
Assessing International Students in the Library Instruction Classroom

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Abstract

The face of the instruction classroom in college and university libraries is rapidly changing as the presence of international students at academic institutions in the United States continues to grow. The 2015 *Open Doors Report* notes a growth rate of 10 percent in 2014–15, the highest since 1978–79. For many of these students this marks their first foray into academic research and academic libraries, in a setting and culture that differs markedly from that of their home countries, all in a non-native language. This paper is focused on an assessment of first-year international students in English as a Second Language (ESL) courses at the University of Illinois at Urbana-Champaign. We sought to discover what strategies would have the greatest impact on international students' success as they engaged in the research process.

Background

The University of Illinois at Urbana-Champaign has one of the largest international student populations in the United States. In fall 2015 there were 10,208 international students at Illinois, of whom 5,410 were undergraduates.¹ This reflects a 21 percent increase from only five years prior. Similar increases can be noted nationally as well (see the *Open Doors Report*² for complete details). Because international students come from varied backgrounds and library experiences, the impact of library instruction on their academic endeavors can be particularly meaningful. At the University of Illinois, the undergraduate library is responsible for the provision of library instruction to the introductory first-year writing courses that fulfill the university's Composition 1 requirement. These include courses in the departments of Rhetoric, Communication, and English as a Second Language (ESL). Upon their arrival at Illinois, international students complete an English Placement Test (EPT) after which they are placed into a Composition 1 course. Most will complete courses in the ESL department. Individual scores on the EPT result in students either completing a one semester course, ESL 115, or a

two semester sequence, ESL 111 and 112. The course description for ESL 115 indicates, in part: "Students learn how to choose a focused topic, develop a thesis statement, and to find and evaluate library materials to use as support in their writing."³

In order to facilitate this outcome, library instruction has been integrated into each section of ESL 112 and ESL 115 since 2008. The study in this paper was conducted during the 2015–16 academic year and assessed the effectiveness of two assignments in first-year ESL writing courses for international students. The research took place in the context of an ACRL Assessment in Action (AiA) project. AiA projects were designed to assess the library's impact on student learning. In spring 2015, the authors' proposal was accepted into the third year of the AiA program. Summer 2015 was spent planning the assessments, and the assessments themselves began with the start of fall semester 2015.

Library instruction is embedded into all sections of ESL 112 and 115 and collaboration between the undergraduate library instruction librarians and the ESL curriculum coordinator assures the instruction takes place at point when it is most beneficial for the students. The timeliness of the instruction is crucial in order to establish the highest degree of relevancy. All sections of ESL 112 and 115 use a common syllabus and assignments. The assignments in ESL 112 and 115 ultimately result in students locating and integrating scholarly research into their papers. In each section students are required to complete a "Research Process Portfolio" and the two assignments assessed in this study are elements of this unit. Students in each section utilize the same prompt for their research paper: *Choose an organization that is actively working towards addressing a problem in society (community, state, region, or country) affecting a distinct population (women, animals, children, etc.). Write a problem/solution paper that describes and critiques three current solutions offered by the organization and recommends how to improve them.*

The academic research process is an unfamiliar concept for most first-year students and there are many new and unfamiliar challenges students face, including challenges for those who are native speakers of English. This process is significantly more difficult for international students who must face these challenges in a language that is not their native tongue. Prior to beginning this study the authors theorized (based on their prior experiences and anecdotal evidence) that students were likely to struggle with three elements: creating focused topics, identifying keywords and alternatives, and differentiating resource and article types. The study specifically assessed these elements of student research. The initial assessments took place in fall semester 2015 and they were repeated in spring 2016 following some adaptations, based on the results of the assessment of the fall 2015 data.

Methodology

Two assignments completed by students in ESL 112 and 115 were evaluated in this study. The first assignment consisted of a concept map worksheet (see Appendix A) completed by students prior to library instruction. The intent of the concept map was to assist students in creating a search strategy by concisely defining their topics and identifying keywords and potential alternatives to those keywords. The second assignment assessed specific aspects of annotated bibliographies created by the students. Following the protocols established by the Institutional Review Board, the authors recruited students from four sections of ESL 112 and four sections of ESL 115 in fall semester 2015. Sixty-nine students agreed to participate in the study. The study was repeated in spring semester 2016 with 38 students participating from two sections of ESL 112 and two sections of ESL 115.

Approximately one week prior to the library instruction all of the students were instructed to complete a concept map worksheet for their topic. As noted above, the concept map guides students in the creation of a search strategy. In addition, it is also a tool that helps prepare them to search in a library database and understand why a search strategy that might be effective in Google might not be successful in a library database. Instructions for completing the concept maps were included in the course's library guide (LibGuide) page (see <http://guides.library.illinois.edu/eslundergrad>). The instructions included a short video explaining the process for completing a concept map, step-by-step written

instructions, and an example of a completed concept map. Following the completion of the concept map, each student deposited their assignment into a forum in their section's course management website. Each of the eight sections participating in the study maintained a presence on Compass, the online learning management system widely used at the University of Illinois. The authors were each responsible for providing feedback to students in four sections. The concept maps required students to (1) write their topic statement and identify keywords from this statement, and (2) list alternatives for each of the keywords. Librarians reviewed and provided feedback to students directly on the completed concept maps. The concept maps would then serve as the foundation for the database searching to take place during the library instruction. The intention of the feedback was to help students create a concept map that was "database ready." The librarians provided suggestions for refining topic statements and keywords and shared suggestions for keyword alternatives that were likely to yield results in a database. The feedback was provided to all students, whether or not they consented to participate in the study. However, only those consenting to participate in the study are included in the study results. For those students participating in the study, the authors applied a rubric to each of the concept maps. Rubrics were developed for assessing the topic statement and the keywords and alternatives (see Appendix B). The authors completed some initial assessment together in order to assure inter-rater reliability.

The second assignment that was assessed for this study was the annotated bibliography. Assessments were completed for five students from each section; individual students were randomly selected from each section. Each student was required to include five sources in their annotated bibliography and each ESL instructor required students to address specific elements for each source. These included a brief summary of the article, an explanation of its relevancy to the student's research topic, and a statement addressing the reliability of the source. In their assessments of the annotated bibliography assignment, the authors included the reliability statements, focusing on the criteria students used to determine each article's reliability. A rubric was applied to the reliability statement of each individual source (see Appendix C). In addition, we sought to discover additional information about each of the sources students included in their bibliographies. These included factors such as whether or not the articles were found in a library database and, if

so, the likely database; the date and length of each article; article type (scholarly, magazine, news, or web); and relevance to the student's topic on their concept map. Ultimately we were evaluating the learning that took place as a result of the library instruction.

Findings

The authors reviewed concept maps for all 69 students from the eight sections of ESL 112 and 115 who consented to participate in the study

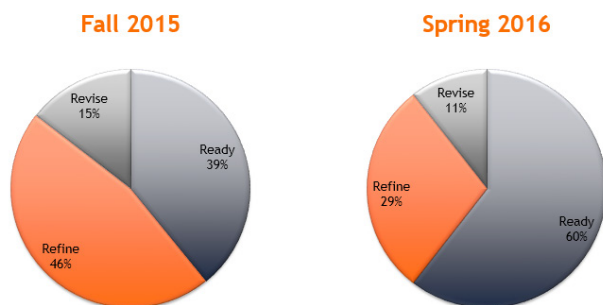
during fall 2015. Of these 69 students, 61 percent needed to revise or refine their topics, while 39 percent developed topics that were considered by the authors to be “research ready” (Figure 1). Examples of student topics from each of the defined categories include:

Ready—How salary is related with job satisfaction in developed countries

Refine—Feeding the hungry in America

Revise—Teenage depression

Figure 1: Topics



While developing strong topics certainly presented challenges in fall 2015, what proved to be more difficult for students in completing their concept maps were (a) identifying the main concepts represented in their topics and (b) brainstorming strong keywords and suitable alternatives. In total, 81 percent of students needed to refine or revise their keywords and alternative terminology, while only 19 percent brainstormed keywords that were considered by the authors to be “database ready” (Figure 2). These findings bolstered the authors’

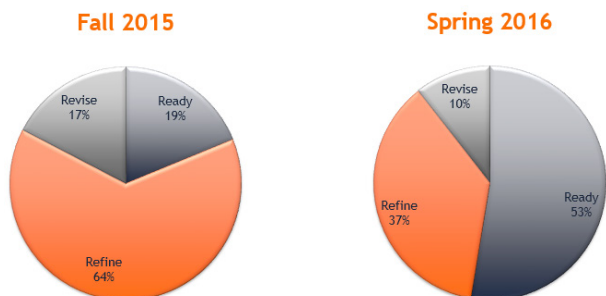
previous assumptions that brainstorming strong terminology would potentially be difficult for students. Examples of student keywords from each of the defined categories include:

Ready—Indonesia (main keyword), Sumatera, Java, Southeast Asia

Refine—Avoiding (main keyword), Keep off, Invalidate, Annul

Revise—Health (main keyword), Disease, Poor region, Cheat

Figure 2: Keywords and alternative terminology



Additionally, of the eight participating sections, the authors received annotated bibliographies for 30 students and assessed 145 individual sources. While students were allowed to use a variety of

credible source types for their assignment, they were encouraged to familiarize themselves with scholarly research in particular. Based on these parameters,

the authors found that the majority of students pursued scholarly articles to support their research.

Of the 145 sources reviewed in fall 2015, 75 percent were classified as scholarly or academic, 45 percent were written within the last two years, and 59 percent were over 9 pages long. Furthermore, 79 percent of these sources were retrieved from databases, with 78 percent specifically found in

Academic Search Complete, which was the primary teaching tool used in ESL library instruction sessions (Figures 3–7). Some obstacles students faced in favoring scholarly materials over other credible source types included the propensity to select articles above the comprehension level of the average first-year student or selecting lengthy law reviews that were inappropriate for the scope of the assignment.

Figure 3: Article Type

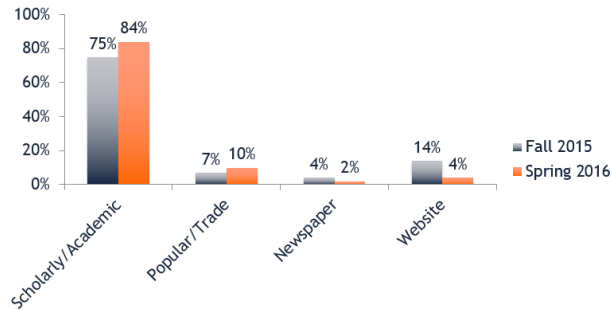


Figure 4: Article Date

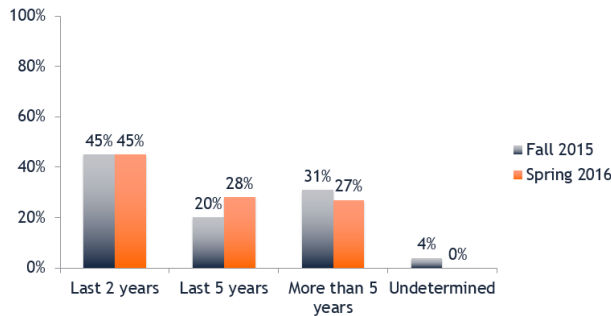


Figure 5: Article Length

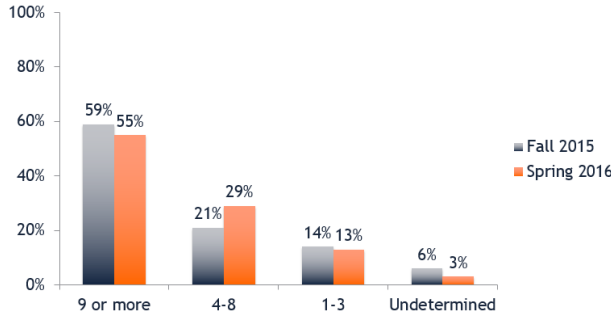


Figure 6: Retrieved From

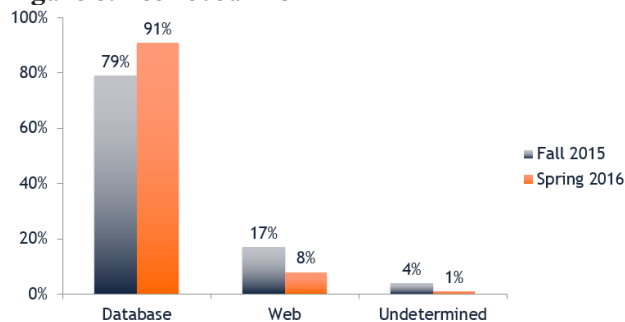
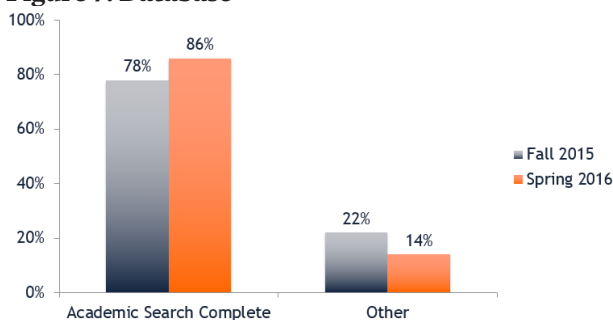


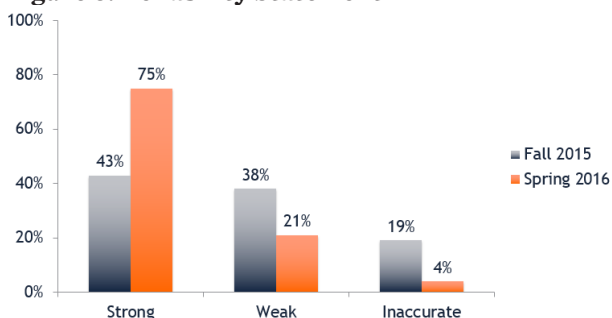
Figure 7: Database



Finally, while students were largely successful in locating credible sources, they did have difficulty articulating why each source was credible in their reliability statements, with 57 percent of sources having either weak or inaccurate statements supporting their inclusion in the annotated bibliographies (Figure 8). An excerpt of a rationale commonly encountered by the authors in fall 2015

is, “The article is found in the database of UIUC library [sic]...” Regarding minor discrepancies in the final totals represented in the charts, the authors did not receive annotated bibliographies from one of the eight sections, two students did not submit all five sources, and not every category applied to each source.

Figure 8: Reliability Statement



Based on the concept map data from fall 2015, the authors made modifications to the “flipped” instructional module in the ESL 112 and 115 LibGuide that supports students in completing their concept maps prior to library instruction. Namely, the authors identified the need for a new video containing clear, step-by-step instructions

for completing concept maps, as well as the need for modified instructions on the worksheet itself (Appendix A). In addition, examples of concept maps in multiple instructional formats were added to the LibGuide. Based on the data from the annotated bibliographies, a new infographic was created for the ESL 112 and 115 LibGuide that highlights the

elements of a strong reliability statement, and the standardized library instruction outline for ESL 112 and 115 was likewise modified to discuss the importance of carefully evaluating each source for credibility and the ability to comprehend the content prior to synthesis.

Following these instructional modifications, the authors observed a marked improvement in the quality of work submitted by the ESL 112 and 115 students in spring 2016. The authors reviewed concept maps for the 38 students from four sections of ESL 112 and 115 who consented to participate in the study (roughly half the total of fall 2015). Of these students, 40 percent needed to revise or refine their topics compared to the 61 percent in fall 2015, while 60 percent developed topics that were considered by the authors to be “research ready” compared to the 39 percent in fall 2015 (Figure 1). An improvement was also observed in the identification of main concepts and the brainstorming of keywords and alternative terminology, though students still had some difficulty with this. In total, 47 percent of students needed to refine or revise their keywords and alternative terminology, compared to the 81 percent in fall 2015, while 53 percent brainstormed “database ready” keywords, compared to the 19 percent in fall 2015 (Figure 2).

Additionally, the authors reviewed annotated bibliographies for 20 students and assessed 100 individual sources. Of these 100 sources, 84 percent were classified as scholarly or academic, 45 percent were written within the last two years, and 55 percent were over 9 pages long. Furthermore, 91 percent of these sources were retrieved from databases, with 86 percent found in Academic Search Complete (Figures 3–7). Students also demonstrated significant improvement in the quality of their reliability statements, with 75 percent of sources having strong justifications for their inclusion in the annotated bibliographies (Figure 8). One particularly impressive excerpt from a spring 2016 student’s reliability statement is demonstrative of the improvement between semesters:

The article was published in 2013 and has a [sic] very clear references (endnotes). It was peer reviewed. The author, Douglas Massey, is the professor of Sociology and Public Affairs at Princeton University. He is also the president of the American Academy of Political and Social Science. The article was published by journal, *Daedalus*, which was

published by MIT Press in support of the American Academy of Arts and Sciences.

Though the effectiveness of the instructional modifications reflected in the spring 2016 data is encouraging, the findings are clear that ESL 112 and 115 students struggle most with identifying strong keywords, particularly when searching within the confines of Western-centric databases. Furthermore, though there was a vast improvement in the quality of reliability statements between semesters, students still struggled with choosing articles that were much too long or advanced for their research purpose or correctly identifying the database(s) from which information was retrieved, as Academic Search Complete was often referred to as “The Library Database.”

Conclusion

The results of this study provide an important glimpse into first-year international students as they engage in academic research at an American university. The results first provide a much deeper awareness and understanding of the difficulty international students face when completing their initial research assignments. Evidence of the difficulty can be seen in the assessments of both the concept maps and the annotated bibliographies. The challenges inherent in working in a new environment and completing assignments in a language that is not their native tongue were clearly evident. English can be a difficult language. Librarians who work with international students must keep this in mind and have multiple approaches to employ when working with international students. Providing instructional materials in various formats is one strategy that can assure greater meaning for a larger number of students. Second, building partnerships with programs that serve international students on a campus will be invaluable to facilitating change and improving the relationship with the library. In larger institutions these are likely to be academic departments, while in smaller institutions librarians should seek to develop relationships with student service and support offices. These are the people on a campus who work with international students on a daily basis, and building these relationships can help facilitate the role of the library in working directly with international students.

As with other instructional endeavors in a library, building partnerships on our campuses is crucial to

our success. These partnerships allow us to meet the specific needs of international students and they can be instrumental in facilitating change. Librarians must be attentive and responsive to what they see and experience and implement the necessary changes. Understanding the needs of international students will result in the creation of meaningful learning experiences that will extend well beyond the library instruction classroom.

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Endnotes

1. “Fall 2015 International Statistics,” International Student & Scholar Services, accessed December 8, 2016, http://iss.illinois.edu/download_forms/stats/fa15_stats.pdf.
2. “Open Doors Data,” Institute of International Education, accessed December 8, 2016, <http://www.iie.org/Research-and-Publications/Open-Doors/Data#.WEnStOYrJPY>.
3. “Course Description, ESL 115,” accessed December 8, 2016, <http://www.linguistics.illinois.edu/students/esl/courses/115/>.

Appendix A: Concept Map

Create a Concept Map for Your Topic ESL 112 | ESL 115

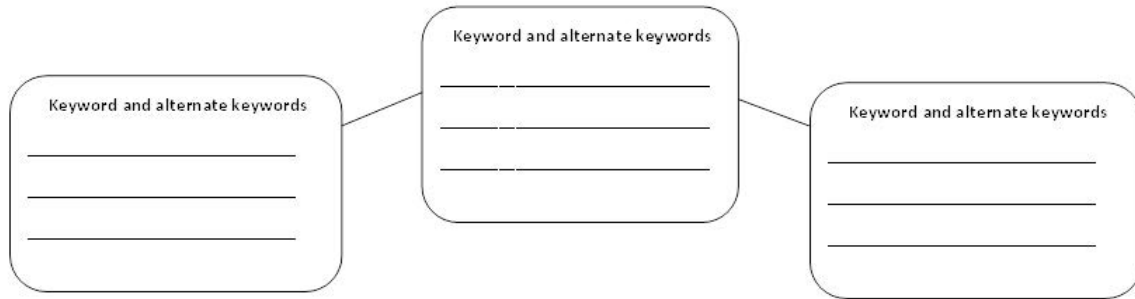
Complete a Concept Map to identify the keywords and concepts you will use when you search for articles about your topic. It can help you identify what you know about your topic and begin to think about your topic in new ways.

To complete your concept map follow the steps below.

1. Write your topic in the box below and circle your keywords or keyword phrases:

TOPIC:

2. Write your keywords in the boxes and list alternate keywords (these will be synonyms).



TO BE COMPLETED IN CLASS:

3. List the **subject areas** of professionals who are likely to publish articles about your topic. Use the **UGL Find Articles Guide** to identify these.

Subject area #1

Subject area#2

Subject area #3

Appendix B: Concept Map Ratings and Criteria

Topic Statement Ratings and Criteria

3: READY

Fully developed. Topic statement is present and (mostly) ready to go.

2: REFINE

In progress. Topic statement is present but requires a bit of focus and/or refinement.

1: REVISE

Not developed or absent. Topic statement is either (a) present, but too loosely defined (e.g., "Obesity in Children," "Skin Cancer," etc.) or (b) not present.

Keyword Selection Ratings and Criteria

3: READY

Database ready. All main concepts with clear relationship to topic identified, and relevant alternative keywords provided for each concept as appropriate.

2: REFINE

Almost database ready. All, or some, main concepts with clear relationship to topic identified and some relevant alternative keywords present, though refinement is necessary for successful database search.

1: REVISE

Not database ready. Main concepts with clear relationship to topic not identified and/or alternative terminology missing or irrelevant

Appendix C: Reliability Statement Ratings and Criteria

3: STRONG

Identified two or more evaluative criteria. For example: information about author credentials, journal focus/coverage, citations, or article content.

2: WEAK

Identified only one of the above criteria examples.

1: INACCURATE

Information based on circumstantial, irrelevant, or incorrect information (the article title, the organization name, etc.).