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Information Literacy in the First Year: Collaborating, Planning and Assessing at Austin Peay

Sponsored by TLIRT

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Abstract from Conference Program:

Successful integration of information literacy competencies into a first year experience course involves curriculum development, instructor training, and learning outcomes assessment. Emphasis is on the planning process. The experiences of Austin Peay State University provide ideas that will help others systematically integrate, teach, and assess information literacy competencies.

Power Point for this presentation: [Web Format](#), [PowerPoint Format](#), [PDF format](#)

Introduction

Good Morning! Today we want to share one of the many successful components of our new first-year experience program – the integration of information literacy. We believe that our success is due to three reasons. First, librarians were involved in planning and implementing the first-year course from its inception. Second, we collaborated with many faculty and professional staff in integrating information literacy into the first-year course.

My perception that the APSU Community is one of the most supportive with regard to their library has not changed throughout this whole process. We have integrated freshman level information literacy outcomes into this course's curriculum because they listened to the librarians and worked with us to make it happen. Gina will be speaking in more detail about this collaboration in a few moments.

Third, I feel certain that we will be able to improve upon what we accomplished this year because of the assessment we have put in place. We intend to take the assessment results and modify our curriculum and pedagogy.

In today's program, I will first provide an overview of our plan.

You will then hear from Nancy who will provide details about the creation and implementation of LILT. She will also share selected LILT Quiz Results and how we are using these results as formative assessment. Gina will then go over how librarians were trained to deliver instruction. She will also share the active learning exercises that students completed in class. Finally, I will follow up with what we learned through our additional assessment efforts.

Overview

As we decided what was important to include in the instruction, we asked these questions, which are based on an instructional model presented by Deb Gilchrist, Lead Faculty of the Information Literacy Institute sponsored by the Association of College and Research Libraries:

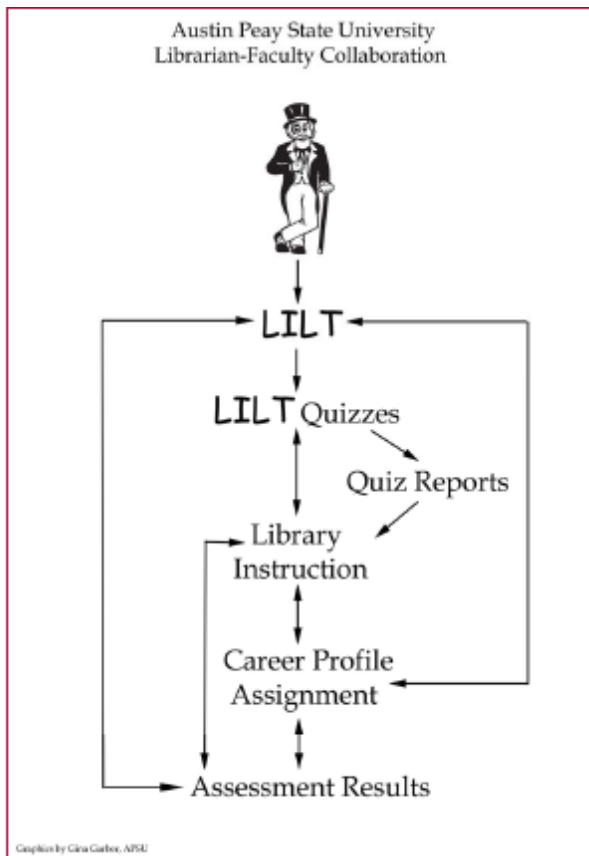
Selecting outcomes: What do we want students to be able to do as a result of this instruction?

Developing curriculum and pedagogy: What does the student need to know in order to do this well? What activity will facilitate the learning?

Assessment: How will the student demonstrate the learning?

Criteria: How will I know that the student has done this well?

A visual representation of the plan that we implemented is below:



We have carefully planned and implemented both formative and summative assessment. Briefly, we combine LILT, our Library Information Literacy Tutorial, and library instruction to help prepare students to successfully complete the Career Profile Assignment found in [Appendix B](#).

However, it should be noted that our efforts are also geared more broadly to provide students with a foundation of information literacy skills and values that will help them succeed in their college coursework. We intend to build upon this foundation with additional library instruction provided in upper level courses throughout the curriculum.

Students complete LILT quizzes as formative assessment. The assessment lets the student, the instructor, and the librarian know what still needs to be learned. Students can repeat LILT as many times as they wish. Indeed, we found that students did. At the end of our presentation today, I will also share information about the surveys and the focus group in which instructors and librarians participated; we used these instruments to assess LILT and our classroom instruction in order to find ways to improve both.

Placing what we planned in a larger context, I want to refer to a report of the [Association of American Universities and The Pew Charitable Trusts](#). This report is listed in the Selected Bibliography found in [Appendix B](#). The report states that students should be able to

- find a variety of sources
- assess source credibility
- use sources properly

At APSU, and I'm assuming at your institutions, these skills are expected for research projects and writing assignments. In their Career Profile Assignment, students

- must find and use three sources
- create a Works Cited page
- include a paraphrase and a direct quote

The goal of our first-year course information literacy component is to prepare students so faculty may expect them to

- use the Library Website <http://library.apsu.edu/> and the physical library as a gateway to high quality, academic information sources,
- begin to search library databases effectively (Boolean operators, keyword searching, truncation),
- begin to evaluate and select sources appropriate for college-level work, and
- cite sources in different styles, paraphrase correctly, and avoid plagiarism.

You can see we have too many concepts and skills to cover in one or two sessions. Nancy will now show LILT, our local tutorial that introduces students to many concepts, skills, and values before they meet with us.

LILT@APSU

LILT is Austin Peay's Library Information Literacy Tutorial. We adapted LILT from Western Michigan's SearchPath using an open source licensing agreement. SearchPath itself is an adaptation of the Texas Information Literacy Tutorial (TILT), one of the first successful open source tutorials.

LILT has 6 modules and covers the concepts that students need to know in order to access, evaluate and use information (see slides 9 and 10 of the accompanying slideshow for example LILT screen shots). LILT is specific to Austin Peay; for example, Module 3 covers how to use Felix G. Cat, our online catalog.

LILT Development and Technical Details

The LILT Development Team was led last summer by Lori, who provided overall direction and tied quiz questions to the *Information Literacy Competency Standards and Objectives for Information Literacy Instruction* documents. Aaron made it possible for students to interactively take the quizzes and get immediate feedback, as well as provide reports for professors and librarians. Gina and Nancy each rewrote a module to reflect Austin Peay's online catalog (Module 3) and databases, specifically InfoTrac (Module 4).

When SearchPath was selected as the base tutorial implementation, we noted that it lacked a fully developed testing mechanism. When Aaron looked at other available quiz functionality, he noted a preponderance of Perl, PHP, Java, and JavaScript code coupled with MySQL backend databases. With an eye toward making things easier for libraries that use Microsoft Internet Information Services (IIS) as their web server, Aaron chose to use Microsoft Access as the backend database and populated the pages via SQL queries.

Developing and testing the quiz modules took approximately 220 hours of Aaron's time during the summer of 2004. Tables were built to hold the data: Librarians and Professors tables for instructor specific data; Sections, Modules, and Surveys tables were created for module specific quiz questions; and lastly tables to hold completed quiz and survey results. Report pages were developed to pull specific information out of the completed quiz table for professors to use in grading and for librarians to use in adapting instruction for a particular section.

Interactive Learning in LILT

Each of the six modules features skills to be learned, at least one interactive exercise, a summary of skills learned, and a quiz with immediate feedback.

The exercises in LILT progress in the amount of effort needed by students. Module One features a game, done with Macromedia Flash software that has students answer whether the statement displayed best describes the library or the Web. The game, ThinkFast, moves quickly and students have to guess the library or the Web in a few seconds before the next statement is displayed. Students can play the game as many times as they like; they are not scored on how well they did.

In Module Two students are led through “choosing a topic”. The tutorial picks an example topic that is broad and shows students how to narrow the topic. Keywords are then selected and variations are brainstormed for two of the three concepts. Students must then brainstorm variations for the third concept, marketing.

In the interactive exercises in Module Four, students learn about article indexing databases. After students are introduced to general and subject article databases, they have the opportunity to practice searching in InfoTrac. Students are given an example topic (i.e., the death penalty) to search, and then shown how to limit their search for opinions for or against the death penalty. Once students go to the next screen they receive directions on the left side and enter information directly into InfoTrac on the right hand side of the screen. This is accomplished through the use of frames.

At the end of each module students take a ten question quiz, submit their answers, and immediately receive feedback regarding their results on the next screen. If students did not correctly answer a quiz question, the tutorial lets them know what the correct answer was. Students can go back to test their new knowledge as many times as they wish.

How we use LILT Quiz Results

After students take the quizzes, instructors and librarians can look at the results. Twenty-six of the thirty-seven APSU 1000 instructors surveyed reviewed the LILT quiz results for their classes. Of those twenty-six who responded, half thought the results had helped them to understand what students still needed to learn. Another eleven stated that the results may have helped them.

Librarians review the results for a class to see what concepts were not well understood by students as a class. Each class can be compared to all APSU 1000 students by using the “Librarians All Section Report”. We find that students tend to miss the same questions. For example, students have difficulty differentiating between what can be found in online catalog versus an article indexing database. Students are also often unclear about how Boolean operators work.

In preparing for our Library Day instruction session with the students, we librarians target the two to three concepts least understood by students in our assigned classes. We use the exercises we created and adapted to help students better understand what the concepts are and how they are applied. We’ll say more about these exercises later on.

This summer, we will use the quiz results to modify LILT in order to clarify confusing wording and to add more opportunities for practice and retention in the modules. We also hope that we can use what we learn in our ongoing collaborations with instructors across campus.

What the LILT Quiz Results Tell Us

Now we want to provide you with a few LILT questions so that you can see the information literacy outcomes we were targeting. Here is a question tied to Information Literacy Standard 3 (Critical evaluation of information and its sources), Outcome: Demonstrates an understanding that information in any format reflects/supports a point of view and may be designed to trigger emotions.

Every information source that presents a single viewpoint on an issue (e.g., the American Cancer Society website’s view on smoking) is biased, that is, it promotes support for a particular viewpoint.[True/False] Question 8, Module 5

Students seem to understand that any information source, including websites, presents a certain bias as indicated by 77 percent of the students who answered the question correctly.

As many of you know, we don’t always see this level of understanding when students turn in research assignments. However, because this concept is covered in LILT, we can now hold students accountable for having at least an understanding. We can also let professors know that they can expect their students to know this. We hope to build on the foundation LILT has laid and work with professors on integrating information literacy into second year and upper division courses.

Here is another question that corresponds to two separate Information Literacy Standards, namely:

- IL Standard 5 (Ethical use of information), Outcome: The information literate student demonstrates an understanding of

what constitutes plagiarism and does not represent work attributable to others as his/her own.

- IL Standard 4 (Effective use of information to accomplish purpose), Outcome: The information literate student integrates the new and prior information, including quotations and paraphrasings, in a manner that supports the purposes of the product or performance.

The question is

*You can avoid plagiarizing by: [select the correct response or responses]
Question 4, Module 6*

Of all the LILT questions that students answered, the question regarding plagiarism received the lowest percentage of correct responses, with only 57 percent of the students answering correctly. Based on librarians' work with piloting the APSU first-year course over the last two years, we are finding that students do not understand what plagiarism is. During the first year, 90% of the students in one class simply copied and pasted information verbatim from websites into their papers. They did not paraphrase; they did not use direct quotations; they did not document their sources. Since then, a more concerted effort is being made to include plagiarism information in the first year course, whatever form or shape it takes.

As part of the APSU 1000 course, first year students complete a Career Profile Assignment that requires them to use at least one paraphrase, one direct quotation and that they document their sources using an accepted citation format.

For the following question, we hoped to help students understand that some information is formally reviewed and some is not.

*The statement "Information is selected through a review process: best describes information found: [select the correct response]
Question 2b, Module 1*

Even though we did not have time to go into great detail about this, we wanted to plant the seed so that when students are exposed later to their major discipline's literature, they would have been introduced to the concept of a review process. We also wanted the students to realize that Libraries contain reviewed sources, while the Web contains material whose quality is sometimes questionable.

In order to become more savvy searchers, students need to understand and become more effective in using Boolean operators, so we asked the following:

*Using the connector AND broadens your search; you will get more records back. [True or False]
Question 9, Module 2*

In library instruction, we stress to the students that learning search protocols such as truncation, keyword searching, and Boolean operators can help them pinpoint needed information by having the computer narrow their search results to a more precise, manageable list.

Finally, we wanted students to understand that they have access to the invisible web, that is, the information sources found only in Libraries that have subscribed to commercially produced databases, so we asked

*Which of the following is a good use of the "Invisible Web" (web sources that libraries buy and deliver)? [select the correct response or responses]
Question 4, Module 5*

In order for students to do LILT, take quizzes and have a library session, Gina worked with the first year course planning committee to include information literacy in the curriculum used by APSU 1000 instructors. She will now speak to the importance of collaboration among all those who participated in launching the first-year course.

Collaboration

Collaboration underlies the Library's success in the APSU 1000 course. When the Library committed to the APSU 1000 course, we knew it was critical that the librarians share the same vision and understand the purpose of the Library's role in the First Year Experience (FYE) Program. We also needed to agree on the desired outcomes. In order to successfully meet these outcomes, collaboration needed to occur on three levels: Administrative, Librarian/APSU 1000 Instructor, and Library Faculty.

Administrative Level: The library (information literacy) component of the FYE Program is a vital part of APSU 1000 because of the librarian involvement in the planning and development stages of the course. From the beginning, librarians were able to stress the importance of information literacy to key administrators, faculty, and staff members; some even seemed to be enlightened by the librarian presence. By presenting the desired outcomes to the Administrative Level, librarians showed what faculty members could expect from their students once they successfully completed APSU 1000. To incorporate these outcomes into student learning, librarians took an active part in developing course curriculum, contributing to the textbook and syllabus, and participating in other decision making efforts that support the APSU 1000 course.

Librarian/APSU1000 Instructor Level: Librarians were assigned to APSU 1000 sections before the course begins. The librarians initiated contact with the APSU 1000 instructors to discuss the Library Research Assignment, Library Day, and Academic Honesty Day. During this meeting, librarians worked to build a rapport with the APSU 1000 instructors as they began to plan the class dates, times, and content covered by the librarian. At that time, the librarians knew how many days to schedule for instruction, location, and what resources were needed. Librarians provided as much instruction as the APSU 1000 instructor requested. In some cases librarians were expected to provide instruction for three or four meetings of each APSU 1000 section.

Library Faculty Level: When the Library committed to the FYE Program, only four of the twelve Librarians had classroom instruction experience. The Instructional Services Librarian led a training initiative for the librarians in which all Librarians took a teaching/learning styles inventory (see learning style inventory link under Burd and Buchanan in the Selected Bibliography – [Appendix B](#)). Meeting on a regular basis to discuss concerns, fears, and ideas began soon after taking the inventory. Librarians shared active learning activities and demonstrated them at meetings. Eventually the active learning activities were placed in a shared APSU 1000 folder on the server so they were available to all Librarians. A template was created for consistency to ensure that titles, objectives, and activities were easy to identify. Librarians adapted the activities for their teaching style, class size and make-up. Lori will now discuss further assessment that was conducted in the project.

Additional Assessment

In addition to the formative assessment of student learning outcomes that we implemented in the LILT tutorial, we chose to survey the instructors and librarians for their opinions about what modifications were needed in the information literacy instruction integrated into APSU 1000. As you can see, our response rate was very good, in that 37 of 44 instructors and 12 of 12 librarians responded to the two separate surveys.

Here's what we learned when we asked the instructors what concepts they thought to be most helpful to their students:

- 24 cited Use search strategy techniques (e.g., Boolean operators)
- 22 said Use the Library as a gateway to quality academic sources
- 20 replied how to cite, paraphrase, and avoid plagiarism
- 16 pointed to how to evaluate and select appropriate sources for college work, and
- 13 cited Felix 9 Lives Self-Guided Tour/Librarian-led tour

We also asked librarians, who ordered the most helpful as follows:

1. Use Library as a gateway
2. Use search strategy techniques
3. Felix 9 Lives Self-Guided Tour/Librarian-led tour
4. Citing, paraphrasing, and avoiding plagiarism
5. Evaluating and selecting sources for college work

When asked how many library instruction sessions should be included in APSU 1000, 29 out of 37 instructors and 11 out of 12 librarians believe that two or more sessions were needed. 27 instructors replied "Yes" and 11 instructors replied "Maybe" when asked if LILT should be required in the future; all 12 librarians stated LILT should be required.

Questions regarding collaboration were addressed. First, instructors were asked if they collaborated with the librarian in front of their class - 19 did and 18 did not. Six librarians stated that they collaborated with their assigned instructors; six did not. Instructors responded to additional questions regarding future collaboration as follows:

- Instructor interest in collaboration with librarians in major discipline area:
Yes 25 Maybe 10 No 1
- Co-creation of library-related assignments for a class
Yes 18 Maybe 14 No 2
- Collaboration on a classroom presentation
Yes 23 Maybe 9 No 4
- Development of a web page
Yes 7 Maybe 16 No 10
- Construction of a web tutorial
Yes 8 Maybe 15 No 11

When asked if they thought that library instruction improved quality of career profile paper, 59% of APSU 1000 instructors replied yes and 49% said maybe. When asked "Did library instruction lay a good foundation in library use for later academic success?" 48% APSU 1000 instructors responded that "students learned a great deal" while 38% believed that "time will tell" and 11% weren't sure. One person thought that students already possessed the knowledge. We also were very interested in whether instructors believed that "faculty can now expect students to find/use high quality information" - 92% stated "definitely yes" or "yes."

In addition to the Instructor and Librarian surveys, we decided to conduct a focus group of selected instructors and librarians. The following points came out of this time spent together.

- LILT: helpful introduction to the library; should be required of all students; instructors should become familiar with LILT content and hold students accountable for it
- Career Profile Assignment: important to the course; provides students with an opportunity to practice library skills; modify into a journal format or called a "report" so that students understand that research is required
- LICR (Library Instruction and Computer Room): All library instruction sessions need to occur here, because 1) students need to enter the Library, 2) the available instructional technology, and 3) comfort zone for librarians

Finally, when asked to what degree "APSU 1000 helped me to improve my ability to use the APSU library effectively" in the overall APSU First-Year Experience Student Survey, 35% of the 1,425 students replied "Significantly", 47% said "Somewhat", and 18% "Not at all." We had hoped that the percentage of students who perceived their ability to use the library to be significantly improved would be higher. However, when compared to responses concerning the other twelve course objectives, we found that the next highest objective garnered a significant response by only 30% of the students, while the remaining ten objectives received 22% or less in terms of having significant improvement. In light of this, we believe that the librarians did have a positive impact.

Conclusion

In conclusion, we wish to make the following three points.

1. Librarians and instructors should collaborate to make sure that students gain information literacy knowledge, skills, and values that will prepare them to succeed both academically and in life.
2. Assessment should be included in the course planning process and the results used to improve instruction.
3. Once an information literacy foundation is laid at the freshman level, librarians and instructors should work together to see that more advanced information literacy outcomes are addressed and become articulated across the curriculum.

APPENDIX A

LIBRARY RESEARCH AND ESSAY ASSIGNMENT

TOPIC: Career Profile

This assignment will allow you to explore a career or field of your choice while at the same time learning how to use the library. You will research a career, write an essay about what you discover and compile a bibliography of the sources you used. Follow the steps below to begin.

1. Go to the Library Website at <http://library.apsu.edu> and search *Felix Online Catalog* to find the *Occupational Outlook Handbook*, *Onet* or similar sources. Use the sections relevant to your career.
2. Use the Library Website to locate the InfoTrac database and use it to gather more information.
3. Write a 2-3 page essay (500-750 words, typed, and double spaced) that relates your career research to yourself. The essay should be titled "Personal Career Analysis: followed by a descriptive subtitle specific to your paper." The paper should address all of the following questions:
 - o Introduction:
 - Identify and give a brief description of your career.
 - Why is this a field that interests you? Be focused and state a concrete opinion, since this will form the thesis of your essay.
 - o Body:
 - What educational requirements are needed for this career? What skills associated with a liberal arts education will be helpful in this career?
 - What aptitudes [abilities] are necessary?
 - How do you plan to meet these requirements?
 - What personality characteristics and values are commonly found in people who enjoy this career? Do you feel you possess these characteristics?
 - What is the employment outlook for this job? Beyond this job, what are the opportunities for a career growth?
 - Use journal articles to identify a current trend or a professional issue associated with this career. What is it, and why is it important?
 - Identify a professional association for this field. What is the association and what does it do? Do they have a Web site? What is the Website's URL?
 - In your paper, you must use at least one direct quotation and at least one correct paraphrase from your research sources. You must also cite your sources using the style guide required by your First-Year Seminar instructor. You need to do these things properly, avoiding even unintentional plagiarism, which will be discussed in your class.
 - o Conclusion:
 - Is this still a career in which you are interested? If not, why?
 - If it does still interest you, what is one step you can take this year to help prepare yourself for that job?
4. Compile a bibliography/works cited page listing each source you used, including *Occupational Outlook Handbook*, *Onet*, and any journal articles or web sites. You must include at least three sources in your bibliography/works cited page. Ask your First-Year Seminar instructor what style guide you should use. Use the *Online Style Guides* (located on the Library Website under *How-To-Guides*) to help you cite your sources correctly.
5. Turn in your Personal Career Analysis and Bibliography to your First-Year Seminar Instructor.

Adapted from ACU's Brown Library

<http://www.acu.edu/academics/library/univseminar/libresearch.html>

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APPENDIX B

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[covers learning styles and use of various inventories, including the *Index of Learning Styles* -see <http://www.ncsu.edu/felder-public/ILSpage.html> - that was used in APSU librarian training]

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