appropriateness of information sources to the assignment	2.28	48	47%
Integration of information sources into the writing assignment	2.01	21	20%
Citation and ethical use of information	1.99	32	30%

percent of essays ($n = 21$) at Target score; and *Citation and Ethical Use of Information*, with a mean score of 1.99 and 31 percent ($n = 32$) of essays at Target score. See table 5 for a complete breakdown of each dimension.

To determine whether a relationship existed between first-year students' IL abilities as demonstrated in their essay performance and FYS faculty-librarian collaboration levels, rubric scores were correlated to faculty-librarian collaboration scores (see table 6).

TABLE 6
Mean Rubric Scores by Collaboration Level

Collab. Score	Develop Question	Appropriateness	Relevance	Integration	Citation	Total Score
5	2.73	2.67	2.53	2.20	1.87	12.00
4	2.41	2.15	2.29	1.83	2.00	10.68
3	2.61	2.10	2.35	2.19	2.06	11.32
2	2.56	2.63	2.63	1.94	1.94	11.69
1	—	—	—	—	—	—

No correlation was evident between FYS faculty-librarian collaboration scores and students' overall IL ability as demonstrated by their performance on this rubric-based evaluation of essays, $r(101) = -.023, p = .817$. Likewise, no correlation was evident between faculty-librarian collaboration and any of the IL dimensions measured in the IL rubric: clarity of research question or thesis, $r(101) = .002, p = .988$; appropriateness of information sources to the assignment, $r(101) = .007, p = .948$; relevance of information sources to the research question or thesis, $r(101) = -.056, p = .573$; integration of information sources into the writing assignment, $r(101) = -.008, p = .934$; and citations and ethical use of information, $r(101) = -.029, p = .772$.

Faculty Interviews

The five faculty interviewed represented a mix of first-time ($n = 2$) and veteran ($n = 3$) FYS instructors. Two instructors were in level 5 collaboration pairs, two instructors were in level 4 collaboration pairs, and one instructor was in a level 3 collaboration pair. The Director of the Library recorded and transcribed these interviews, and the project team leader conducted a conventional content analysis using descriptive, in vivo, and emotion coding. Several themes and similarities emerged from these interviews.

When asked which of the FYS IL learning outcomes they incorporated into their seminars, instructors spoke in broad terms rather than specific outcomes, stating that they covered concepts such as information literacy, researching information, and accessing library resources. Those instructors with higher collaboration scores emphasized the teaching effectiveness of their liaison librarian, but all discussed how librarians contributed general "ideas" to their incorporation of IL into their respective seminars. Most reported conversing with their liaison librarian during the summer and fall, with only one instructor failing to discuss IL outcomes with the liaison librarian. All instructors interviewed expressed satisfaction with the FYS liaison librarian program.

Faculty indicated that student engagement and interpersonal relationships had a big impact on the success of their course. This was particularly applicable to IL instruction, an aspect of the seminar they felt received the most "push-back" from students. Faculty indicated that students were generally overconfident about their IL abilities, which presented an obstacle to IL instruction. Lack of time was also a significant barrier to IL integration. Each seminar must cover not only course content but also the four

college-identified liberal arts skills, leaving many faculty feeling as though they lacked adequate class time. Despite these stressors, faculty felt that teaching a FYS improved their pedagogical approaches to other courses.

Discussion and Recommendations

Answering this project's guiding question was an ambitious endeavor, particularly for a college without a strong precedent of student learning assessment. The project team evaluated two complex components of the FYS—faculty-librarian collaboration and IL student learning—and examined their relationship to one another. Each team member brought expertise and experience to this community of inquiry, resulting in assessment methods and results that were meaningful to librarians, FYS faculty, and administrators. For many team members, this project was their first dose of assessment; for others, it was an opportunity to put assessment ideas into action. This developmental experience uncovered a wealth of information that served as fuel for further inquiry and a foundation for improving information literacy instruction practices within the FYS.

Collaboration or Consultation?

A close look at the collaboration scores of each of the FYS faculty-librarian teaching pairs reveals relationships more accurately described as consultation rather than collaboration. Only 3 out of 24 faculty-librarian pairs actively worked together to create IL assignments and learning experiences. With a mean collaboration score of 3, most faculty were inclined to discuss assignments and syllabi with librarians but did not incorporate their colleagues' ideas into seminar planning. Information gleaned from the commentary portion of the librarian survey indicated that even librarians who were a part of higher scoring pairs felt as though they weren't active instructional partners. Yet interviews with faculty indicated that they were quite satisfied with their liaison librarians' involvement. What could account for this feeling of imbalance in faculty-librarian teaching relationships? Perhaps faculty were less inclined to share negative perspectives on collaborating with librarians because they were being interviewed by the Director of the Library. From the librarian point of view, the standards for collaboration expressed in the scale might have been too low, so even those librarians with high collaboration scores felt as though their teaching partnerships were less than ideal. This raises another question for future exploration: What does a collaborative teaching relationship look like to librarians, and is it different from what faculty might describe as collaboration?

The discrepancy between faculty's and librarians' perceived collaboration levels may also indicate a larger structural problem within the FYS program. In their interviews faculty admitted the difficulty of incorporating course content and the four liberal arts skills into their one-semester seminars. Given the pressures and time constraints FYS faculty face, the project team questioned whether teaching all thirteen existing IL learning outcomes was a realistic goal. The mean number of librarian-taught classes for each seminar was only 1.6, and each librarian on the team admitted that at most, they were teaching two to three learning outcomes per class. It is therefore highly unlikely that all IL learning outcomes were being adequately addressed within the typical class time of 70 to 110 minutes. Thus what began as an investigation of faculty-librarian collaboration revealed a need to reexamine the learning outcomes for the FYS program.

What Are Students Learning?

This assessment project did not focus on librarian's pedagogical approaches to the FYS, but the results of the second student survey and rubric evaluation of research essays offer a glimpse at what first-year students might be learning in their seminars.

Those enrolled in seminars with greater faculty-librarian collaboration were more likely to report using library resources and services. These activities corresponded to specific FYS learning outcomes, including using the library's print collection, electronic resources, research assistance offerings, and additional services such as interlibrary loan and consortial book borrowing. Conversely, no correlation was found between faculty-librarian collaboration and students' use of information sources in research essay assignments. This included students' ability to develop a clear research question or thesis, select relevant and appropriate information sources, integrate them into their writing and cite them. Students' performance on these essay assignments was, on average, closer to the Emerging rather than Target rubric score, both overall and on each of the IL dimensions measured. This was a disappointing assessment finding that resulted in much reflection and discussion among members of the project team.

Although disheartened, the librarians on the team were not surprised by the rubric results. They admitted that there were specific IL outcomes evaluated by the rubric that they weren't able to cover in a one-shot instruction session. This once again raised the question of what can be realistically taught in a one-semester course with an average of 1.6 librarian-led instruction sessions. Are librarians teaching the IL skills and abilities students need to create effective research essays, and are faculty providing the classroom time and academic freedom for librarians to do so? An even deeper idea to explore might be that perhaps some librarians are teaching these IL concepts, but are not doing so in way that promotes effective application of this knowledge in writing assignments.

The Writing Center and Library directors had a different take on this result, likely a result of years of experience teaching writing and research to undergraduate students. From their perspective, a research essay is a complex assignment, one that requires students to not only find relevant research but also to ask compelling questions and synthesize different sources of information. It's likely that students need more than one semester of college coursework to develop the writing and IL skills needed to create a well-crafted research essay. Upon reflection, the project team speculated that perhaps the Emerging level was *appropriate* for students in their first semester of college. This was reiterated by the Dean of the Core Curriculum, who, as a faculty member, agreed with the notion that first-year students have quite a bit of room to grow. With no early writing sample or baseline measure of students' IL abilities, the project team could not chart IL development, and therefore had no way of knowing whether students performed better on these essays at the end of the semester than they would have at the start.

The results from the start-of-semester student survey indicated that students used libraries while in high school, but had varying levels of familiarity with and use of a library's material and human resources. Therefore much of what students might need to do in their early college career is familiarize themselves with college-level research resources; not just the tools but the types of information available to them as well. The IL dimensions evaluated in the rubric-based essay assessment are ones that students would be best served by learning throughout their college career, not just in the FYS. Much as faculty would be disinclined to say that one or two semesters of English composition make a great writer, the same can be said about expecting a fully information-literate student after one semester of IL instruction. The integration of IL across all levels of the college curriculum is needed for students to understand the intricacies of research and the information landscape.

Changes and Challenges to Action

A series of resignations and responsibility shifts in spring 2014 created significant obstacles to pursuing additional changes in the FYS program and its faculty-librarian

dynamic. Three of this project's primary supporters—the Director of the Library, Dean of Faculty, and Liberal Arts Associate—left SMCM. The Dean of the Core Curriculum position became Director of Matriculation and Academic Planning, effectively removing oversight of the SMCM Core Curriculum. The library also lost one FYS liaison librarian. This sudden turnover prevented the library faculty from effectively advocating for greater faculty-librarian collaboration. Yet even within this tumultuous environment, opportunities for continued assessment and improvement of the FYS IL curriculum occurred.

One immediate result of this assessment project was a revision of the FYS IL learning outcomes. The project team leader worked with the instruction librarians to develop a concise set of IL learning outcomes covering the skills and concepts best addressed during students' first semester of college.²⁵ These outcomes were approved by the SMCM Faculty Senate in spring 2014 as a new foundation for IL in the FYS. Along with data from the assessment project, these new outcomes were introduced to all FYS instructors during their spring planning workshop. Having a justification for the outcome revisions helped the FYS instructors understand the change in approach to IL instruction. The team leader's hope is that this manageable set of outcomes will improve FYS faculty-librarian discussions and prove easier to integrate into seminars.

The implementation and results of this assessment project also revealed a need for a librarian to assume coordination of the library's instruction and assessment efforts. Despite a failed attempt at securing funding for an additional position, the library hired a replacement instruction librarian and shifted responsibilities so that the project team leader could assume coordinator duties in summer 2015. One of this librarian's projects in the 2015–2016 academic year is to create a repository of activities and lesson plans for each of the FYS IL learning outcomes to help ease the burden of class planning for librarians and offer faculty concrete examples of IL instruction.

A recent Middle States reaccreditation visit has also focused attention on the need to improve college-wide assessment efforts. In summer 2015 the interim provost solicited proposals for curriculum development and assessment planning. The library was the only academic department that submitted assessment proposals, one of which was a plan to assess the implementation of the new FYS IL learning outcomes. This proposal was fully funded, giving the librarian team leader and an instruction librarian a stipend to prepare for fall 2015 assessment efforts. These include articulating what librarians are teaching in FYS instruction sessions and how students perform on both research essay and in-class assignments designed for formative assessment. In addition, based on her work in the AiA program, the project team leader was asked to join the college-wide Academic Assessment Committee. Among its primary goals is the development of an assessment plan for the college's four liberal arts skills at all levels of study. This recognizes the assessment expertise and leadership that the library can lend to campus. It also presents an excellent opportunity to advocate for IL integration throughout the college curriculum. Project team members and librarians remain optimistic about this renewed energy for student learning assessment and plan to use both existing and future assessment results to strengthen collaborative partnerships between faculty and librarians.

Conclusion

The SMCM AiA team's inquiry into collaboration and IL student learning produced results that led to more nuanced questions about the nature of faculty-librarian teaching relationships and expectations of first-year students. By including non-librarian stakeholders in this assessment, the project team was able to draw from a variety of perspectives, learning more about how faculty approach the FYS and its various chal-

lenges. Conversely, faculty and administrators were clued in to librarians' thoughts on IL integration and their commitment to undergraduate education. This project promoted discussions over shared concerns about the FYS and provided the opportunity for the project team to model the kind of collaboration that can make lasting improvements to teaching and learning.

An unexpected outcome of this project is the enhanced status of the library as a campus assessment leader. Although this was not a primary goal, it is a welcome and exciting outgrowth of this action research initiative. In addition to demonstrating the ability to do the work of assessment, the librarians on the project team showed a level of comfort with the kind of mixed assessment results that others might find defeating. The results did more to fuel inquiry than stifle it, as the librarians identified further avenues for assessment. Interesting questions led to more questions, and there are enough opportunities from this project to continue this community of practice well into the next few years.

Appendix A. Student Surveys

Start of Semester Survey

Think back to your experiences while you were in high school:

1. Did you ever visit your school or public library?
 Yes No
1.a. If you answered YES to Question 1, please tell us how you used the library (Check all that apply).
 I borrowed a book or some other library material (such as DVD, game, or CD).
 I went there to study.
 I went there to take an exam.
 I went there to do research.
 I went there to attend a program (for instance: book club, crafts, or gaming).
2. Did you ever use a library database (either through your school or public library)?
 Yes No I'm not sure
2.a. If you answered YES to Question 2, please list the database(s) you used.
3. Did you ever ask a librarian for help doing research (either at your school or public library)?
 Yes No
4. Did your school librarian ever visit one of your classes/teach one of your classes?
 Yes No

End of Semester Survey

1. Did you physically visit the library this semester with a class other than your First Year Seminar?
 Yes No
2. Did you physically visit the library this semester *on your own* (not as a part of a class visit)?
 Yes No
2.a. If you answered YES to Question 2, how often did you visit the library? Select the option that best describes your actions.
 every day
 a few times a week
 a few times a month
 a few times during the semester
3. This semester, did you (check all that apply):
 Borrow any library materials (book, DVD, CD, etc.)?
 Borrow any library technology (laptop, Kindle, charger, etc.)?
 Request a book from another USMAI library?
 Use Interlibrary Loan to get an article or book?
 Talk to a librarian at the reference desk?
 Set up an appointment outside of class time with a librarian?
 E-mail a librarian for research help or help using the library?
 Visit the library's website?
 Use OneSearch to locate books or articles?
 Search the library catalog for books or other materials?
 Search a library research database for articles?

Which database(s) did you search?

APPENDIX B FYS IL Rubric				
	1 (Initial)	2 (Emerging)	3 (Target)	4 (Exemplary)
Clarity of research question/thesis	No apparent research question or thesis.	Poorly worded, unclear or unfocused research question or thesis. Research question or thesis does not meet the required needs of the writing assignment or prompt.	Research question or thesis is clearly defined. Research question or thesis meets the required needs of the writing assignment or prompt.	Research question or thesis is situated within a larger scholarly conversation.
Appropriateness of information sources to the assignment	No sources at all OR sources do not meet the assignment requirements.	Sources meet some of the requirements of the assignment OR some sources are appropriate to the assignment.	Sources meet the assignment requirements and are appropriate in type to the assignment.	Sources are varied in type and exceed the expected breadth and depth of the assignment requirements.
Relevance of information sources to the research question or thesis	No or very few sources are relevant to student's research question or thesis.	Some (most-ish) sources are relevant to the student's research question or thesis.	All sources are relevant to the student's research question or thesis.	Sources are relevant, represent different viewpoints, and apply to various aspects of the question or thesis.
Integration of information sources into the writing assignment	Student does not relate sources to the research question or thesis.	Student relates some sources to the research question or thesis AND makes limited use of information from sources to support or develop ideas.	Student relates most sources to the research question or thesis AND usually incorporates information from sources when needed to support or develop ideas (in a coherent manner).	Student relates all sources to the research question or thesis AND incorporates information from sources whenever needed in a sophisticated manner.
Citations and ethical use of information	Sources are not documented OR minimally documented without a recognizable citation style.	Sources are inconsistently documented in a recognizable citation style.	Sources are consistently documented in a recognizable citation style with few errors.	Sources are consistently documented in a recognizable citation style with no errors.

Appendix C. Faculty Survey

Name:

Core 101 Section Number:

1. To what extent did you emphasize the following First Year Seminar information literacy outcomes in your own First Year Seminar?

Please select the option that best describes your degree of emphasis of each topic.

(On the survey distributed to faculty, each outcome was accompanied by a 1–5 Likert Scale where 1 = Not at All and 5 = Heavily Emphasized. Faculty were asked to circle a number from 1 to 5.)

Information Facilities & Services Outcomes

Upon completion of Core 101, a student will:

- Be familiar with the college library, including its physical layout and locally held resources (the collections). The student will also know how to use call numbers to locate materials.
- Be aware of the human resources available in circulation, reference, and interlibrary loan services.
- Be able to use the online catalog and know the difference between the library catalog and the research databases.
- Be able to use the library web page to locate and use research databases and related resources at a basic level.

Information Characteristics Outcomes

Upon completion of Core 101, a student will:

- Know how to explore general information resources like encyclopedias, handbooks, statistical sources, and atlases to learn more about a topic.
- Distinguish among various types of materials including books and book chapters, popular magazines, scholarly articles and journals, etc.; understand how these different types of information are used for research; know in what formats they can be found; understand intended audience.
- Know the difference between primary sources, which are created by witnesses or represent first-hand accounts of events or experiments, and secondary sources, which report on, synthesize, or summarize those accounts.
- Think critically about information and select context-appropriate resources from among the wide array of available information, including licensed research databases, free Web sites, books, articles, etc.

Researching Information Outcomes

Upon completion of Core 101, a student will:

- Develop a research topic, narrow to more specific research questions, and demonstrate a capacity to construct a research strategy.
 - Be able to identify key concepts and terms that describe a research question or information need.
 - Demonstrate the capacity to appropriately record or save desired information in an organized manner.
 - Synthesize information into a research paper or presentation.
 - Use appropriate documentation styles and both recognize and prevent plagiarism.
2. If you emphasized any of the above outcomes in your own First Year Seminar, in what ways did you do so (for instance, an assignment, lecture, discussion, or in-class activity)?
 3. Did you consult with your First Year Seminar librarian liaison on incorporating any of the above outcomes in your own First Year Seminar? If so, please mention the specific outcomes below.

Appendix D. Librarian Survey

Librarian Name:

Semester / Year:

FYS Faculty Name:

FYS Section Number:

FYS Faculty-Librarian Interaction

Please check all that apply.

- Librarian contacted instructor before fall semester
- Librarian interacted with instructor before fall semester
- Instructor requested assistance at any point
- IL was included on syllabus
- Librarian received a copy of the syllabus
- Course had at least one assignment that addressed IL
- Librarian received a copy of the assignment
- Instructor discussed assignment with librarian

Number of times librarian met with this FYS section?

Instruction Details

Please check all that apply.

- Short initial visit by librarian for introduction
- Library tour
- Classroom demonstration
- Hands-on activities
- Instructor attended spring FYS workshop

Additional comments on collaboration.

Open-ended paragraph box

Appendix E. Faculty Interview Questions

1. Is this the first time you have taught a FYS? If not, how many times before have you taught it?
2. The FYS handbook outlines information literacy outcomes in three categories, information facilities and services, information characteristics, and researching information. Did you emphasize or focus on any of the specific outcomes in your First Year Seminar? (Faculty were given a list of the FYS IL Competency Standards.)
3. If you did emphasize any of the IL outcomes, how did that happen in your class (assignment, lecture, demonstration, activity)? If you did not, is there a reason why you didn't focus on them in your class?
4. Did you consult with your FYS librarian on ways to incorporate any of the outcomes into your seminar? Please explain why or why not.
5. If you have taught this FYS before, did you make changes to assignments or other activities to address or improve IL outcomes? If this is the first time you have taught, would you consider making such changes the next time?
6. Is there anything else you'd like to share about your experience incorporating information literacy into the FYS or working with your FYS librarian?

Notes

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3. Kim Leeder, "Collaborating with Faculty Part I: A Five-Step Program," *In the Library with the Lead Pipe* (blog), April 7, 2011, <http://www.inthelibrarywiththeleadpipe.org/2011/collaborating-with-faculty-part-i-a-five-step-program/>; Michael Mounce, "Working Together: Academic Librarians and Faculty Collaborating to Improve Students' Information Literacy Skills: A Literature Review 2000–2009," *Reference Librarian* 51, no. 4 (2010): 300–320, doi:10.1080/02763877.2010.501420; Paul Hyrcaj and Michael Russo, "Reflections on Surveys of Faculty Attitudes toward Collaboration with Librarians," *Journal of Academic Librarianship* 33, no. 6 (December 2007): 692–96.

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5. Stephanie Sterling Brasley, "Effective Librarian and Discipline Faculty Collaborative Models for Integrating Information Literacy into the Fabric of an Academic Institution," in *Information Literacy: One Key to Education*, New Directions for Teaching and Learning no. 114, ed. Margit Misangyi Watts (San Francisco: Jossey-Bass, 2008), 74; Ruth Ivey, "Information Literacy: How Do Librarians and Academics Work Together to Deliver Effective Learning Programs?" *Australian Academic & Research Libraries* 34, no. 2 (2003): 102.

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8. Cook, "Creating Connections," 22.

9. Cook, "Creating Connections"; George D. Kuh, Polly D. Boruff-Jones, and Amy E. Mark, "Engaging Students in the First College Year: Why Academic Librarians Matter," in *The Role of the Library in the First College Year*, ed. Larry L. Hardesty (Columbia, SC: National Research Center for the First-Year Experience and Students in Transition, 2007), 23; Mounce, "Working Together"; Meggan D. Smith and Amy B. Dailey, "Improving and Assessing Information Literacy Skills through Faculty-Librarian Collaboration," *College and Undergraduate Libraries* 20, no. 3–4 (2013): 314–26, doi:10.1080/10691316.2013.829370.

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11. Association of College & Research Libraries Best Practices Initiative Institute for Information Literacy, "Characteristics of Programs of Information Literacy that Illustrate Best Practices: A Guideline" (2003, rev. 2012), <http://www.ala.org/acrl/standards/characteristics>; Brasley, "Effective Librarian and Discipline Faculty Collaborative Models," 72; Mounce, "Working Together," 305.

12. Brasley, "Effective Librarian and Discipline Faculty Collaborative Models," 77.

13. Leeder, "Collaborating with Faculty Part II," 2, 10.

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18. Flaspohler, *Engaging First-Year Students in Meaningful Library Research*, 57, 68, 73.

19. Kuh, Boruff-Jones, and Mark, "Engaging Students in the First College Year," 23.

20. Flaspohler, *Engaging First-Year Students in Meaningful Library Research*.

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