Student Learning Outcome Information Literacy Instruction 2017-18

Parameters and Timeline

This study assessed the Applied Research Techniques ("r") skill, the goals of which are:

> *1. To identify and select the most appropriate investigative methods or information retrieval systems.*
> *2. To identify, locate, and retrieve information.*
> *3. To use information effectively to accomplish a specific purpose.*

A rubric assessing four elements mentioned in these goals (methods, systems, information retrieval and use) was applied to 44 annotated bibliographies. The rubric was created by liaison librarians collaborating with faculty in 2016-17; four librarians and one member of the faculty worked together as scorers for this year's bibliographies in January 2018.

Survey Design and Methods

As in 2016-17, our survey focused on annotated bibliographies as the most likely opportunity for assessing students' research. Unlike last year, in 2017-18 we focused solely on First-Year Seminars. Assignments varied in scope, ranging from a short, stand-alone project due at the mid-semester, to more extensive annotated bibliographies assigned to groups of students as their final project.

44 annotated bibliographies were collected from 6 courses. Not all bibliographies were complete; scorers were instructed to rate as many elements as they were able.

Rubric categories (see Appendix I) matched the ART skill's goals to the elements which we could find in evidence. To allow for cases in which faculty instructions to students did not require or specify certain annotation elements, a rating of "N/A " was an option for three categories.

Scoring and Inter-Rater Reliability

Raters rated and discussed a set of sample bibliographies for the norming process. Once all had come to a better understanding of each category's meaning and parameters, each bibliography was scored twice. If a score was uneven between two raters, a third score was solicited from another member of the team

to break the tie. This method was used successfully in 2016-17, and was once again necessary when 26 of 44 bibliographies showed uneven scores

Used Appropriate Investigative Methods: Question 1 Results

- Not Applicable: 36
- Below Requirements: 5
- Meets Requirements: 0
- Excellent: 3

36 results from 4 courses received an "N/A" rating due to the professor not having required evidence of key words or similar investigative methods.

Investigative Methods

- ■ Not Applicable
- ■ Below Requirements
- ■ Meets Requirements
- ■ Excellent

7%
11%
82%
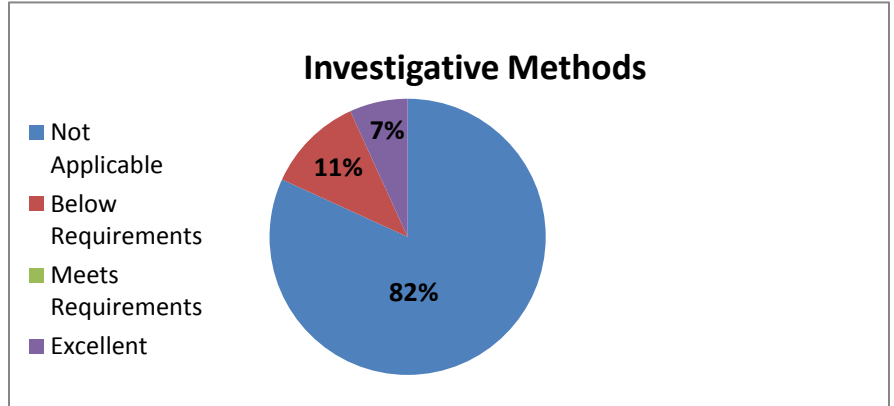
From the remaining bibliographies, 3 exceeded expectations, while 5 were below expectations.

Annotations met expectations when any key words or other search terms had been included; work exceeded expectations when it showed evidence of students' using a significant variety of key words.

Used Appropriate Information Retrieval Systems: Question 2 Results

- Not Applicable: 36
- Below Requirements: 5
- Meets Requirements: 0
- Excellent: 3

This category posed a challenge for extracting meaningful data due to the library's implementation of a discovery system in the summer of 2017. With 140

Retrieval Systems

- ■ Not Applicable
- ■ Below Requirements
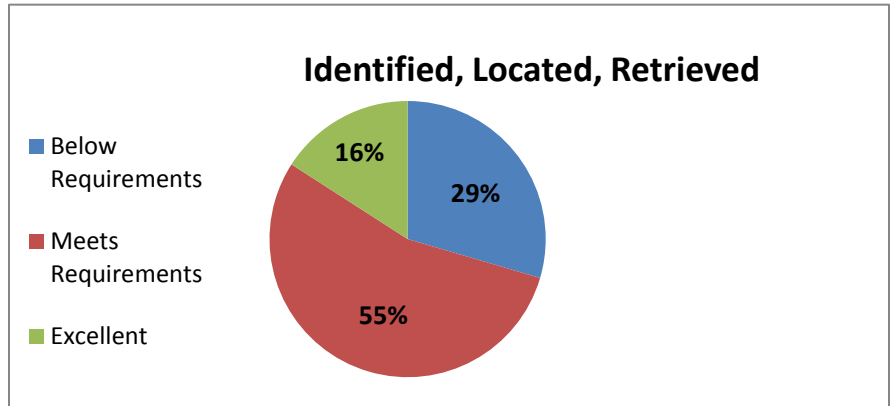- ■ Meets Requirements
- ■ Excellent

7%
11%
82%
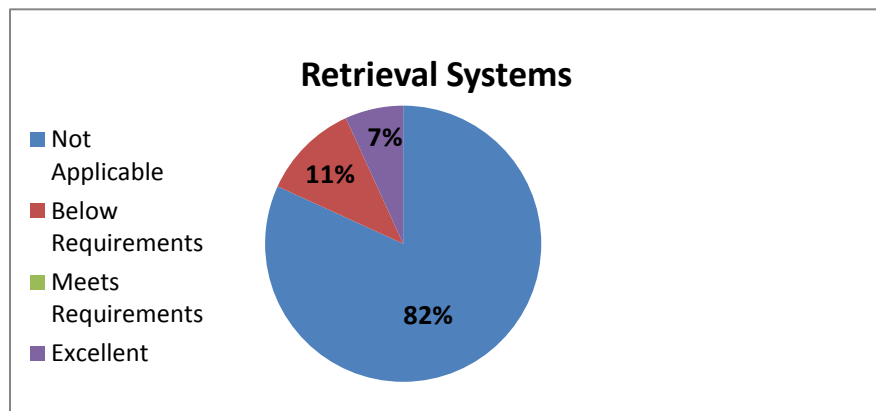
databases combined into one retrieval system, we can no longer simply require the use of multiple databases as a marker for excellence.

As before, courses received an "N/A" rating if we were unable to determine whether the professor had required students to use any particular information retrieval system. A "Below" rating resulted when students had been instructed and had then failed to use more than one system; "Excellent" required evidence of students using a significant variety of systems.

Identified, Located and Retrieved Information: Question 3 Results

- Not Applicable: 0
- Below Requirements: 13
- Meets Requirements: 24
- Excellent: 7

Since all of the assignments specified a required number of sources, all bibliographies were scored in this category. If particular formats were required, this also became a consideration for scoring.

Identified, Located, Retrieved

■ Below Requirements

■ Meets Requirements

■ Excellent

16%

29%

55%

To receive an "Excellent" a student's bibliography had to include more than the minimum required number of appropriate sources. 71% of bibliographies either met or exceeded the professor's requirement for identifying, locating and retrieving appropriate sources.

Used Information Effectively To Accomplish a Specific Purpose: Question 4 Results

Below Requirements: 13

Meets Requirements: 20

Excellent: 11

All bibliographies were scored in this category, which considered the execution of annotations. To meet expectations, a student had to

Used Information Effectively

■ Below Requirements

■ Meets Requirements

■ Excellent

25%

30%

45%

address all of the elements required in her assignment; a score of "Excellent" required her to do so with particular clarity and depth.
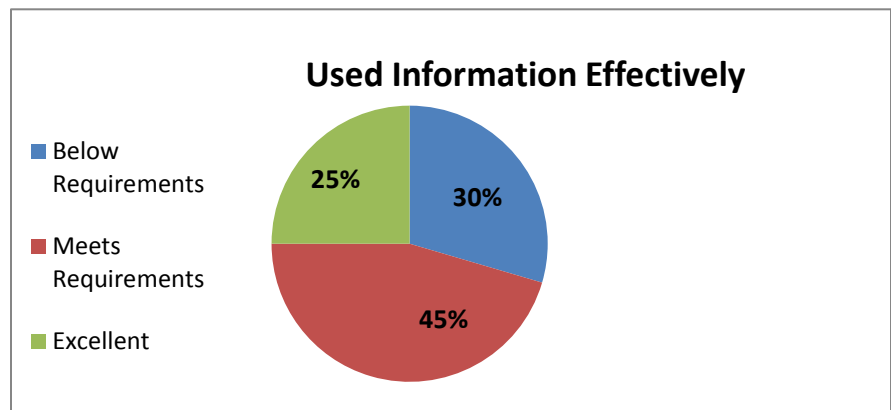
30% of the bibliographies were scored "Below requirements," while 70% either met or exceeded.

Limitations

While all of the work collected for this assessment was annotated bibliographies gathered from courses at the FYS level, there was tremendous variation in the requirements of the assignments. Differences abounded in the two most significant rubric categories, which correspond to Parts 2 and 3 of the ART skill:

- Appropriate sources (Part 2): some faculty required multiple types of sources, while others specified that students could only choose scholarly articles. Yet other faculty did not address source types at all.
- Annotations (Part 3): some faculty required only summaries, while others expected students to evaluate their sources; others encouraged additional annotation elements such as source comparisons. Some assignments specified annotations of several paragraphs, while other professors accepted shorter work or left length entirely up to the student.

These variations resulted in a broad spectrum of work, and a lot of uncertainty for scorers. While difference in scores may be compared as an accurate reflection of which students were able to follow instructions, it is a much less certain method of judging the quality of their ability to successfully find and utilize sources.

Part 1 (assessed by the first two categories in our rubric) also presents real difficulties, for the following reasons:

- Investigative methods are rarely evident in students' final work. The solution applied in 2016-17, assessment of the use of key words, is only one component of search methodology: while it is a worthy part, it is not a good substitute for the whole.
- Given our current use of a discovery system which combines almost all of the library's information formats into one search, requiring or even suggesting the use of multiple retrieval systems is beyond the level of complexity of many undergraduate research assignments, especially those assigned in FYS courses.

Note that 36 (82%) of the bibliographies assessed were ineligible for a meaningful score in these categories.

Conclusions

Keeping in mind these limitations, the results of our survey demonstrate that a majority of students are successful when it comes to meeting or exceeding two-thirds of the goals of the ART skill in their first year. 71% were successful in identifying, locating and retrieving information for their research projects. Almost as many, 70%, created effective annotations. This score is an improvement from 2016-17, when only half met or exceeded requirements in this category. However, given our relatively small sample size, it is unclear whether this indicates significant improvement across the entire first-year class.

Appendix I: Survey

As specified in the assignment, the student has:	Excellent	Meets Requirements	Below Requirements	N/A
		Key words are included.		

Used appropriate investigative methods	Varied key words are used across the annotations.		Key words are assigned but not included.	Key words are not required in the assignment.
Used appropriate information retrieval systems*	3 or more appropriate systems were used, exceeding the requirement as assigned.	Appropriate systems were used, according to the requirement as assigned.	Systems used are inappropriate for the assignment.	Systems are not required in the assignment.
Identified, located, and retrieved information	Exceeds number of appropriate sources required.	Meets minimum number of appropriate sources required, in total and type.	Number and/or types of sources are incomplete.	Source numbers and types are not required in the assignment.
Used information effectively to accomplish a specific purpose	Annotations communicate all required information about the source with coherence, depth, and clarity.	Annotations communicate all required information about the source, e.g. - Main ideas - Relevance to the topic - Quality of the source	Annotations are missing required components, or are poorly executed.	

*Examples of systems are catalogs, databases, bibliographies, or experts (noting that expertise is contextual, depending on field of study and the nature of the assignment.