

Collaborating with an Institutional Research Office: Benefits, Lessons Learned, and Initial Insights into Faculty Information Literacy Teaching Practices

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The literature of librarianship is rich with successful, innovative collaborations designed towards developing information literacy (IL) in students enrolled in institutions of higher education. When collaborating, it is helpful to understand how departmental faculty perceive and value information literacy instruction (ILI). Informed with insights into how stakeholders and potential partners view IL, teaching librarians can conduct more effective outreach and design instruction that aligns with student and departmental faculty needs. While there are many studies examining departmental faculty perceptions of IL, an additional component is less explored: What are the IL teaching practices of departmental faculty *independent* of librarians and the library? In collaboration with the institutional research office (<http://www.fresnostate.edu/academics/oie/>) at California State University, Fresno (Fresno State), the IL teaching practices of departmental faculty were examined in an effort to establish better partnerships for IL development. This paper will explore that collaboration, including benefits and lessons learned, as well as initial findings and next steps.

Institutional Research

Institutional research offices (IRO) serve to collect, communicate, and analyze information about their institutions, with the goal of supporting informed and effective decision making. The Association for Institutional Research (2016) lists the “duties and functions” of institutional research (IR) as 1) Identify information needs; 2) Collect, analyze, interpret, and report data and information; 3) Plan and evaluate; 4) Serve as stewards of data and information; and 5) Educate information producers, users, and consumers. These offices may also serve a variety of institution-specific functions, aligned with the needs and priorities of their campuses, sometimes combined and sometimes distinct from other units (Volkwein, Liu, & Woodell, 2012).

Some services provided by IRO are internally focused, while others are focused external to the institution. Internal services might include collection and preservation data related to: students (e.g., enrollment, retention, graduation rates, demographics); finances; employees (e.g., number of faculty and staff, employee demographics); facilities; and institution-specific research (Ofori-Attah, 2002). External services might include the collection and reporting of institutional data to outside organizations (Volkwein et al., 2012), such as data related to accreditation (Ofori-Attah, 2002). Libraries and librarians have made use of many of these IRO services and data sets, particularly in areas of assessment, data storage and access (Hewitt & Hewitt, 2010).

IR collaboration at Fresno State

Fresno State, with over 25,000 students and 5,000 employees, is located in the Central Valley of California, and is a member of the California State University (CSU) system, the largest public university system in the world. The Fresno State IRO is referred to as the Office of Institutional Effectiveness (OIE), and is conveniently located on the 4th floor of the library, where many university administrative offices are housed. Staffed by only eight employees, the collaboration described in

this study was initiated by the desire to increase the investigative/research capacity of OIE. With this in mind, under the leadership of the Director of the Office of Institutional Effectiveness, the OIE Faculty Fellows program was created. A call for nominations was issued in Fall 2016, and nominated faculty—one from each college, including the library—met with the director to discuss OIE research priorities, and where this might overlap with the research interests of the faculty member. The goal of the fellowship was to 1) Increase the capacity of OIE through faculty-led research related to institutional goals and priorities; 2) To increase campus awareness of OIE resources and services; and 3) To support early-career faculty.

The author of this article—an early-career, tenure-track librarian—has been particularly interested in the development of higher-order IL skills and authentic assessment of these understandings, and how these practices can be scaled at the university-wide level. In conversations with colleagues and library administration, it was determined that a proposal to investigate departmental faculty IL teaching practice was necessary in order to create IL collaborations that achieve these goals. This investigation was particularly relevant in light of accreditation activities. Fresno State is accredited by the Western Association of Schools and Colleges (WASC)- Senior Colleges and University Section (WSCUC), and WSCUC-accredited schools are assessed on five core competencies, one of which is IL. Information Literacy being so important to the accrediting agency has raised the profile of IL on campus, and brought awareness to the teaching and learning of IL. By aligning library interests with accreditation interests, the proposal to study faculty IL teaching practices was accepted.

The study design used a triangulation method, incorporating quantitative and qualitative data from multiple sources. Quantitative data was collected through a survey of faculty IL teaching practices. Questions included: 1) Inclusion of IL concepts in teaching practices, including assessment of IL development; 2) Inclusion of IL concepts in course syllabi; 3) Teaching responsibility for IL concepts; 4) Value of IL concepts as an academic skill and as a professional skill for their discipline; 5) Familiarity with key IL resources, including standards, teaching tools, and campus/library IL resources; 6) Use of these resources in their classes; and, 7) an open-ended comment question. At the completion of the survey, faculty could indicate their interest in participating in the next phase of the study—focus groups. Qualitative data was collected through these hour-long focus groups, consisting of full-time, part-time, tenure-track, and adjunct faculty. Nine faculty participated in two focus groups, and every effort was made to diversify the disciplines represented in the focus groups. Both quantitative and qualitative data was also collected from annual assessment reports, which are documents submitted by every department detailing learning and assessment activities, aligned with a set of outcomes established by the department. These include the assessment of outcomes aligned with general education and/or accreditation core competencies, including IL.

A range of services was provided by OIE through this collaboration. While the survey and focus group instruments were initially designed by the librarian, OIE staff refined the ques-

tions for clarity, and developed the Qualtrics survey. The instrument design was greatly improved by this expertise in Qualtrics, which may have benefited ease of survey use and completion rates. OIE also led the efforts to distribute the survey and recruit faculty to the focus groups. This was particularly useful for accessing adjunct faculty: as a campus with 57.7% non-tenure-track faculty (California State University Fresno Office of Institutional Effectiveness, 2018), adjunct faculty are critical partners for ILI, but are difficult to communicate with as they are often not listed in official directories, and turnover from semester to semester is high. However, OIE has access to the complete list of these faculty, and increasing the participation from this key campus group improves the accuracy of the study. The survey was sent to a representative sample of 602 faculty; 122 responses were received, and any incomplete responses were removed, for an n of 91. OIE also provided critical support in data analysis: working with a graduate student employed by OIE, focus groups responses were transcribed and coded. As part of the fellowship, OIE also offered networking lunches where fellows could share the progress of their work, and events that placed the fellows' research work in front of campus administrators and other stakeholders, such as the Academic Affairs Leadership Team meeting, where the Provost, Vice-Provost, Deans, and Associate Deans meet; and a CSU-wide meeting of the heads of the campuses' respective IROs. A \$5,000 stipend was also part of the fellowship, which covered student assistant time, professional development funds, and research participant incentives.

Benefits and Lessons Learned

As a result of this partnership, several benefits were gained, beyond the findings of the study.

1. Increased awareness of partner resources and services

Librarians often find themselves in the position of explaining and advocating for the depth and range of services they can provide to students, faculty, and campus administrators. In conversations with OIE, they often have a similar experience for their work. The opportunity to collaborate and learn about each unit's work has resulted in increased awareness of resources and services, from both partners. This has led to referrals, additional collaborations, and has contributed to an increased role of the library in campus student success initiatives.

2. Networking and stakeholder communication

Because communication of data and information across campus is a primary function of OIE, the library has benefited from opportunities created by OIE to share IL work. This includes increased visibility with academic affairs leadership, meetings with multiple campus units, and the above-mentioned presentation to IROs from other CS campuses. It is hoped that by seeing a librarian visible in this work, these other IRO officers may be intrigued and interested in collaborating with their campus library team.

3. Expertise

It has been reported that librarians may feel underprepared or inexperienced in conducting certain aspects of research, including statistical analyses (Kennedy & Brancolini, 2018). The expertise of IROs, including instrument design and testing, study design, data collect-

ing, and data analyses were all OIE services that this librarian was able to leverage to improve the quality of the study.

An additional takeaway is a "bigger picture" question related to student data and the library's involvement in student success initiatives tied to analytics. Because this specific study focused on faculty, data about students and their interactions with the library were not examined. However, this collaboration provided insight to the potential benefits and concerns of how data is shared, consulted, and used. This has initiated a broader conversation about patron data policies and student success analytics in the library.

Initial Findings from Study

While data from the annual assessment reports are still being processed, initial findings have yielded interesting insight into faculty IL teaching practices. Broad findings include:

1. Faculty highly value IL skills for their students. When asked to rate their value of IL skills as both an academic literacy and as a professional practice, all skills were highly valued, and were seen as particularly valuable for students once they graduate and enter the workforce or post-graduate programs.
2. Faculty are sensitive to the complexities of today's information environment, and are very interested in providing their students the skills necessary to achieve within that environment. This is particularly true for newer and emerging information platforms, including social media and the inclusion of these platforms in the classroom as legitimate sources of information.
3. Faculty are less frequently explicit about IL outcomes in their course materials. IL outcomes are often not included in syllabi or in classroom teaching exercises. Departmental faculty are often not aware of key IL resources, both local to the Fresno State campus, and larger IL guidelines such as *The Framework for Information Literacy*, *The Standards for Information Literacy in Higher Education*, and the American Association of College and Universities' IL VALUE Rubric.
4. Departmental faculty view the responsibility for teaching IL skills, concepts, and understandings as mainly their responsibility. Departmental faculty view librarians as more responsible for instruction in discrete skills, such as how to use certain databases, how to design a search, and how to determine if an article is a scholarly, peer-reviewed resource.

Next Steps

These findings point to several ways librarians can support departmental faculty in their IL teaching practice, especially that faculty view the responsibility of ILI as theirs. One such method is to increase awareness of key IL resources, such as the *Framework* and the AAC&U IL VALUE Rubric, as well as campus-specific resources. The hope is that these documents and services will support faculty in making IL skills, concepts, and understandings more explicit in their teaching work, and allowing students to make connections throughout the class and across their program of study to these IL outcomes. As a result of this project, and with these goals in mind, the 2018 new faculty cohort at Fresno State had the option to participate in a "Teaching IL" breakout session as part of their orientation to

campus, and many faculty expressed excitement about using IL resources to build IL into their syllabi and teaching practice. This workshop was held again in 2019, and plans are currently underway to design a “roadshow” version to offer to departmental faculty, chairs, associate deans, and deans.

In addition, because faculty highly value IL for their learners as students and for themselves as professionals, librarians can use this to work with faculty to identify higher-order and highly-relevant IL learning sessions, modules, or resources that demonstrate to departmental faculty the range of IL teaching and learning librarians can support.

Finally, several collaborations and partnerships have arisen from networking opportunities provided by OIE. By continuing this partnership with the campus IRO office, the library has increased capacity to make evidence-informed choices about instruction, outreach, and resource/service development, in partnership with departmental faculty, in support of Fresno State students and their learning.

References

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(Statistics is for Everyone ...Continued from page 5)

gistic regression predicts a binary, categorical outcome. For example, you might want to predict whether or not a student will pass (1) or fail (0) a class based on a student’s overall high school GPA, SAT score, and fall semester attendance record. You can do that with logistic regression. The interpretation of logistic regression results are very different than many other common analyses, which is why I think of it as an odd little bird. If you want to know more about probability, odds, and odds ratios, then you’re probably going to love diving into logistic regression!

Exploratory Factor Analysis (EFA) / Confirmatory Factor Analysis (CFA)

The final multivariate test I want to mention is factor analysis. The primary function of these types of analyses (EFA, CFA) is to identify factors that underlie manifest variables. What does that mean? Imagine that there is an underwater geyser. You can’t see the geyser itself, but you can see the bubbles on the surface of the water so you know the geyser exists. The bubbles are the manifested variables, which you can see and measure like items on a scale, and the geyser is the unobservable factor (also referred to as latent variable) that you cannot directly measure. Here’s a concrete example: Let’s say you want to create an instrument that measures the various components of the construct information literacy. As you can imagine, measuring constructs is a tricky business, but you decide that information literacy is comprised of three different underlying factors (the geysers) and you want to measure that via a thirty-item instrument (the bubbles). What you would then do, after administering the instrument to a group of students, is ana-

lyze the scores by looking at the correlations between items to identify the underlying factors. Generally speaking, if you had a hypothesis that information literacy was composed of a certain number of factors, say three, then you use confirmatory factor analysis to extract three factors and see how well that worked in explaining the construct. If you do not have a hypothesis of how many factors to extract, then you use exploratory factor analysis.

Conclusion

The purpose of this second article in this two-part series for instruction librarians was to provide an overview of common statistical tests and to explain the choices researchers make for why certain tests are employed over others. It is important to acknowledge that this article did not cover all the available types of statistical analyses, nor did I rely on external resources as I composed this piece. I decided that it was best to write as if I was talking to someone in person, librarian to librarian. However, as a librarian, I would be remiss if I did not end this article with some of the resources that I consistently rely on when working with students or advancing my own knowledge. The online content at UCLA’s *Institute for Digital Research and Education* (IDRE) are phenomenal. Check that out! Also, I’m a big fan of Andrew Hayes (*Regression Analysis and Linear Models; Introduction to Mediation, Moderation, and Conditional Process Analysis*), Geoff Cumming (*Understanding the New Statistics*), and Jeremy Miles and Mark Shevlin (*Applying Regression and Correlation*). If you prefer something a little more advanced, I highly recommend Singer and Willett’s *Applied Longitudinal Data Analysis* for librarians who are interested in measuring change across time.