Expected Outcome 1: Auburn University Libraries will build and sustain collections that support the research mission of Auburn University

Information resources are critical for the research productivity of Auburn University researchers. It is important that the information resources needed to support research be available in a cost-effective, convenient, and timely manner. Auburn University Libraries provides information resources by a variety of methods including, but not limited to, journal subscriptions, database subscriptions, book purchases and interlibrary loans.

Assessment Method 1: Faculty survey

Assessment Method Description
In December of 2013 Auburn University Libraries surveyed faculty about their use of library information resources. Faculty were emailed a link to an online survey administered using Qualtrics. The survey consisted of eighteen questions, including two open-ended questions (survey instrument is attached). Faculty were asked about the number of references that they cite in articles, research grants, and research reports. They were also asked how they accessed these references and how effectively the online resources provided by the library met their needs for writing articles and research grants.

- 📂2014_faculty_survey_instrument

Findings
Of 1,186 faculty at Auburn University, 116 completed the online survey (9.8% response rate). The survey confirmed that library-provided information sources are valuable to Auburn University researchers. Including references in grant proposals and journals articles was considered important, or very important, to 96.3% of respondents. Most journals and books cited in articles and grant proposals were accessed electronically from the university computer network or via the library website. On average, 76.5% of faculty accessed references electronically (90.0% median). There was a difference between disciplines. On average, 53.5% College of Liberal Arts faculty access information electronically compared to 84.4% for other faculty. This may be due to the relative lack of availability
of electronic books to support book-based research programs. Faculty reported that they spend an average of 5.0 hours per week searching for articles and books and 10.5 hours reading them. If limited to only print resources, faculty predicted that the amount of time spent searching for articles and books would roughly double (11.4 hours) while the amount of time reading would remain about the same (11.2 hours). The information resources provided by Auburn University Libraries are considered valuable. Ninety percent of faculty said that Auburn University Libraries always, or most of the time, provides them with the academic resources needed to write articles and grant proposals. However, the survey reveals that there is room for improvement for some faculty. Of the 10% who did not agree that resources are adequate, 7.5% said that the library sometimes provides the needed resources and 2% said that the library rarely, or never, provides the needed resources. Again, there were differences between disciplines. Only 73.9% of College of Liberal Arts faculty said the library always, or most of the time, provides them the information they need. In contrast, non-College of Liberal Arts faculty reported 95.6% satisfaction with resources provided by the library.

In response to the open-ended question “Please respond to the following statement: The Auburn University Libraries provides me the academic resources I need to complete articles and grant proposals” many of the faculty responded with positive comments. However, a number of faculty commented on gaps in the collection or problems accessing information through the library.

“There are numerous human medical journals that are not accessible, but I eventually can get them through interlibrary loan. However, this takes too long to be efficient so I often simply do not include them.”

“We have limited access to Nature journals.”

“We don't have access to all the important journals in my field.”

How did you use findings for improvement?
The results of the survey were provided to the Office of the Provost to support a request for funding to continue current levels of online journal subscriptions. The requested funding has been provided to the Libraries as one-time funds in 2015 and may be renewed or made permanent in future years. The Provost expects a request to make these funds permanent along with a request for funds to meet the anticipated journal price increases in 2016 and each year in the future.

In response to faculty for whom the online academic resources of the Auburn University Libraries are not adequate to support their research, a new service, Readcube has been added. Readcube allows unmediated access to articles in journals to which Auburn University does not have a subscription. Currently, Readcube provides access to journals from Nature Publishing but additional publishers are expected to be added in the future.
Expected Outcome 2: Auburn University undergraduates will be information literate.

The Auburn University Libraries Instruction Program supports the university’s general education outcome that Auburn students shall be information literate (SLO#1). The specific outcomes that the university associates with information literacy are: (1) determine the nature and extent of information needed (2) access information effectively and efficiently (3) evaluate information critically (4) use information to accomplish a specific purpose (5) understand the economic, legal, and social issues associated with using information. These outcomes are based on the Association of College & Research Libraries (ACRL) Information Literacy Competency Standards for Higher Education (http://www.ala.org/acrl/standards/informationliteracycompetency).

Assessment Method 1: Review of fourth essay in ENGL1120 (second semester English Composition)

Assessment Method Description
According to the English Department’s 2007/2008 Revised English 1120 Curriculum, Essay IV is an extended research paper that “requires students to engage meaningfully with multiple sources and then organize, analyze, and synthesize information from those sources to develop an original argument.” In Fall 2014, the Libraries’ three member instruction team graded 32 student essays from Spring 2014 using a rubric developed collaboratively by the instruction team and the English Department. The rubric measures students’ abilities to: (1) document citations via a works cited page or bibliography, (2) find appropriate scholarly sources, (3) find appropriate scholarly sources using library subject databases, (4) evaluate appropriate scholarly resources (according to relevance and timeliness) and (5) integrate appropriate scholarly sources into their paper. Each measure of the rubric is aligned with specific standards, performance indicators, and outcomes from the ACRL Information Literacy Competency Standards for Higher Education.

Findings
Essay scores, graded on a five-point scale rubric, with a minimum value of 1 and a maximum value of 5, were as follows:
(1) Document citations via a works cited page or bibliography. Average score= 2.91
(2) Find appropriate scholarly sources. Average score= 2.69
(3) Find appropriate scholarly sources using library subject databases. Average score=2.03
(4) Evaluate appropriate scholarly resources (according to relevance and timeliness). Average score= 3.53
(5) Integrate appropriate scholarly sources. Average score= 2.00
The above findings for the assessment period 2013-2014 can be compared against scores from 2008-2012 (see ENGL1120 Paper IV Rubric with Outcomes and Averages). During the four year period 2008-2011, average scores for all outcomes rose each year (or, in one instance, remained equal). However, in 2012, scores on four of five outcomes (all outcomes with the exception of outcome #1) declined from their 2011 values. Compared to 2012 scores, students in 2013-14 performed better on three out of five outcomes: (1) finding appropriate scholarly sources, (2) finding appropriate sources using the library’s subject databases, and (3) evaluating appropriate scholarly sources. However, scores on two outcomes were lower in 2013-14 than in 2012: Student performance declined with respect to (1) documenting sources and (2) integrating appropriate scholarly sources into their research papers. Arguably more significant, student scores on all five outcomes were lower in 2013-14 than in 2011, which was the high-water mark for student performance during the period in which assessment data has been collected.

- ENGL1120 Paper IV Rubric with Outcomes and Averages

**How did you use findings for improvement?**

The Libraries’ Instruction Coordinator shared results of the 2013-14 assessment with the English Department’s Composition Coordinators. Together with the above assessment results, the Libraries’ Instruction Coordinator shared general observations from library faculty and members of the Instruction team regarding ENGL 1120 essay assignments. She noted that requirements for Essay IV vary significantly by ENGL1120 instructor. Overall, there is a relaxing of requirements with respect to use of scholarly resources in Essay IV. A number of ENGL instructors no longer require students to locate scholarly resources for their papers, nor do they require use of the library’s research databases. Instead, many instruct their students to locate “reliable,” “credible,” “relevant,” or “valuable” sources.

The Instruction Coordinator communicated to the English Composition Coordinators that, if these changes in English essay assignments become formalized in a new English Composition curriculum, then the Libraries will need to revise the assessment rubric currently used to score students’ essays. In addition, it will be necessary to modify the traditional “popular vs. scholarly” information literacy library session to one which focuses on articulating and applying higher-level criteria (reliability, validity, accuracy, authority, timeliness, and point of view or bias) in order to evaluate all types of sources, including websites. At this time, individual instruction librarians have made these types of adjustments to their lesson plans at the request of faculty for whom they teach. If changes to the ENGL curriculum are made, this information will be shared with all library instructors, and the instruction team will facilitate departmental discussions of this issue as well as provide faculty training and development opportunities.
The Libraries’ Instruction Coordinator and English Composition Coordinators (new to their positions as of 2014) believe that a clarification of student learning outcomes, which is ongoing at the time of the writing of this report, is a first step towards improving student performance.

**Additional Comments**

**Assessment Method 2:** Assessment of NURS 3110 (Theoretical Concepts of Professional Nursing) pre-class worksheet

**Assessment Method Description**

NURS 3110 requires students to complete a professional research paper based upon a community health topic. In conjunction with this assignment, the Nursing Librarian provides discipline-specific library instruction. Prior to the library session, students view a video tutorial created by the Nursing Librarian and then complete a worksheet based on the video. During Fall 2014, the Nursing Librarian scored 96 student worksheets (class size = 97). The rubric used to score these worksheets measures students’ ability to: (1) articulate a focused topic, (2) identify the key concepts associated with the topic, (3) identify relevant synonyms for the key concepts, and (4) identify relevant subject headings for the key concepts.

**Findings**

A review of student worksheets (see NURS 3110 worksheet, rubric, and performance scores) revealed that a clear majority (94%) of students were able to take the general, overarching topic assigned by the NURS 3110 faculty member and articulate a more focused topic for their paper. A majority of students, although a significantly smaller percentage (70%), was able to identify all the major concepts (keywords) of their topic without including extraneous concepts. Eighty-eight percent (88%) of students were able to identify synonyms for their major concepts. These findings suggest that students find it challenging to translate a topic statement (or phrase description of their topic) into keywords that could be used in a database search. Internet search engines such as Google allow natural language searching, which does not require the higher-order thinking required to extract the main concepts (keywords) of a topic. Likewise, it is easier for students to generate synonyms for concepts than it is to identify the main concepts of a topic. What students found even more challenging was identifying relevant subject headings for their key concepts. Only 66% of students were able to accomplish this task. (An example of a successful mapping of subject heading to keyword: keyword=birth control; subject heading=contraception. Examples of failure to map subject headings to keywords frequently involved identifying the keyword or keyword synonyms as subject headings.) While searching by subject headings/descriptors is an essential skill for searching databases (particularly when conducting research in the health sciences), this type of search has no real analogue in the Internet searches with which students are most familiar. These findings suggest that
more time needs to be devoted to this component of the library session.

- NURS 3110 Findings
  - NURS 3110 pre-class worksheet
  - NURS 3110 rubric and performance scores

**How did you use findings for improvement?**
Assessment of student worksheets was first conducted in Fall 2014. The Nursing Librarian plans to revise the pre-class video tutorial to place more emphasis on (a) selecting the major concepts of a topic and (b) explaining what subject headings are and the reasons why these are useful. She also plans to reorder the sequence of explanation in the video and on the worksheet so that students will be instructed to look for relevant subject headings before they brainstorm relevant synonyms for their key concepts. She suspects students may be confusing subject headings with synonyms and believes the reordering of instruction will be less confusing.

**Additional Comments**

**Assessment Method 3:** Performance-based in-class assessment of ENGL 1120 student work

**Assessment Method Description**
All library instructors are required to conduct at least two in-class student learning assessments per semester. In-class assessments are based on the learning outcomes identified for that session. While instructors are free to devise their own assessment method, most instructors use worksheets completed by students during in-class, active learning exercises. (Instructors use carbonless paper, which allows students to share a copy of their work.)

The two most common type of worksheets used for ENGL1120 (second semester English Composition) focus on (1) evaluating sources based on information need and information type (e.g., popular vs. scholarly) and (2) articulating a well-defined topic statement (or research question) and identifying keywords (and synonyms or related terms) of the topic to be used in a database search. While the large number of library sessions taught for ENGL1120 (223 ENGL1120 in 2013) accounts for a good deal of the assessment data we collect, library teaching faculty are also strongly encouraged to collect data for sessions taught for upper-division classes in their area of subject specialization.

In Fall 2014, a member of the Libraries’ instruction team reviewed 106 “topic development/keywording” worksheets (from 5 classes) and 41 “evaluating sources” worksheets (from 3 classes) that were collected from library faculty teaching ENGL 1120 classes during the 2013-14 assessment period.

**Findings**
Most ENGL1120 students were able to distinguish between a popular and
scholarly source and were more successful when examples used were distinct and easily identifiable. Academic journal articles, several pages in length, with charts, tables and an extensive bibliography, were generally recognized as “scholarly” publications. Likewise, articles from news magazines were usually correctly identified as “popular”. However, students struggled with those types of publications which fell between these clear-cut source types. Trade/professional articles, or opinion pieces in any type of publication, were more difficult for students to identify. While 83% of students in the sample were able to correctly identify scholarly sources and 73% correctly identified popular sources, only 34% of students correctly identified trade/professional sources (see ENGL1120 Performance-based, in-class assessment of student work, Table 1).

The evaluative criteria students used to distinguish publications varied greatly and appeared to be unique to every class. This review of student work suggests that library instructors’ presentations significantly influenced student responses. As an example, the majority of students in one class justified their choices based heavily on format markers (i.e. color pictures, length, inclusion/exclusion of a bibliography, etc.) In another class, students targeted audience characteristics as a major factor. Overall, students had a tendency to rely on physical characteristics, as opposed to other characteristics which would have required higher levels of critical thinking to discern. Across the entire sample, the three characteristics or features that were most frequently used to determine type of publication were works cited, color graphics, and advertisements. In addition, students had difficulty in applying multiple criteria in order to make a more complete and thoughtful determination. In general, students’ ability to apply evaluative criteria in order to distinguish among types of publications was rated as at a basic level.

A review of students’ topic statements revealed at what stage they were in the research process. Results varied given individual instructor, student preparation, and class assignment. Students with little knowledge of their topics constructed statements that were incomplete, overly broad, and tended toward the colloquial (e.g.: “Is technology today for the good or bad?”). The development of a well-defined topic statement is a critical step in building subsequent information literacy skills. Worksheets revealed that a majority (62%) of students performed at a basic level. Thirty-eight percent (38%) of students in the sample were found to be working at a level of little or no ability (see ENGL1120 Performance-based, in-class assessment of student work, Table 2).

In order to conduct effective and efficient searches, students must be able to identify and develop keywords, synonyms, and related terms for the information needed. Students in the sample were most successful in completing keywording worksheets when they came to the library session prepared with a well-
developed topic statement or research question (Example: keyword=social media; synonyms=Facebook, Instagram, Snapchat, Twitter). Students were least successful when they had only a broad topic in-hand. In these instances, students generated a number of terms and phrases, many of which were wide-ranging and unrelated; these would not lead to an appropriate search strategy. (Example: keyword=food industry; synonyms=wholesale, regulation of food, processing, manufacturing, agriculture, production).

- ENGL 1120 in-class performance based assessment of student work
  - ENGL 1120 Performance-based in-class assessment of student work
  - sample popular versus scholarly source worksheet
  - sample topic development-keywording worksheet

**How did you use the findings for improvement?**

The Libraries' Instruction Coordinator shared details of these assessments with the English Composition Coordinator. An October 2014 workshop, attended by the English Composition Coordinator, several ENGL 1120 instructors, and the Libraries’ Instruction Coordinator and library teaching faculty, included a discussion of information literacy learning outcomes and how best to address these in ENGL 1120 classes. Discussions between the Libraries and the English Department on this issue are ongoing.

In addition, the Libraries’ instruction team drafted the following set of proposals to improve student performance with respect to information literacy outcomes targeted in ENGL 1120:

In order to improve student learning in terms of ability to evaluate, and distinguish among, types of information resources/publications: (1) revise the traditional “popular vs. scholarly” information literacy library session to one which focuses on articulating and applying higher-level criteria (reliability, validity, accuracy, authority, timeliness, and point of view or bias) in order to evaluate all types of sources, (2) standardize the library curriculum with respect to this learning outcome, (3) offer library faculty training and development opportunities, (4) develop new active learning exercises/worksheets which reflect revision of the library curriculum, (5) develop assessment plan and collect and analyze assessment data, (6) in collaboration with ENGL1120 instructors, explore and develop new information literacy library sessions that focus on “format as process,” as articulated in the new Framework for Information Literacy for Higher Education (http://acrl.ala.org/ilstandards/wp-content/uploads/2014/02/Framework-for-IL-for-HE-Draft-2.pdf). According to the new Framework, “format” is the way tangible knowledge is disseminated. The essential characteristic of format is the underlying process of information creation, production, and dissemination, rather than how the content is delivered or experienced. The expert researcher understands that the quality and
usefulness of a given information source is determined by the processes that went into making it. The processes of researching, writing, editing, and publishing information—whether print or digital—can be highly divergent, and information quality reflects these differences.

In order to improve student learning with respect to topic development: (1) provide “topic development” instructional support to ENGL1120 faculty, (2) create instructional materials (such as tutorials, videos, and active learning exercises shared via online LibGuide) to assist library faculty in teaching topic development, and (3) teach topic exploration/development within library sessions if requested by ENGL 1120 instructors.

In order to improve student learning in identifying and developing keywords, synonyms, and related terms: (1) hold information literacy library sessions subsequent to students’ development of well-defined topics or thesis statements/research questions, (2) hold library sessions subsequent to students’ receipt of ENGL assignments, particularly assignments that require multiple resources, and (3) encourage “flipped” classroom methods in which students complete keywording worksheets prior to attending the library session.

Additional Comments

Expected Outcome 3: Courier delivery of library books and bound journal to campus offices will save the time of faculty, staff, and graduate students.

The Auburn University Libraries’ courier service is a user-initiated delivery service in which library books and bound journals are delivered to departmental and faculty offices across campus. The intent of the service is to save the time of faculty, staff, and graduate students, who would otherwise need to come to the library for these materials.

Assessment Method 1: Time study and log analysis

Assessment Method Description
In Spring 2014, the Libraries conducted a study to determine how much time its courier service saved library users. First, library staff measured the average amount of time it takes for a patron to walk to the library, pick out a single book in one of several locations, and check it out. Second, staff measured the average, round trip travel time from university departments to the library. For departments within the campus core, staff measured a typical walk time. For departments outside of the campus core or off-campus, driving time of the courier service van was measured. Third, staff calculated the total number of courier deliveries from 2010 to 2013, with breakouts by building and
department. Using these three measures, staff calculated the amount of time the courier service saved library users during 2010-2013.

**Findings**
During 2010-2013, 15,338 items were delivered to 93 buildings and 165 departments by the courier service. Based on the time study, the service saved faculty, staff and graduate students a total of 3,945 hours during the four year period. The study showed that, among Auburn’s schools and colleges, the largest number of requests for courier service came from the College of Liberal Arts. The Libraries made 8,465 deliveries to the College, saving faculty, staff, and graduate students 1,893 hours. Across all campus departments, library users in the English and History Departments were the heaviest users of the service. The courier service delivered 3,418 items to the English Department, saving 13.3 minutes per transaction for a total of 769 hours. During the same period, 1,680 items were delivered to the History Department at 13.0 minutes per transaction, saving 365 hours.

The courier service also saved time for library users who work off-campus or who have offices on the periphery of campus. For example, the study showed that it takes at least 20.3 minutes to walk to the library, check out a book, and return to the Lowder Business Building. During the four years of the study, 355 items were delivered to the Department of Management, saving these library users a total of 121 hours. At the College of Veterinary Medicine, average drive time to Draughon Library is 23.3 minutes. During 2010-13, 691 items were delivered to the veterinary medicine complex, saving over 282 hours.

Analysis of the courier delivery logs yielded additional findings. Use of the service was sustained but not overwhelming until August 2010, when the library implemented a VuFind catalog discovery layer in which all catalog records included a self-populating link to the courier service request form. Within the next year, the number of requests grew by 94.8%.

Over the course of the four year study period, use of the service rose steadily:
2010: 2,244 deliveries
2011: 3,771 deliveries
2012: 4,383 deliveries
2013: 4,940 deliveries

- Courier Deliveries Log and Time Study
  - Courier Deliveries 2010-2013 By Year and Month
  - Courier Time Study 2010-2013

**How did you use findings for improvement?**
Based on rising use of the service and time savings for patrons, the Libraries, in Spring 2014, converted a part-time student position into a full time staff
position to maintain the level of efficiency that makes the courier service an added value to the campus community. The Libraries will continue to explore ways to publicize the service and assess its value relative to other library functions and services.

Additional Comments