Assessing Information Literacy on a Regional Campus
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Institutional Context

Indiana University Kokomo is a public, four-year university located in Kokomo, Indiana, a city of 50,000 people an hour north of Indianapolis in a region whose economy has historically depended on agriculture and automobile manufacturing. IU Kokomo opened its doors in 1932 as “Kokomo Junior College” and became part of the IU system in 1945. Because of the region’s economic roots and other socio-economic and cultural factors, many of our incoming students are first-generation college students, a population that typically requires extra support with information literacy (Pascarella, et al, 2004).1 Today, approximately 130 full-time faculty (tenured, tenure-track, and non-tenure track) offer courses to nearly 4,000 students in a variety of formats, including face-to-face (f2f), fully-online, and hybrid (“IU Kokomo Campus 2014-15 Fact Book,” 2015).

Project Background: Assessment at IU Kokomo

In recent years, frankly, assessment on our campus has been something of a slapdash operation. In preparation for the Higher Learning Commission’s (HLC) accreditation visit in 2018-19, the IU Kokomo Assessment Council proposed an assessment schema to measure the achievement of learning outcomes in the general education curriculum. Formerly, assessment was the purview of the Center for Teaching, Learning, and Assessment (CTLA) with the Assessment Council serving as a coordinating body for efforts across campus. But faculty and staff turnover, retirements, and changes in campus leadership had left assessment somewhat orphaned in an institution-wide sense; the vast majority of the assessment on our campus in recent years has been relegated to individual academic programs and departments, with little in the way of “cross-talk” between and among these academic units.

Nevertheless, our campus has always maintained a strong commitment to assessing general education, which includes assessing information literacy. Further, the relatively small number of full-time instructional faculty and librarians makes for a collegial and highly-collaborative campus environment. Initiatives such as the one we detail in this article are often launched with a quick email or a chance meeting between colleagues and, in 2015, librarians proactively formed the Information Literacy Assessment Team (ILAT) in response to a campus mandate that assessment of general education learning outcomes would be a focus of the upcoming accreditation visit. The ILAT includes the Dean of the Library, the Information Literacy Librarian, the Director of Writing, and the Chair of the Department of Communication and Performing Arts. In the spring of 2015, the ILAT’s internal information literacy assessment grant was approved for funding, which we used to pay students to help code and analyze the survey results and to support faculty travel to Indiana University Purdue University Indianapolis’s (IUPUI) Assessment Institute in the fall of 2015 and again in 2016.

1 Over 25% of the students we surveyed reported that they had not previously received any library or information/media literacy instruction before coming to IU Kokomo.
Learning Outcomes: Information Literacy and General Education

The general education or “GenEd” curriculum for IU Kokomo undergraduates includes five overarching information literacy learning outcomes, with several components:

**Outcome 1:** Students will determine the nature and extent of information needed
- Component 1: Students will choose appropriate types of information
- Component 2: Students will determine relevance of information
- Component 3: Students will determine currency of information

**Outcome 2:** Students will access the needed information effectively and efficiently

**Outcome 3:** Students will evaluate information and its sources critically
- Component 1: Students will examine sources for bias
- Component 2: Students will examine sources for credibility

**Outcome 4:** Students will identify ethical, economic, legal, and social issues surrounding the access and use of information

**Outcome 5:** Students will use information effectively to accomplish a specific purpose

The information literacy requirement is met through two required courses: ENG-W 131: Reading, Writing, & Inquiry I (our first-semester introduction to academic writing and research course) and SPCH-S 121: Public Speaking. We focused our pre-test/post-test on Information Literacy Outcome 1 (“Students will determine the nature and extent of information needed”) and Information Literacy Outcome 3 (“Students will evaluate information and its sources critically”) in all ENG-W 131 and SPCH-S 121 classes.

We decided to assess these specific outcomes in part because our information literacy librarians had already developed instructional sessions that cover these topics. We also had a ready-made instrument for measuring “credibility” (authority, accuracy, currency, relevance, objectivity) which we use during those sessions. Instructors of ENG-W 131 and SPCH-S 121 have been using a similar strategy (affectionately called the “CRAAP” test: Currency, Relevance, Authority, Accuracy, Purpose) for several semesters, so it made sense to assess the effectiveness using similar terminology.

**Methodology and Implementation**

Since ENG-W 131 and SPCH-S 121 are the GenEd courses in which students work most explicitly with information literacy concepts and practices, these courses were the logical sites to begin our coordination. The two program directors worked closely with librarians to arrange dates and times for the librarian-led information literacy sessions. Together we communicated with the instructors who teach ENG-W 131 and SPCH-S 121, and these instructors (mostly adjuncts and lecturers) then scheduled their sessions with the librarians.
We considered the general education curriculum outcomes, course learning outcomes, information literacy session outcomes, and our experience teaching information literacy concepts to freshmen to decide on the information literacy assessment objectives. We agreed that evaluating information and information sources is a crucial skill for both the writing and speech classes and should be covered in information literacy sessions. Choosing appropriate types of information is also a basic, important information literacy skill, especially for the first-year college student.

After obtaining IRB approval, we started the pilot with a pen and paper survey administered by three library faculty who worked with all sections for the two courses. In the fall semester, librarians visited the classes twice. The initial visit occurred in the second week of the semester to administer the pre-survey and provide a brief overview of the Library’s website; the second visit occurred later in the semester in coordination with a short research assignment. Librarians led a 65-minute session that included database searching techniques and criteria for evaluating information resources. The post-survey was delivered to students with the course evaluations at the end of the semester, and completed surveys were returned to the Information Literacy Librarian. Surveys were anonymous. Students entered the last four digits of their student identification numbers so we could compare responses from the two data collections. Only students over the age of 18 were allowed to participate.

We collected demographic information, including class standing, major, and transfer status. We also asked whether the student had previous library instruction in high school or college or previous experience writing research papers. We also asked the following questions:

1a. When you look for information on a research topic, what resources do you use? Please be specific.
1b. Please indicate whether you use that resource in paper format, electronic/online format, or both.
1c. For each resource you list, state the kinds of information for which you are searching.
2. Please explain how you determine whether an information resource is credible and reliable.

Data Analysis

Preparation

The initial survey yielded 666 completed responses to be analyzed (this included pre- and post-tests). We transferred the paper surveys into Qualtrics, realizing that we needed to administer the next survey online as a matter of efficiency and in order to give us the ability to compare results from year to year. We screened for students who completed both pre- and post-survey, based on 4-digit ID, which left us with 288 valid surveys for comparison. There were 144 students who completed both the pre- and post-survey.

Qualitative and quantitative analysis

For our preliminary analysis, we made the decision to ignore survey item 1b (“Please indicate whether you use that resource in paper format, electronic/online format, or both.”),
because the question was intended to gather information for collection development purposes and not for information literacy assessment. We set aside survey item 1c (“For each resource you list, state the kinds of information for which you are searching.”), with a plan to review after we finished data coding and analysis of item 1a.

As we conceptualized the survey tool and anticipated probable responses, we assumed a hierarchy of responses for item 1a: beginning, developing, and experienced. After reviewing the data, we used a rubric to group results of the first survey item (1a) into several predetermined categories ranging from open-web and generic sources (e.g., Google) to scholarly journal articles. Each of these categories fit under one of the three broader classifications. For example, an open-web source of information fit into the beginning classification while a peer-reviewed journal was considered “experienced.” As we discussed how to rank responses, we realized that we were making assumptions that might not lead us to useful conclusions. For instance, using an open web source does not necessarily indicate a “beginning” level of information literacy. Some open web sources are high-quality and even peer-reviewed. Survey item 1c was included, in part, to help us determine those distinctions, but not all of the students who provided a response to 1a also provided a response to 1c and so we were left guessing, in many cases, where a response would fall in our information literacy hierarchy. It’s quite possible that this was a fault of the survey. In the pen and paper survey format, the one-to-one correlation between the information source and the information type may not have been clear to students. We tried to correct this disconnect in our later Qualtrics-based survey. While we have not yet analyzed that data set, we do know that not all students provided answers to the “kinds of information” question in the Qualtrics survey either.

The discussions about precisely how to categorize responses ultimately led us to rethink the original information source categories selected, and we were finally able to identify 19 categories over which the responses were distributed, resulting in a more complex data set than we had initially anticipated. For later survey administrations, we considered offering various types of information from which respondents could choose, but we rejected that approach after acknowledging that we could not determine in advance the categories of possible responses without leading the students to predetermined answers; the questions needed to remain open-ended if we were to capture genuine and usable data. For survey item 2, “Please explain how you determine whether an information resource is credible and reliable,” we looked for specific evaluation criteria that fall into five categories that we recommend students use to evaluate information: authority, accuracy, currency, relevance, objectivity.

Coding & Norming

Once we identified response categories for the survey items we were analyzing, we trained student assistants to code the data, which required a common understanding among coders. The Information Literacy Librarian recruited and trained two student workers to identify each category and criterion, providing context and definitions. After a trial run under Ms. He’s supervision, the student assistants coded the data independently. Ms. He coded responses as well, so that three sets of data were created. Ms. He and the two students then met to compare and discuss inconsistencies. Where there were differences among the three coders, they worked together to select a single code for each response.

Preliminary Results
As previously noted, 144 students took both the pre- and post-surveys. Ninety percent were freshmen and their majors broke down along the following percentages: Health Sciences (42%), Business (15%), Education (10%), Humanities and Social Sciences (8%), and Undecided (23%). Six percent were transfer students and over 25% of the respondents indicated that they had no previous information literacy instruction.

Our decision to classify responses into 19 categories addressed the issue of multiple responses, from the same student, ranging across the benchmark criteria for beginning, developing and experienced. Still, we were faced with how best to interpret our findings. How would we rank a respondent who listed resources that fit into two or more of the three broad categories? It was at this point that we conferred with an assessment consultant, Dr. Douglas Eder, who was working with the IU Kokomo campus. Dr. Eder suggested that we look at the diversity of resources the respondents listed, rather than focusing on placing an individual respondent into a category or rank, and asked whether an increased diversity in responses might indicate a more sophisticated understanding of appropriate information sources. Looking at the data in this context, a pattern emerged. We saw a significant increase in the number and variety of information resources with fewer blank responses recorded in the post-surveys. We also saw an increase in the number of resources that fall into the developing and experienced benchmarks while the majority of students also mentioned Google and “the Web” and other resources that fall under the beginning benchmark.

Responses to survey item 2 reflected a better understanding of how to evaluate information sources and included more thorough and detailed explanations of evaluation criteria and techniques.

Discussion

Figure 1, below, shows that nearly all respondents listed a larger number of potential information resources in the end-of-the-semester post-survey.

![Figure 1: Number of Information Resources](image)

The frequency with which specific types of resources were mentioned, pre- and post-survey, is illustrated in figure 2. It is clear that students had a better awareness of different types
of resources by the end of the semester. Especially noteworthy is the fact that over 100 respondents mentioned the IU Kokomo library specifically.

![Figure 2: Types of Information Resources](image)

In the post-survey, overall, we saw better explanations for evaluating resources, as well as more detailed and better-articulated responses. More students mentioned authority, currency, and accuracy than relevance and objectivity. The way the survey question was worded may have contributed to the low “relevance” response rate. We asked students to explain how they determine whether an information source is *credible* and *reliable*. Students may not have made the connection to relevance when considering credibility and reliability of a source.
Our study does not attempt to draw firm conclusions about the effectiveness of the librarians’ classroom teaching, but it does show that students are improving their information literacy skills over the course of the semesters that we surveyed. In the second phase of our data analysis, we plan to look for differences in the post-survey responses of the students who attended both information literacy sessions compared to those who attended only the first session. We will also compare survey responses of the students who indicated they had previously attended information literacy instruction or written a research paper with those who did not have that experience. We will examine the demographic information we collected to look for differences or patterns of responses based on class standing and major.

During the pilot, we adopted similar survey templates for ENG-W 131 and SPCH-S 121 because the two courses have similar information literacy learning outcomes. While working with all sections of the two high-enrollment courses, the overlap in instruction between the two courses became very apparent. While some redundancy in information literacy instruction is desirable in foundational freshman courses, we found there were several students taking the two classes at the same time and, wishing to keep the course content interesting and relevant for all students, we revised our information literacy curriculum to differentiate our instructional approach for the two classes. After the initial survey administration, we decided to create separate, identical surveys for ENG-W 131 and SPCH-S 121, collecting two sets of results that may be compared. Ultimately, we decided to further differentiate the information literacy learning outcome goals and the information literacy curriculum for the two courses in order to diversify and strengthen our information literacy program. Once the learning outcomes and curriculum revisions are complete, we will adjust the pre- and post-surveys to assess the revised outcomes for each course.

Now that we have collected sufficient survey data for this assessment research project, our ongoing assessment efforts will involve the course instructors in survey administration.
through Canvas (IU’s learning management system), thereby building a culture of assessment in these programs.

Biographies

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