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Assessing Information Literacy Instruction in Selected English Classes
At Tennessee State University

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Abstract

In this study, the Brown-Daniel Library located at Tennessee State University (TSU) provided information literacy/bibliographic instruction (IL/BI) to six selected English 1010 classes with a total of 119 students in the spring semester of 2010. Students were administered an online pretest prior to the instructor's presentation, and administered the same test as a posttest following the lecture. All classes were held on days that allotted one hour and twenty minutes which gave the library faculty time to administer both tests. Students were also asked to evaluate instruction using a Likert-style measure called Library Orientation Survey. All results were electronically submitted to the investigators for analyses.

Introduction

Tennessee State University, a comprehensive, urban, coeducational university with two campus locations in Nashville, Tennessee was founded in 1912 as a land-grant institution, known then as the Agricultural and Industrial State Normal School. The University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools and awards associate, bachelor's, master's, specialist in education, and doctoral degrees. Present enrollment at TSU is approximately 9,000 (headcount) and approximately 7,500 (FTE) students. Campus ethnic diversity constitutes 75 percent African Americans, 22 percent White, and three percent other. There are approximately 434 full-time and 167 adjunct faculty members providing teaching and/or research services in support of the University's academic mission. As stated in the University's Academic Master Plan (AMP)[1] it "recognizes that a culture of continuous assessment and improvement is integral to the success of the University" and the "successful implementation of the AMP and realization of the benefits are contingent, in part, on how the University monitors the plan, assesses and reports its accomplishments, and uses the assessments for improvement" (p. 10, 30).

Question

The Brown-Daniel Library would like to explore the question: Are there differences in knowledge scores associated with library instruction and information literacy among selected English 1010 classes on pretest and posttest results?

Literature Review

According to Jackman[2], Foster[3], Eisenberg, Lowe and Spitzer[4], and Badke[5], the term information literacy had its origins over thirty years ago when it was coined by Paul Zurkowski. Zurkowski advocated that institutions of higher learning engage students with techniques and skills to strengthen their ability to use information more effectively and to make them contend better in the world around them. Breivik and Gee[6] explored information literacy in higher education from the respective viewpoints of an academic library director and University president, while the American Library Association Presidential Committee on Information Literacy's final report published the same year influenced the role and importance of information literacy in higher education through a task force formed by the Association of College and Research Libraries (ACRL). In 2000 ACRL published a set of information literacy competency standards for higher education that provided a set of graduated benchmarks designed as frameworks for the assessment of an individual's level of knowledge attainment. These standards focused on skill sets that included how well an individual could locate, evaluate, and use information effectively and ethically.[7]

Gilstrap and Dupree[8] pointed to the importance of critical thinking skills and their growth over the past several years, whereas Saunders[9] pointed to the emphases on critical thinking skills related to student learning outcomes as strong themes emerging throughout higher education. Janes[10] reported that 6,000 college students' inability to use information tools appropriately to reliably evaluate websites, form search statements, and select appropriate databases for queries that resulted in critical thinking skills to effectuate measurable student learning outcomes. Macpherson[11] reported better results from an experiment teaching module designed to teach undergraduates concepts of the advantages and restrictions of electronic databases and appropriate search techniques. Conversely, Foster[12] lamented that the results of a study conducted by the Educational Testing Service that revealed that only 13 percent of 3,000 college students and 800 high school students passed muster as being information literate.

The Boyer Commission[13] study found disappointing results when it reported that students did not have an understanding of retrieving information or how to manipulate it to a meaningful conclusion. The Commission called on institutions of higher learning to improve on students' ability to become critical thinkers and problem-solvers such that "the skills of analysis, evaluation and synthesis will become the hallmarks of a good education (p. 6)". Jones [14] in citing information from the National Center for Education Statistics, identified information literacy as an all too important requisite skill that students should have to become critical thinkers and the ability to locate, access, and evaluate needed information. The American Association of Colleges and Universities[15] submitted that "strong and analytical communication, quantitative and information skills (p. 5)" be among the recommended student outcomes in higher education.

Librarian and Faculty Collaboration

Rochman[16] pointed to the importance of collaboration efforts needed between disciplinary faculty and librarians to effectively incorporate and/or integrate information literacy into the curriculum. Scales, Matthews and Johnson[17] discussed particular collaboration efforts between librarians and academic faculty in implementing information literacy programs in courses. They "described their experiences concerning a collaborative project to revise a credit-bearing information literacy course" (p. 229) which some colleges have already put in place. Mackey and Jacobson[18,19]made the argument that the librarians role, though central, is to engage faculty in content areas to partnerships that will make IL an integral part of the curriculum. Jabro and Corinth[20]; Samson and Millet[21]; McMillen, Miygishima and Maughan[22]; Gauss and King[23] all discussed the merits of collaborative/partnership experiences of integrating information literacy into classroom settings at all levels and assessing student learning outcomes.

Assessments, Evaluations and Outcomes

Examining the literature to identify meaningful assessment measures for information literacy has been a challenge. Although several evaluation measures abound, few are considered valid in determining critical thinking and analytical skills. In a goodwill effort to create a model, the Middle States Commission on Higher Education[24] published a document called *Assessing Student Learning and Institutional Effectiveness.* However, rather than this document serving as a template for assessing information literacy, it served to explain characteristics and/or features of evaluation tools. According to Matthews[25] other assessment tools, such as the *Collegiate*

Learning Assessment Project (CLA) was created in 2000 by the Council for Aid to Education (CAE)[26] to measure critical thinking and analytical skills – but its design and make-up was geared toward general education and was only narrowly inclusive of information literacy skills. It was noted in the investigations of Lazerson[27], Meuleman[28], Hernon and Dugan[29] that more needs to be done in developing assessment measures for information literacy for programs in higher education for measureable outcomes. Ewell[30] offered that "more authentic and comprehensive assessments - ideally constructed to examine how much students have grown during the college experience are badly needed" (http://measuring up.highereducation.org/ commentary/gradinglearning.cfm (accessed February 21, 2010).

Quantitative and qualitative assessment tools should be designed to reliably measure what they say they will measure. In the case of information literacy, assessment tools should measure proficiency levels related to critical thinking, analytical and higher-order skills in students as they progress through the curriculum. According to Scharf, Elliot, Huey, Briller and Joshi[31] assessment methods such as surveys and multi-choice tests are most common but they are not accurate measures of performance, i.e., critical thinking and analytical skills. They claimed that "it is difficult to devise questions to adequately assess a student's ability to use new information analytically to achieve a defined purpose" (p. 462). In 2003, the ACRL Board[32] advocated that several methods be employed to determine achievement measures for information literacy. Therefore, the ACRL Board incorporated language that "called for assessment planning, integration with course and curriculum assessment, measurement, and suggested that multiple methods of program evaluation would be needed."

Accrediting organizations such as the Middle States Commission on Higher Education[33] American Association of Higher Education, Council of Independent Colleges, etc., published their criteria with these standards requiring assessment measures and outcomes for students in higher education. Scarf, et al.[34] asserted that "yet to the extent that accreditation agencies set goals but do not provide strategies, these agencies give little guidance; if we look to such agencies, there is little to be found on methods of information literacy assessment" (p. 463).

Three librarians at Kent State University, O'Connor, Radcliff, and Gedeon [35] developed the *Standardized Assessment of Information Literacy Skills* (SAILS), a web-based assessment instrument. However, this instrument did not assess the ACRL standard that requires "students to use information to accomplish a purpose" (p. 464) which, obviously, is required for

information literacy. Other computer-based tests, such as the Information Literacy Test (ILT) developed at James Madison University, did not meet the goal as well. Nevertheless, the *Collegiate Learning Assessment*[36] and the Rand Corporation came closest to what the ACRL Standards attempted to accomplish, by creating computerized assessments aimed at gathering qualitative data to reveal measured outcomes through student-constructed responses.

Assessment at Tennessee State University
Brown-Daniel Library

At Tennessee State University, assessment measures/instruments for information literacy/bibliographic instruction are by-and-large quantitative and are administered via online surveys and paper formats. These assessments include pre- and posttest questionnaires, Likert-style student evaluation of instruction and user satisfaction surveys. The results are analyzed, and feedback is provided to faculty librarians as well as posted on our website. Steps are then taken to enhance and/or improve test formation, instruction, and services based on feedback. The Brown-Daniel Library has also developed an Information Literacy course for-credit that will be submitted for approval by academic committees at the university.

The library was also represented at the Information Literacy Leadership Institute[37] (ILLI) in November 2007, hosted by Johnson C. Smith University in Charlotte, North Carolina and funded by the Mellon Foundation. As part of the evaluation and assessment process for the Institute, each participant was required to submit a proposal for changes and upgrades for information literacy at their home institutions. These proposals were based on current practices, ideas and insights gained from the institute, fellow program participants, colleagues, and best practices in academic libraries regarding establishment, implementation, assessment, and modification of information literacy objectives.   As specifically related to assessment, participants also benefited from a presentation and "hands-on" assessment workshop conducted by Teresa Y. Neely[38], University of New Mexico library director and recognized authority on information literacy assessment.

Study Methodology

In spring 2010, one hundred-nineteen (n=119) English 1010 students from six classes were administered an online pretest/posttest in their information literacy/bibliographic instruction (IL/BI) sessions. Classes held on Tuesday and Thursday were chosen because they

are allotted one-hour and twenty minutes class durations. This time allotment allowed the instructor to administer both the pretest and the posttest. The pretest was administered prior to the presentations, and the same pretest was administered as a posttest following the presentation to compare results.

The pretest/posttest included 17 basic questions that were designed to assess student knowledge through responses regarding the location of resources, services, classification systems, recognizing different types of sources, etc., in the TSU Libraries/Media Centers. The librarian's lecture served as the intervention to determine instructional effectiveness. Upon completing the tests, results were electronically submitted to the researcher for analysis. Each participants pretest and posttest was coded and the results were compared. All tests that could not be matched were counted and coded but not used. Results were analyzed using SPSS 11.0 for Windows.

Following the pretest/posttest submissions, students were also asked to evaluate instruction using a Likert-style measurement scale called Library Orientation Survey. Ninety-seven (n=97) evaluations were submitted and the results were submitted to the researcher for analysis. Results were analyzed using SPSS 11.0 for Windows.

Study Results

The sample of English 1010 students (n=119) pretest and posttest results were compared and were shown to be accurately representative. A two-tailed t-test was used to compare results before and after the lecture intervention. The alpha level was set at $p < 0.05>$ and the calculated probability value was .000.   The paired mean scores for the pretest performance for skills of students was 9.83, whereas paired mean scores for the posttest performance for skills of students was 11.71, respectively as shown in Table 1. The post-test performance for these same skills increased overall by twenty percent.

Table 1

	Mean	N	Standard Deviation		Standard Mean Error
Paired Samples Statistics					
Pretest	9.83	119	1.989		.182
Posttest	11.71	119	2.578		.236

	N	Correlation	Significance
Paired Samples Correlations			
Pretest & Posttest	119	.037	.691

Paired Samples Test
(Paired Differences)

	Mean	Standard Deviation	Std. Error Mean	95% Confidence Intervals of the Difference		t	df	Sig (2-tailed)
				Lower	Upper			
Pre & Posttest	-1.882	3.197	.293	-2.463	-1.302	-6.422	118	.000

Student evaluation of instruction was analyzed in SPSS 11.0 for Windows and student responses are represented in Table 2 below. Students had an overall favorable perception of instruction.

Table 2
Library Orientation Survey
(Evaluation of Instruction)
Averaged Responses For Each Question (n=97)

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. This session gave me valuable information to better function in the library	74.2	16.5	8.2	0	1.0
2. The presentation has given me adequate understanding of and skill in using the online catalog	76.3	15.5	8.2	0	0
3. The presentation has given me adequate understanding of and skill in using the online databases	73.2	17.5	9.3	0	0
4. The handouts and/or Internet-based information were useful	67.0	19.6	12.4	1.0	0
5. The information was appropriate for the course contents	80.4	13.4	6.2	0	0
6. Too much information was given at the library presentation	50.5	6.2	16.5	21.6	5.2
7. The material was presented at an appropriate pace	66.0	20.6	9.3	4.1	0
8.The instructor had effective communication and presentation skills	71.1	18.6	8.2	1.0	1.0
Average Percentages	69%	15%	9%	3.4%	.6%

Discussion

A key theme central to this research was to investigate the extent to which English 1010 students performed on library literacy pre- and posttests to determine knowledge outcomes. It was also important to investigate how these students perceived library instruction during their library sessions. However, it was disappointing that student performance only increased by twenty percent on posttest results. Although students' scores increased marginally on posttest results, one should not be misled to believe that higher scores on such tests could be interpreted

to conclude that they are information literate. Gloss and Latham[39] agreed that students who do well on posttests should not be lulled into a false sense of skill attainment when measured against criteria set forth by the information literacy benchmarks of ACRL, while Neely recommended that survey questions be as clear and unambiguous as possible in order to prevent confusion on the part of those being assessed. As a result, TSU has used these recommendations and assessment data in efforts to improve its information literacy program in general and its assessment instruments in particular.

Notes and References

1. Academic Master Plan 2009-2028: Envisioning the Future Through the Lens of Our Heritage, Tennessee State University, Available: http://www.tnstate.edu/uploads/documents/AMPSept08FINAL.pdf (8 May, 2010).
2. Lana N. Jackman, "A New Year, An Unending Legacy for the National Forum on Information Literacy," *College and Research Library News* 71, no. 1 (Jan, 2010): 7. Available:http://vnweb.hwwilsonweb.com.sultan.tnstate.edu/hww/results/getResults.jhtml?_DARGS=/hww/results/results_common.jhtml.33 (May 20 2010).
3. Andrea L. Foster, "Information Navigation 101," *Chronicle of Higher Education* 53, (March 2007): A38-A40.
4. Michael B. Eisenberg, Carrie A. Lowe, & Kathleen L. Spitzer, *Information Literacy: Essential Skills for the Information Age,* 2nd ed. (Santa Barbara, CA: Libraries Unlimited).
5. William Badke, "Foundations of Information Literacy: Learning From Paul Zurkowski." *Online,* 34, no. 1(Jan/Feb 2010): 48-50.
6. Patricia Senn Breivik & E. Gordon Gee, *Information Literacy: Revolution in the Library* (New York: American Council on Education/Macmillan, 1989).
7. ACRL: Association of College and Research Libraries, *Information Literacy Competency Standards for Higher Education*, Available: http://www.ala.org/acrl/ilintro.html. (March 8, 2010).
8. Donald L. Gilstrap & Jason Dupree, "Assessing Learning, Critical Reflection, and Quality Educational Outcomes: The Critical Incident Questionnaire, *College & Research Libraries*, 65, no. 5 (September 2008): 4407-426.
9. Laura Saunders, "Regional Accreditation Organizations' Treatment of Information Literacy: Definitions, Collaboration, and Assessment," *Journal of Academic Librarianship,*33, no. 3 (May 2007): 317-326.
10. Joseph Janes, "Why Johnny Can't Search," *American Libraries* 38, no. 1 (January 2007): 38
11. Karen Macpherson "Undergraduate Informs on Literacy: A Teaching Framework." *Australian Academic & Research Libraries* 35, no. 3 (September 2004): 226-241.
12. Andrea L. Foster, "Information Navigation 101." *Chronicle of Higher Education* 53, no. 27 (March 9, 2007): A38-A40.
13. Boyer Commission on Educating Undergraduates in the Research University, Reinventing Undergraduate Education: A Blueprint for America's Research Universities (Stonybrook, NY: State University of New York): 6. Available: Pres/boyer.nsf/ 673918d46fbf653e852565ec0056ff3e/d955b61ffddd590a852565ec005717ae/$FILE/boyer.pdf
14. Elizabeth Jones, "National Assessment of College Student Learning: Identifying College Graduates' Essential Skills in Writing, Speech and Listening, and Critical Thinking" Washington, DC: National Center for Education Statistics, 1995.
15. Association of American Colleges and Universities, Board of Directors, "Our Students' Best Work: A Framework for Accountability Worthy of Our Mission, (Washington DC: Association of American Colleges and Universities, 2004): 5.
16. Ilene F. Rockman, "Strengthening Connections Between Information Literacy, General Education, and Assessment Efforts." *Library Trends* 51, no. 2 (Fall2002): 185.

17. Jane Scales, Greg Matthews, & Corey M. Johnson. "Compliance, Cooperation, Collaboration and Information Literacy." *Journal of Academic Librarianship* 31, no. 3 (May 2005): 229-235.

18. Thomas P. Mackey & Trudi E. Jacobson. "Developing and Integrated Strategy for Information Literacy Assessment in General Education," *JGE: The Journal of General Education* 56, no. 2 (April 2007): 93-104.

19. Thomas P. Mackey, & Trudi E. Jacobson. "Information Literacy." *College Teaching* 53, no. 4 (Fall2005 2005): 140-144.

20. Ann Jabro & Jacqueline Corinth, "Crisis in Information Literacy," *Academic Exchange Quarterly* 9, no. 2 (Summer 2005): 46-50.

21. Samson, Sue, and Michelle S. Millet. "The learning environment: First-year students, teaching assistants, and information literacy." *Research Strategies* 19, no. 2 (December 2003): 84-98.

22. Paula S. McMillen, Bryan Miyagishima & Laurel S. Maughan. "Lessons Learned about Developing and Coordinating an Instruction Program with Freshman Composition." *Reference Services Review* 30, no. 4 (2002): 288-99.

23. Gauss, Nancy Venditti and William E. King. "Integrating information literacy into freshmen composition: beginning a long and beautiful friendship." *Colorado Libraries* 24, no. 4 (Winter 1998): 17-20.

24. Middle States Commission on Higher Education, *Developing Research and Communication Skills: Guidelines for Information Literacy in the Curriculum.* (Philadelphia, PA: Middle States Commission on Higher Education, 2003).

25. Jay Mathews. "Measure by Measure." *Atlantic Monthly* 294, no. 3 (October 2004): 134.

26. Council for Aid to Education (CAE). *Collegiate Learning Assessment* (CLA) Project. Available:http://www.cac.org/content/procollegiate.htm. (February 15, 2010).

27. Marvin Lazerson, Ursula Wagener & Nichole Shumanis. "What Makes a Revolution?" *Change* 32, no. 3 (May 2000): 12.

28. Yvonne Nalani Meulemans, "Assessment City: The Past, Present, and Future State of Information Literacy Assessment." *College & Undergraduate Libraries* 9, no. 2 (2002): 61-74.

29. Peter Hernon, Robert E. Dugan & Candy Schwartz, *Revisiting Outcomes Assessment in Higher Education,* (Westport, CT: Libraries Unlimited, 2006): 456.

30. Peter T. Ewell, Grading learning: Projects and prospects in measuring up 2006 Available: http://measuringup.highereducation.org/commentary/gradinglearnng.cfm (accessed February 12, 2008).

31. Davida Scharf, et al. "Direct Assessment of Information literacy using Writing Portfolios." *Journal of Academic Librarianship* 33, no. 4 (July 2007): 462-477.

32. ACRL: Association of College and Research Libraries, *Information Literacy Competency Standards for Higher Education*, 2003, Available: http://www.ala.org/acrl/ilintro.html. (March 8, 2010).

33. Middle States Commission on Higher Education, *Developing Research and Communication Skills: Guidelines for Information Literacy in the Curriculum.* (Philadelphia, PA: Middle States Commission on Higher Education, 2003).

34. Scarf, et al., p. 34.

35. Lisa G. O'Connor, Carolyn J. Radcliff, & Julie A. Gedeon. "Applying Systems Design and Item Response Theory to the Problem of Measuring Information Literacy Skills." *College & Research Libraries* 63, no. 6 (November 2002): 528.

36. Council for Aid to Education (CAE). *Collegiate Learning Assessment* (CLA) Project. Available:http://www.cac.org/content/procollegiate.htm. (February 15, 2010).

37. Fletcher F. Moon, Report to the Information Literacy Leadership Institute (ILLI), January 10, 2008, Johnson C. Smith University, Charlotte, NC.

38. Teresa Y. Neely, I*nformation Literacy Assessment: Standards-based Tools and Assignments.* (Chicago: American Library Association, 2006): 216.

39. Melissa Gross & Don Latham. "Attaining Information Literacy: An Investigation of the Relationship Between Skill Level, Self-estimates of Skill, and Library Anxiety." *Library & Information Science Research* 29, no. 3 (September 2007): 332-353.