

Utah State University Library Instruction Program Annual Report for 2006-2007

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I. Introduction

The USU Library Instruction Program continues to provide high-quality instruction to the USU community. The numbers show that our reach continues to expand. In the 2006-2007 academic year librarians taught a record 1,183 sessions, which included 23,722 contact hours with students. If taking into account multiple visits (the same class receiving instruction on multiple occasions) we reached 10,520 students.¹ English 1010 and 2010 classes continue to be the primary focus of our instruction. Librarians taught sessions for 36 departments in all of the University's colleges, except the College of Natural Resources.² Eleven Reference and Instruction Services librarians, three Library Peer Mentors, and 19 staff from other departments provided instruction during the year.

We also began to achieve some of the programmatic goals from previous years. We conducted a longitudinal assessment of English 1010 to see if students found their English 1010 preparation helpful for their English 2010 coursework. We began to explore better ways to integrate information literacy instruction into breadth courses in the general education curriculum. Finally, we examined our organizational culture as teaching librarians in order to create a work environment that better supports our professional development as teachers and sustains our heavy teaching loads.

II. English Composition Instruction

Librarians continue to collaborate with the Writing Program (English 1010 and 2010). Librarians taught a record 822 sessions for English 1010 and 2010. As in previous years, we adapted the English 1010 library instruction lessons in response to the Common Literature Experience selection of *Warriors Don't Cry*. Building upon the Problem-Based Learning model used successfully in the past, students addressed the question of school integration in a group research assignment, the School Board Project (online at <http://library.usu.edu/instruct/eng1010/index.php>).

The majority of English 1010 instructors implemented the School Board Project in Fall 2006.

While some students struggled with the topic of school integration, most instructors found the basic

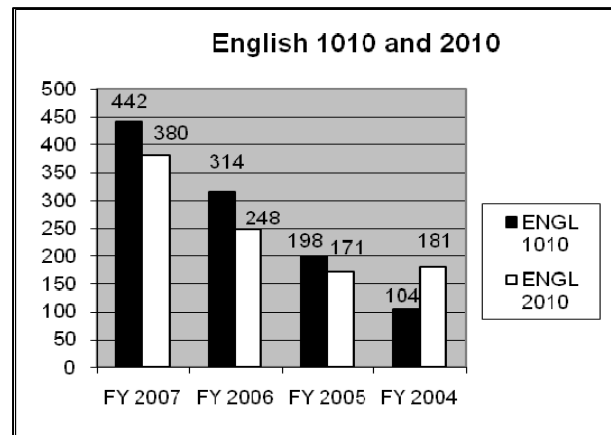


Figure 1

¹ Since we cannot track which students might have taken more than one class that participated in library instruction (e.g. English 2010 and a business class), a more accurate number of individual students would be slightly lower. This number also does not account for students who receive library instruction in more than one semester during the year.

² The College of Natural Resources does have its own library and a librarian who provides instruction.

model of the assignment valuable and implemented it again in the spring semester. The average number of library sessions per section of English 1010 was five, for both Fall and Spring. No English 1010 graduate instructors dropped the basic assignment in Spring when they have more freedom to develop their own curriculum. This was the first year in which there was a zero “drop-out” rate between Fall and Spring since the establishment of a more standard library curriculum. In addition, several fulltime lecturers, who have complete freedom to develop their own curriculum, adopted the School Board Project.

Librarians continued to refine their instructional offerings in English 2010, through such creative lessons as MLA Musical Chairs, new Problem-Based Learning scenarios, and concept mapping and brainstorming sessions. Many instructors brought their classes to the library multiple times during the semester, which is a testament to a more holistic approach, rather than relying on a single library session. The average number of sessions in Fall and Spring, respectively, were 4.6 and 4.9. The lowest number of library instruction sessions per class was two. Three instructors included more than 8 library instruction sessions in a semester. The most popular type of library session for English 2010 is a hands-on research day, in which librarians help students one-on-one on a specific assignment. Many instructors brought their classes in for multiple research days, as students find the individualized assistance most helpful. The average number of research days increased from 1.7 in Fall to 2.2 in Spring. Most of the research days were preceded by lessons on topic selection, concept mapping, and/or developing research questions so that students had well-defined information needs before searching for information. Several instructors (9 of 21 in Fall and 7 of 21 in Spring) used Problem-Based Learning in their library sessions.

Assessment of both English 1010 and 2010 classes suggest that students are gaining a greater degree of familiarity and comfort in using library resources, rather than relying solely on the World Wide Web. Details are reported in the Assessment section below.

The Writing Program selected a new textbook for English 1010 in Fall 2007. They also, for the first time, adopted a standard textbook for the English 2010 course. Librarians were invited to review the nominated textbooks and provide feedback on how each book treated library research. In the end, the department selected two books, *The Curious Writer* for English 1010 and *Writing: A Guide for College and Beyond* for English 2010. Both books do a nice job of integrating information literacy skills into the writing process, and they were selected, in part, for this strength. Librarians then worked with English instructors to adapt our previous English 1010 and 2010 lesson plans to be used in conjunction with these textbooks in Fall 2007. Collaboration with the Writing Program in developing and refining library instruction curriculum continues to be the major achievement of USU teaching librarians.

III. Other Course-Related Instruction

Librarians taught 175 sessions for subject-specific courses (e.g. not English 1010 or 2010, Connections, or PSYC 1730). This was an increase from 160 in the previous year. Classes in Nursing, Nutrition and Food Science, Social Work, and Secondary Education participated in library instruction for the first time in several years. The Nursing orientation, led by Betty Rozum, produced very good results. Several students contacted Betty after the class for individual research consultations. The success of the class led the Nursing program to schedule a similar session for the 2007-2008 year. Librarians also taught two sessions for USU breadth courses, or general introductions to scholarly disciplines. Flora Shrode developed a library research assignment for USU 1350, a breadth science class, and Wendy Holliday

and Holly Swenson provided an introduction to library resources in the humanities for USU 1320. In both classes, the instructors noted that student work improved as a result of library instruction. See Section VII for details. Librarians also taught a record number of sessions for Honors courses (13), including integrated humanities and social sciences courses.

Librarians continue to participate in the Connections program. In 2006, we combined a 20-minute PowerPoint “virtual tour” with a short walk around the library to highlight key service points. Feedback from Connections instructors, students, and program administrators was very positive. The logistics of hosting tours for 100 students at a given time around the library proved to be difficult, however, so a virtual-only tour is planned for 2007.

In Summer 2006 we focused our second year of the Information Fellows Program on at-risk students and PSYC 1730, a college success course. We hired three Fellows, Melissa Bowles, Julie Pelletier, and Carol Rosenthal. We focused our initial training session on epistemology, or how students’ beliefs about learning and knowledge influence their approach to information literacy. We then developed common learning goals and a series of library lesson plans for PSYC 1730. The lessons were piloted in several classes during the Fall. In late Fall, the PSYC 1730 program began the planning process to cut a 16-week course down to eight weeks. Librarians worked collaboratively with the Academic Resource Center to adapt the key components of the PSYC 1730 library lessons to the shorter class schedule. Wendy Holliday and Deleyne Wentz piloted several ideas in a traditional 16-week section of PSYC 1730 in Spring. Final lessons for the new eight-week format were based on this pilot experience, and they will be implemented in Fall 2007.

IV. Special Projects

General Education Learning Goals

The General Education Subcommittee of the Faculty Senate asked Wendy Holliday to lead a small task force to address the issues raised from the General Education Syllabi Audit completed in March 2006 (<http://library.usu.edu/instruct/gened-il-audit.pdf>). The audit showed that approximately half of the USU breadth courses failed to include a required information literacy component. The task force met several times and developed new and more realistic information literacy goals for these classes, as outline below:

- Students need to know that there are a variety of information sources, many available only through the library.
- Students need to understand something about the context of how information gets produced, so that they can differentiate between opinion, informed opinion, research-based findings, etc.
- Students need to learn that librarians who specialize in different subjects are available for help.

We also developed new language for the information literacy requirement, which will be proposed for formal adoption in Fall 2007. The Information Literacy Fellows program will focus on developing actual lesson plans and teaching strategies in 2007-2008.

Organizational Culture

Wendy Holliday collaborated with Kristen Bullard, Instruction Coordinator at the University of Tennessee-Knoxville, in a study of organizational culture among instruction librarians. Teaching librarians at both institutions took an organizational culture assessment instrument. We then used the survey results to facilitate group discussions about the current and desired organizational cultures. The discussions generated concrete ideas for ways in which to better support instruction librarians with their heavy teaching loads and desire to keep developing more innovative instruction. The results of the program will guide professional development efforts for the coming year.

V. Web-Based Instruction and Tools

The Library Instruction website saw an increase in traffic since FY 2006, especially in September and October. This was likely a result of both English 1010 and 2010 instructors and students using the lesson plans and resources linked from these pages during our busiest instruction time. Traffic to the Instruction home page increased from 4,144 hits in FY 2006 to 9,953 in FY 2007. This likely reflects the general increase in instruction activity. Table 1 summarizes the web traffic on major sections of the Instruction site.

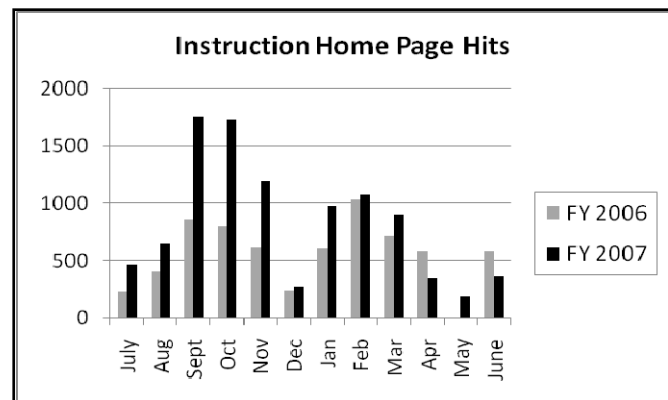


Figure 2

	Instruction home page	1010 instructor resources	2010 instructor resources	1010 and 2010 lessons	Handouts	Guide to Library Research
July	472	369	252	682	160	251
Aug	652	387	113	626	247	2,101
Sept	1,755	936	552	1,408	417	7,577
Oct	1,732	2,109	687	1,176	431	2,784
Nov	1,195	957	571	1,083	339	1,462
Dec	277	261	382	669	545	794
Jan	978	297	677	1,279	1,426	1,338
Feb	1,077	849	517	1,474	1,317	664
Mar	905	508	662	1,521	1,083	666
April	352	311	567	1,115	948	881
May	192	205	352	866	626	542
June	366	186	531	1092	695	339
Totals	9,953	7,375	5,863	12,991	8,234	19,399

Table 1: Traffic on Library Instruction Website

The English 1010 and 2010 areas of the website are among the most heavily visited. The English 1010 and 2010 pages (including the index page and several informational pages) received 7,375 and 5,863 hits, respectively. English 1010 and 2010 lesson plans received a total of 12,991 hits.

Our web-based tutorials continue to be used, especially the Guide to Library Research. Hits on all modules totaled 19,399. Many people enter the tutorial non-sequentially, from direct links to a particular module. The most popular modules were Selecting a Topic, Selecting the Most Useful Resources, Finding Books, Finding Articles, and Citing Your Sources. Traffic peaked in September 2006, with 7,577 hits. This was likely because the tutorial was linked from

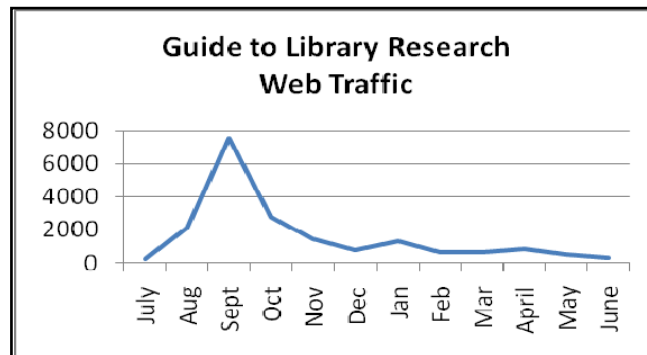


Figure 3

the Computer and Information Literacy (CIL) tutorial pages. All Connections students were required to pass the Information Resources section of the CIL test by the end of September. The Organize My Research Tutorial continues to receive significantly less traffic, averaging around 38 hits per month. Librarians in the Instruction Program need to decide whether this tutorial is worth maintaining in its present format. The Concept Mapping tutorial received an average of 123 hits per month. Several English 2010 classes use parts of this tutorial for the Concept Mapping lesson.

Library Instruction handouts, including database and general research tips, were also popular items on the website, receiving 8,234 hits. The most popular handouts were for Endnote (2,046 total hits), which received a spike in traffic in January after a successful series of Endnote workshops. Library patrons continued to make use of the Endnote handouts well after the sessions, averaging 259 hits between February and June 2007.

Course Pages were also used heavily. The most popular Course Pages were for BIS 2200 and ASTE 3440, both large classes. Usage for all course pages tended to peak during the month when the class was taught, but several had staying power over the course of the year, with frequent hits well after the instruction session was taught. The Nursing course page, for example, received a high of 48 hits in January 2007, months after the August 2006 orientation session for nursing students. This suggests that students are returning to some course guides after learning about them in library instruction sessions. Table 2 summarizes the traffic on the 20 most popular course guides.

Course	Hits	Course	Hits
BIS 2200	2,584	Public Health	160
ASTE 3440	741	USU 1320	155
BA 4590	571	HNRS 1340	145
BIS 4550	540	JCOM 5300	135
JCOM 4000	411	FCHD	133
JCOM 2300	286	BIS 2550	132
PEP 2000	231	ENGL 4610	125
BIS 6810	206	ANTH 3310	124
LAEP	171	Nursing	117
ENGL 2600	163	CHEM 4990	113

Table 2: Most frequently accessed course guides

VI. Statistics

The Instruction Program continues to expand its reach in sheer numbers of class sessions. Librarians taught a record 1,183 sessions, double the number from five years ago. While some of these sessions are short, 15-minute visits by a librarian to introduce a concept, the number still represents a significant degree of engagement with students. Each semester, librarians reach between approximately 3,800 and 4,600 students.

	English 1010	English 2010	PSYC 1730	Connections	Subject	Other
FY 2007	442	380	37	70	174	42
FY 2006	314	248	42	50	160	60
FY 2005	198	171	37	34	188	14

Table 3: Total sessions by type of course

Despite heavy teaching loads in English 1010 and 2010, librarians continue to reach out to departments in order to teach more subject-specific classes. Librarians succeeded in teaching 14 more subject-specific classes than in FY 2006. For the first time in recent years, the College of Humanities, Arts, and Social Sciences was the heaviest user of library instruction (52 classes total), followed by the College of Education (45) and the College of Business (29). The decline in College of Business classes was one striking change from previous years, but this was likely the result of some changes to their overall curriculum and faculty retirements. Table 4 includes the ten most frequent library instruction participants by department.

Department	College	Number of classes
BIS/MIS	Business	14
HONORS	Gen Ed/Honors	13
ENGL (except 1010 and 2010)	HASS	12
JCOM	HASS	12
ELED	Education	11
HIST	HASS	11
PSY (except 1730)	Education	11
BIO	Science	7
ECON	Business	7
FCHD	Education	7

Table 4: Instruction sessions by department

Session content continues to focus on major library tools, such as databases and the library catalog. The large number of sessions dedicated to “other” continues to represent our focus on developing good research questions, brainstorming techniques, and concept mapping. As in previous years, active learning, especially hands-on research, continues to dominate our teaching strategies. Our instruction tends to focus on ACRL Standards One (defining information needs) and Two (finding information effectively). In 2006-2007 more librarians included instruction in citing sources (Standard Five) in response to assessments that showed students remain confused about this skill. Librarians also increased their attention to Standard Four (the effective use of information), especially in English 1010. Librarians often attended research presentations and were able to provide feedback to the students’ final products.

Content	# of classes
Databases	576
Other	511
Catalog	464
Free Web	337

Table 5: Session Content

Format	# of classes
Hands-On/Active	646
Demonstration/lecture	379
Tours	129
Other	33

Table 6: Session Format

ACRL Standards	
One	663
Two	678
Three	502
Four	278
Five	52

Table 7: ACRL Standards

Reference Services Department librarians, who do the bulk of the teaching, continue to handle a heavy teaching load, averaging 111 sessions this year, with an individual high of 193. Staff from other departments led or assisted with 126 sessions, helping ease the burden of our “high touch” approach to English 1010 and 2010. Librarians continued to track the time they spent preparing for classes and consulting with students as a result of classes. The total estimate of preparation time by all librarians was 805.25 hours for the year. The estimate of post-session consultation time was 230 hours. Reference Services Department librarians spent an average of 47

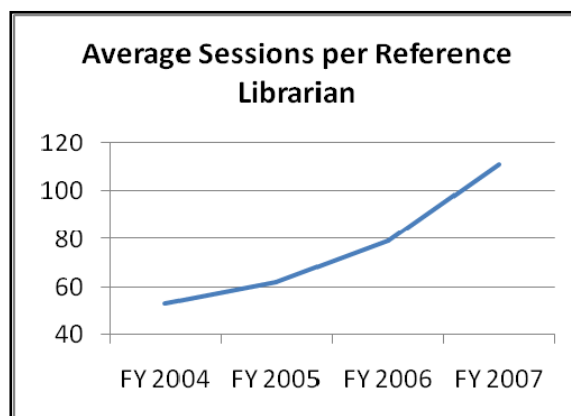


Figure 4

hours preparing for classes and 20 hours working with students outside of class time. These numbers probably fall far short of the time that librarians actually spent doing these things, as a few librarians did not keep track of this time consistently. Even by this conservative estimate, librarians contributed approximately 2,100 hours of teaching, preparation, and consultation time to Utah State University.

VII. Assessment of Student Learning

Librarians continue to apply a range of techniques to assess student learning. The following summarizes the results of these multiple methods.

English 1010: One-Minute Assessments

In two sections of English 1010, we administered a one-minute assessment that asked students to describe the highlight of the library instruction sessions and what they would do differently as a result. Library instruction included the standard series of sessions for the School Board Project (a session on developing research questions, a research day, and presentations), a session on media analysis, a two research days for the final ReReading American Culture essay. Twenty-nine students completed the survey. The most popular learning highlight was a new awareness of the library resources available to students, especially the electronic databases (22 out of 29 students). Six students mentioned learning about citation styles as their learning highlight. When describing what they would do differently as a result of the library instruction, 24 out of 29 students said that they would use library resources, rather than only using the Web, which had been their previous inclination. Ten of these students said that they would use the library *instead* of the Web because the resources were more reliable, credible, or scholarly.

English 1010: Self-Assessments

Two instructors asked their classes for self-assessments of what they learned as a result of the School Board Project. The most common theme (mentioned by about half of the students) was learning about the library resources available to them. They said that they learned to use databases to find articles and the catalog to find books. Several students also mentioned that learning how to use library resources was especially helpful because they knew they would need to apply this to other classes at USU. A few even mentioned that good library skills would be something that they would use throughout their lives. Several students described the School Board Project as a good introduction and they wanted to learn more about and practice using library resources in subject areas outside of education. One student mentioned, for example, that the School Board Project provided a “good foundation” for her college career.

The second most common theme related to learning more generally. Nearly a third of the students mentioned that they really learned something new about race and education as a result of researching a topic in-depth. Several of these students also mentioned that they especially enjoyed learning about diverse viewpoints by reading a variety of source material, and that they learned to keep an open-mind throughout the research process and use information to help them make conclusions. They also enjoyed learning from the research and discussion with their fellow students through group work and the final presentations. Again, this was an especially gratifying result, as many students enter college with a habit of thinking in black-and-white. The School Board Project (and problem-based learning in groups, more generally) seems to promote some vital college-level critical thinking skills.

Students mentioned that learning how to work in groups and how to do presentations as especially valuable and transferable to other classes. Nearly a third of students also mentioned that developing good research questions and learning how to focus a topic were valuable lessons from the project. Many also noted that they learned that it was useful to get help from a librarian, rather than becoming frustrated when searching for information.

English 1010 Longitudinal Assessment

Erin Dini Davis, Wendy Holliday, and intern Melissa Bowles conducted a longitudinal assessment of the problem-based English 1010 library curriculum. In both Fall and Spring semesters, we recruited English 2010 students to participate in focus groups. Facilitators asked students to reflect on what they learned in English 1010 and how this had or had not prepared them for English 2010. The Fall focus groups were comprised mainly of students who had taken English 1010 through concurrent enrollment or AP credit. There was a striking difference between these two groups of students when they reflected on their preparation to do library research. The AP students generally felt fairly well prepared, while the concurrent enrollment students felt less prepared. Several of the concurrent enrollment students did not even remember doing a research project or using library resources in any way.

For the students who took English 1010 at USU, nearly all of them had participated in a problem-based learning exercise to learn library research skills, such as the Save our Schools project. Students preferred this hands-on instruction, focused on the real world, rather than passive demonstrations. They also noted that they needed a lot of one-on-one help from librarians in order to reinforce what they saw in short demonstrations and avoid information overload. They also noted that they wanted library skills

integrated even more into the English 1010 curriculum. They preferred several class visits over the course of the semester, rather than a single library instruction session. Students wanted to see a stronger relationship between reading, research, and writing and they needed help integrating and synthesizing the information they found. Students wanted this early in their college careers, noting that they were finally getting some of integrative skills in English 2010. Several said that they wished they had learned these skills earlier so that they could apply them to other classes. Finally, nearly all students agreed that it was very helpful to have a personal librarian for the class and appreciated librarians' willingness to provide help outside of class time.

The results of the focus groups were shared with the Writing Program, especially during the selection of a new textbook for both English 1010 and 2010. The new curricula for both courses address the issues of repetition between English 1010 and 2010. Both curricula also include plans for problem-based learning, multiple visits to the library, and the continuation of the "personal class librarian." Librarians and English instructors will continue to explore ideas to foster meaningful connections between research and writing in both classes.

English 2010: One-Minute Assessments

Librarians administered a one-minute paper in four sections of English 2010 (two of which were taught by the same instructor). The assessment asked students: "What is the most significant or meaningful thing you have learned during the session?" Instruction in the sessions included:

Class One (four sessions): A basic overview of library resources, including the catalog and databases, a tour, an explanation of scholarly versus popular sources, and two hands-on research days.

Class Two (five sessions): A basic introduction to the library and the librarian, a session on evaluating information, a session on citation styles, and two hands-on research days.

Class Three (three sessions): A general introduction to library sources, a tour, concept mapping and narrowing topics, and a hands-on research day.

The same themes emerged in all of the classes. A little more than half of the respondents in each class noted that learning about library resources, most often the library databases, was the most meaningful. The second most popular response was learning about citation styles. Students also reflected on gaps in their learning. The most significant gap across all classes related to finding physical items in the library, especially books. Students also had difficulties locating print journals, using the BARN, and locating government documents. While part of this may be related to the complexity of our government document collection and a poor library catalog interface, it suggests that some students need more assistance in navigating the physical collections in the library. The Instruction Program needs to find a way to provide assistance to a small, but significant, portion of students who still need instruction in very basic library skills. We will be piloting a program with Library Peer Mentors providing quick workshops in the Fall.

English 2010: Post-Assignment Survey

One librarian administered a survey to students asking them to reflect on their recently completed assignment and what they had or had not learned from the library instruction sessions. Ninety-nine students from three sections of English 2010, all with the same instructor, responded. One of the sections was an Honors section. The content of instruction included concept mapping, database exploration, evaluating information, a citation formatting game, and three more open-ended discussion and research days. The librarian met with each class eight times over the course of the semester. The survey asked the following questions:

- What parts of the library sessions were most helpful to you?
- What additional instruction would have helped you with your research?
- Please describe (briefly) your research experience for this class. What sources did you use?
- What problems did you encounter AFTER the library session?
- Did you consult a librarian for help at any point AFTER the session?
- Can you make any suggestions for the improvement of future library research classes?
- Did you learn anything new in the library sessions?
- If Yes, what did you learn that was new?

Sixty-nine students (76%) said that they had learned something new from the library instruction sessions. Nearly half of the students (44%) said that they learned how to use library resources, as opposed to basic Web searching. One-third of students also said they learned how to cite sources properly according to a standard citation style, such as MLA. When asked what was most helpful about the library sessions, the majority (37%) said that it was learning about what was available via the library for research. Nearly 25% mentioned the research time with one-on-one help from a librarian. One-quarter of the class also mentioned that help with citation styles was the most helpful. Other responses included advanced Web tools, such as Google Scholar. When asked about additional instruction that would have been helpful, 22% said that they simply wanted more research time with a librarian. Several people mentioned that they wanted to know more about physical resources in the library, including knowing how to find and check out books. Several students requested a library tour, suggesting that many students had spent little time using the library for research before English 2010. Most students identified that they had used a specific library search tool, such as an article database or the library catalog. The most common problems encountered after the library sessions was remote access (13 of 61 responses) and citation formatting (10 of 61 responses). This suggests that students are trying to use library resources, but that remote access can be a frustrating barrier to use. It also suggests that despite time spent in class learning about citation styles, many students still have problems with this part of the research/writing process.

In another class, the instructor asked students to write a self-assessment letter, reflecting on how the class contributed to their growth as writers. Half of the students, without prompting, mentioned that learning how to do research more effectively was one of the highlights of the class. Eight out of ten students mentioned that they learned about the availability of library resources for the first time, and that they learned how to search them effectively. In many cases, students said that this enabled them to find more reliable and scholarly resources than they had used in the past, and contributed to their ability to make stronger arguments in their papers. Several students also specifically mentioned the librarian as a useful resource for getting help when they got stuck.

English 1010 and 2010 Citation Analysis

Librarians collected final papers and annotated bibliographies from 14 sections of English 1010 and 18 sections of English 2010. This sample included bibliographies and papers from 112 English 1010 students and 249 English 2010 students. Citations from the bibliographies and works cited lists were entered into an Excel spreadsheet for a total of 578 citations for English 1010 and 1,969 citations for English 2010.³ Librarians then classified each citation according to the following parameters:

- **Type:** Books, Scholarly Journals, Magazines, Newspapers, Reference Works, Websites, Personal Interviews, etc. Websites were defined as general sites (such as .com, .gov, .org) freely available via the World Wide Web. If a scholarly journal or newspaper provided access to a source via the Web, the source was classified by its primary type, such as newspaper or journal, rather than the mode of access.
- **Format:** Print or electronic. In many cases, we could determine whether students accessed electronic sources because of the URLs provided as part of the citation. In other cases, we assumed that if a title were available electronically and in print, most students would have accessed the electronic copy. It is unlikely that students used microfilm to retrieve articles from the older newspapers and magazines when an electronic option was available, for example. This likely skewed the final analysis toward electronic sources, but the format was unclear in only about 10% of the citations.
- **Library-Provided:** For all electronic journals, magazines, newspapers and reference works, we determined whether the source was freely available on the Web or whether it was provided through a library subscription. The URLs provided in citations clarified how most students accessed material.

This rich collection of data provided librarians with a good picture of what types of sources students are actually finding and using in their coursework.

Websites were the most popular type of source in both English 1010 and 2010, comprising around 40% of the total citations. Of these websites, most were authored by organizations or individuals (41% for English 1010 and 51% for English 2010). We did not analyze each website for its credibility. Many of these personal and organization websites included reliable and high-quality information. The preponderance of these kinds of sites, however, suggests that students might be missing more subtle forms of bias or perspective. For example, several students did research on education topics. They cited sources ranging from the NEA, a teachers union, to private think tanks. While none of the information from such sites is necessarily inaccurate, each site does represent a particular point of view or political perspective. While a citation analysis alone cannot reveal whether students are reading these types of websites critically, the sheer number of websites from organizations, in particular, suggest that librarians and instructors might need to emphasize teaching students how to identify subtle differences in perspective, rather than focusing primarily on watching out for blatant inaccuracies.

A much smaller percentage of the websites (between 6% and 13%) came from purely commercial sources. Interestingly, the use of government data and scholarly websites was much higher in English 1010 than 2010, but this could result from the common assignment in all sections of English 1010. The

³ Many thanks to Natalie Christensen for entering these citations into Excel.

types of sources tended to cluster in certain areas more than in English 2010, where students could select their topics more freely. See Figures 5 and 6 for a complete summary.

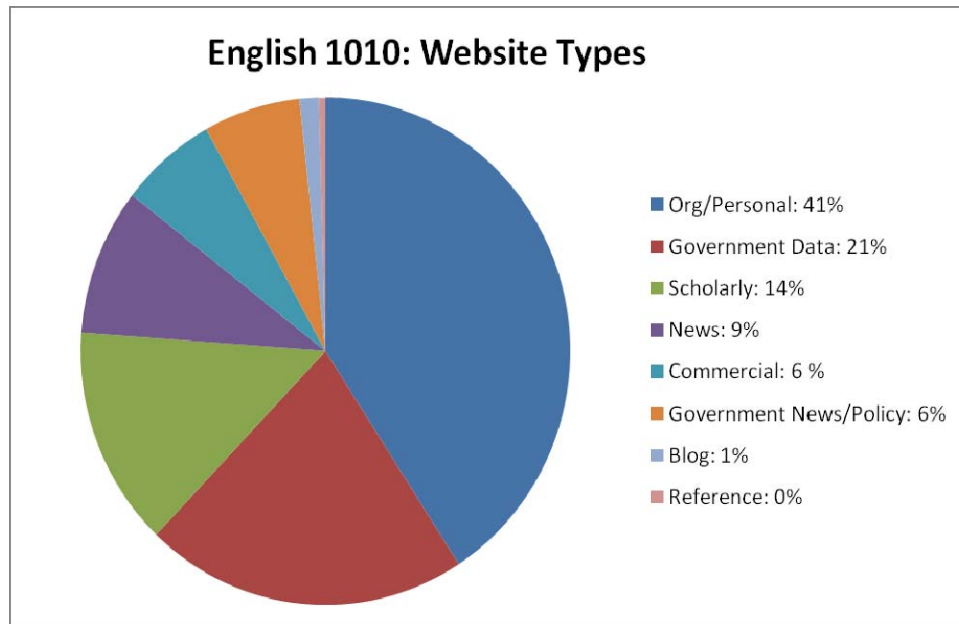


Figure 5

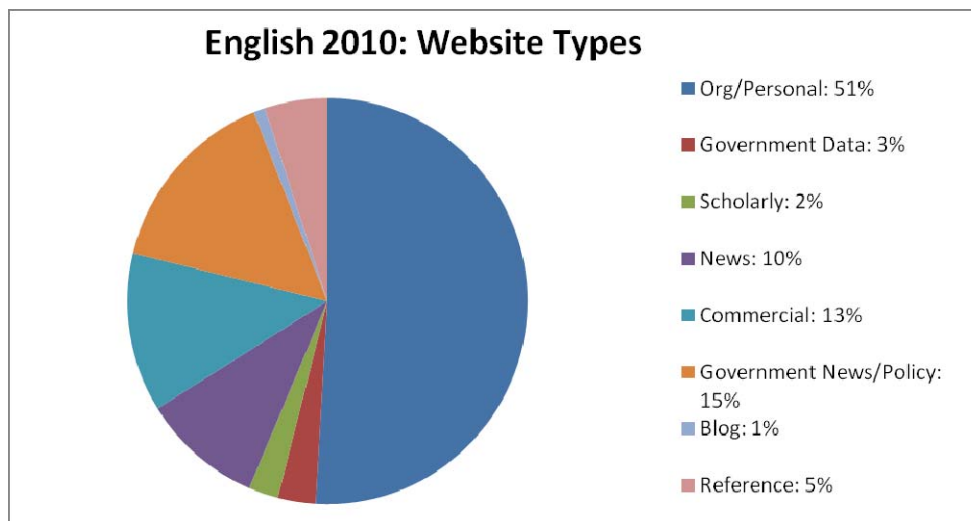


Figure 6

Journals were the second most popular type of information source more generally. More 1010 students used journals than 2010 students (22% and 15%, respectively). English 2010 students cited a slightly higher percentage of books, however, and they were also more likely to use personal interviews. The latter may occur because of the different nature of the assignments and the emphases of different instructors. We categorized Wikipedia as a separate type of source, just to see how many students cited it. No English 1010 students cited it, and it represented only 3% of the total 2010 citations. See Table 8 for a complete summary of the different types of sources.

Source Types	ENGL 1010	ENGL 2010
Websites	41%	39%
Journals	22%	15%
Magazines	17%	15%
Books	7%	11%
Newspapers	6%	6%
Government or ERIC document	3%	1%
Reference Sources	2%	2%
Personal Interview	0%	4%
Wikipedia	0%	3%
Movie, music, or television	0%	2%
Textbook or course materials	0%	1%
Primary Source	0%	1%
Legal Case or Law	0%	0.4%
Thesis	0%	0.2%
Personal Survey	0%	0.1%

Table 8: Summary of Types of Sources Cited

Students overwhelmingly favored electronic sources. In English 1010, 91% of the journals, magazines, newspapers, and reference works were electronic, while 94% of the 2010 sources were electronic. English 1010 students were more likely to use the library to find electronic periodicals. Of all of the electronic periodicals and reference books cited, 79% came from a library-provided resource. For English 2010, library resources comprised 69% of the electronic citations. English 1010 students generally received more intensive instruction during the School Board Project assignment, as well as stricter restrictions of the types of sources they could use, which might explain their greater use of library resources.

We also analyzed the range of sources used by each individual student. We categorized the range as mainly library (more than 2/3 of sources were library sources); mixed (between 1/3 and 2/3 from the library); mainly web (more than 2/3 from the web); and all sources from the web. In both classes, 75% of students used mainly library or a mix of sources. In English 1010, 13% of students used only web sources, but some of the sample bibliographies represented individual student work on a larger group project. As a result, some bibliographies only had 2 sources, making it more likely that they were all of one type. In English 2010, one in five students used primarily web sources, suggesting that students still might need further instruction and encouragement to use library sources.

	Mainly library	Mixed	Mainly web	All web
ENGL 1010	47%	33%	6%	13%
ENGL 2010	44%	33%	20%	4%

Table 9: Library versus web sources cited

Nevertheless, English 1010 and 2010 students did use a significant number of library sources, suggesting that their instruction has introduced or reinforced the need to look beyond Google for academic research. Books and journals also seem to serve to serve as a “gateway” to using a wider range of resources. Of the 89 English 2010 students who cited a book, 58% used mainly library (or non-website) information sources. Only six of these students used websites as their primary source of

information. The number is similar for the students who cited a journal, with 56% using library sources more frequently than websites. We found similar numbers for English 1010, although the group projects made it harder to identify trends for individual students.

English 2010 Assignments

Britt Fagerheim, Cynthia Nordgren, Flora Shrode, and Wendy Holliday scored the sample of English 2010 assignments according to our standard rubric (<http://library.usu.edu/instruct/eng2010/2010rubric.pdf>). For each learning goal, a score of one represents Needs Improvement, a score of two represents Good, and a score of three represents Excellent. We did not score the English 1010 bibliographies because some students handed in the entire bibliography for their group work, while others only submitted bibliographies for their individual contributions. This made it impossible to fully assess the quality of sources cited for the English 1010 group projects. Librarians scored a total of 191 papers, 75 annotated bibliographies, and 24 research proposals. We initially scored a small sample of these assignments and compared results, in order to ensure that we were scoring consistently. For the remainder of the assignments, two librarians scored each assignment and averaged their scores.

We scored research proposals for two learning goals: 1) identifying information needs; and 2) identifying appropriate sources to address those information needs. All of the proposals were from an online English class in which the librarian provided some basic instruction through class bulletin boards, largely by commenting on individual student posts. For the first learning goal on information needs, the average score was 2, or Good. For the second learning goal, identifying appropriate sources, the average score was 1.71, suggesting that students were still not aware of the variety of sources available to them in the library. When the same students' papers and annotated bibliographies were scored at the end of the semester, scores improved to 2.11 (Goal 1) and 2.46 (Goal 2), both in the Good range. This suggests that, in the course of working on their papers with suggestions from a librarian, they actually used a richer range of sources than they originally proposed.

Librarians scored the papers to see how they addressed the following four learning goals:

1. Students will use a variety of sources to explore a topic in order to produce documented material directed to a specific audience.
2. Students will evaluate information for its value, relevance, and accuracy in order to assess whether the information they find is credible and useful for their purpose.
3. Students will synthesize and integrate the information found in order to create new knowledge or understanding, answer a question, make an argument, or solve a problem.
4. Students will document their sources in order to acknowledge their intellectual debts and demonstrate their understanding of research ethics.

Scores averaged in the Good range for the entire sample, with the highest scores in the evaluation of sources and citing of sources.

Goal	One	Two	Three	Four	Total
Average	2.18	2.44	2.30	2.45	9.37

Table 10: Average scores for papers

We also calculated the averages for each class, to determine whether the number of library sessions or the type of instruction might influence scores. In most cases, the differences were not statistically significant, with the possible exception that the Honors students scored much higher than average. See Table 11. In some cases, the differences in the scores for each learning goal possibly reflect the emphasis of individual English instructors and the nature of different assignments. In class L, for example, students scored slightly below the Good range, but this was probably because the essay assigned emphasized more personal reflection than research. This class scored higher than average on Goal 3, integrating research into writing. Class J had the highest number of library instruction sections and scored higher than average on using a variety of sources, but lower than average on the rest of the learning goals. While instruction varied, scores on Goals 1 and 2 (using a variety of sources and evaluating sources) were highest in classes that used Problem-Based Learning.

Class	# of sessions	Instruction	Goal 1	Goal 2	Goal 3	Goal 4	Total
R (Honors)	2	1 introduction to the research process and 1 research day	2.71	2.79	2.75	2.84	11.09
G	1	1 Problem-Based Learning session	2.50	2.63	2.38	2.63	10.13
K	3	1 introduction to the research process, 1 research day, 1 lesson on evaluating information	2.09	2.55	2.19	2.42	9.25
S	2	2 research days	2.16	2.31	2.24	2.53	9.24
L	5	1 concept mapping lesson, 1 Problem-Based Learning Session, 1 research day, 2 Research Q & A sessions.	1.96	2.43	2.45	2.35	9.19
J	7	3 Problem-Based Learning sessions and 4 research days	2.32	2.38	2.16	2.26	9.12
H	na	Online class: individual comments to posts	2.11	2.34	2.16	2.36	8.97

Table 11: Average paper scores by class

We found similar results when looking at individual student performance, rather than class averages. Total scores were assigned as follows:

- 11-12 : Excellent
- 8-10.5: Good
- Less than 8: Needs Improvement

The Honors class had the highest percentage of students scoring in the Excellent range (68%) and no students scoring in the Needs Improvement category. Around 75% to 80% of students in all classes scored in the Excellent and Good range.

Class	Excellent	Good	Needs Improvement
G	25%	75%	0%
H and I	20%	54%	26%
J	26%	48%	26%
K	24%	55%	21%
L	27%	54%	19%
R (honors)	68%	32%	0%
S	25%	60%	15%

Table 12: Student Performance on Papers

The scores for annotated bibliographies were similar. The average score for all students for Goals One and Two were 2.35 and 2.64, respectively. The evaluating resources score tended to be slightly higher for the annotated bibliographies than for the papers, possibly because evaluation was a major component of the annotations themselves. Librarians scoring the essays had a better context for assessing the quality and relevancy of resources on this assignment.

Class	# of sessions	Instruction	Goal 1	Goal 2	Total
U	3	Two Research Days and a tour	2.79	2.88	5.67
T	6	Introduction to the research process, introduction to databases, two Problem-Based Learning sessions, two Research Days	2.67	2.75	5.42
M	n/a	online class	2.35	2.65	5.00
O	2	One Problem-Based Learning Session and one Research Day	2.24	2.67	4.90
H and I	n/a	online class	2.13	2.46	4.59

Table 13: Annotated Bibliography Scores by Class

Individual student performance was also similar to the papers. Between 74% and 81% of students scored in the Excellent and Good range in three classes, and all of the students scored in this range in two classes. In one class, 92% of students scored in the excellent range.

Class	Excellent	Good	Needs Improvement
H and I	35%	39%	26%
M	62%	15%	23%
O	48%	33%	19%
T	50%	50%	0%
U	92%	8%	0%

Table 12: Student Performance on Bibliographies

Examining actual student work, in the form of proposals, annotated bibliographies and papers, reveals some general patterns about library instruction in English 2010 classes. Most students perform at an adequate level, using a wide range of credible sources in their writing. Individual differences between classes probably result from differing emphasis of English instructors. In two classes, we had an entire range of assignments, from research proposals early in the semester to the final papers. Scores improved for the use of a variety of resources between the proposals and papers, suggesting that library instruction is having an impact. This is echoed in student comments on one-minute surveys and other self-assessments. No one model of instruction seems to produce more favorable results. Differences are likely the result of individual teaching styles, assignments, and the nature of each class.

While the results of our analysis are generally favorable, approximately one in five students still score in the Needs Improvement category. Furthermore, from the citation analysis, around the same percentage of students cited mainly websites or only websites. This suggests that there is sizable minority of students who still require a different kind of library instruction in order to learn how to effectively use a wide range of information sources.

Subject Specific Courses: English 3030 One-Minute Assessments

Librarians administered the one-minute assessment titled 3-2-1 after a single library instruction session for English 3030, a literature course. Instruction included demonstrations of specific library resources, including biography databases, the MLA International Bibliography, JSTOR, the New York Times database, and others. Students were asked the following questions:

- List 3 things that you learned in this session.
- List 2 things that you still don't understand about research or using the library.
- List one thing that you would change about this class.

In general, students were much more likely to rank a specific library database as the first thing they learned about from the session. The most popular were the biography databases and JSTOR. Learning about general library resources was the second most popular answer. When ranking their second and third learning highlights, students were more likely to mention advanced search techniques, such as learning how to use better keywords and navigate the library website. In contrast to English 1010 and 2010, many students seemed to know that the library had useful resources, so they appreciated learning about more specific search tools that would help in their research for this particular class. In discussing learning gaps, however, there remained a sharp split between students who found the session repetitive and too basic and those who still wanted to know how to do things like find physical sources in the library or how to check out a book. This suggests that even in upper-division courses, librarians must deal with a wide variation in student readiness for advanced library research.

Faculty Feedback Survey

Most of our assessments focus on students, including their perceptions of learning and actual analysis of their work. We also asked faculty for their perceptions of the impact of library instruction. At the end of the semester, we sent a survey to each faculty member (with the exception of English 1010 and 2010 instructors) who scheduled a library session for their classes. The survey asked faculty members whether the quality of student work met their expectations, and whether they thought this was a result of library

instruction. They were also asked whether students appeared more confident when conducting library research. We received 45 completed surveys. All of the faculty members who responded said that student work met their expectations and that students appeared to be more confident. In the comments, many faculty members said that student work was much improved after the library instruction session or that they received far fewer questions about how to do research papers. All of the respondents agreed or strongly agreed that the library instruction sessions met their course learning goals. The results of the survey are liable to be skewed toward those with a positive view of library instruction. Nevertheless, the qualitative comments provided librarians with useful feedback on how their instruction contributes to the teaching goals of USU faculty members.

Data-driven decisions: How assessment shapes what we do

In response to all of the student assessment data, librarians propose the following in order to improve library instruction and meet students' needs:

- Develop a handout and/or online tutorial about remote access.
- Develop instructional materials and tutoring in citation styles, in collaboration with the Writing Program.
- Develop optional library tours and quick workshops on basic skills like how to check out a book. These could be promoted for extra credit in English 1010 and 2010 classes, much like required visits to the Writing Center. This could address the issue of the very different skill levels and comfort among students in English 1010 and 2010 classes. These workshops might also address the 20% of English 2010 students, for example, who still seem to struggle to use library resources.
- Develop ways to pre-test students in advanced or upper-division classes to address the problem of repetition for some students and the need that some students have for more basic instructions. .

VIII. Goals

While the Library Instruction Program has been very successful in collaborating with the English Writing Program and individual faculty members in several departments, we still hope to expand our instruction offerings to better integrate information literacy into the curriculum. English 1010 and 2010 provide a solid base from which to work, but we need to build on our experience in order to figure out the best ways to sequence information literacy instruction in other general education classes and in the majors. The assessment of student work in English 2010 suggests that many students reach a solid level of proficiency in general research. Yet others still struggle. Furthermore, we do not have a clear picture of whether students apply their experience in English 2010 to other courses, especially those in their majors. Our specific goals for the coming years include:

- Expand instruction into the majors.
- Develop lesson plans for breadth courses.
- Begin planning for an assessment project to see whether students apply library instruction from one class to the next.
- Explore ways to integrate more interactive Web 2.0 applications to the library instruction environment.