

# Distance Learners: Teaching and Assessing INFORMATION LITERACY

Information literacy and critical thinking skills must be priorities for every academic library. At Southern Adventist University (SAU), Collegedale, Tennessee, in keeping with the institution's goals, students are helped to master "basic skills of critical reasoning, independent thinking, computation, communication, collaboration, and creativity needed to enter the workplace with confidence, to pursue lifelong learning, and to exercise leadership as contributing citizens who advance their families, communities, the church, and society."<sup>1</sup> This includes learners who never, or rarely, set foot on campus.

The university must provide equal library support for off-campus students, including instruction, even if they live hundreds or even thousands of miles away. The Association of College & Research Libraries (ACRL) guidelines state that "Access to adequate library services and resources is essential for the attainment of superior academic skills in post-secondary education, regardless of where students, faculty, and programs are located. Members of the distance learning community are entitled to library services and resources equivalent to those provided for students and faculty in traditional campus settings."<sup>2</sup>

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For Adventist tertiary institutions in the United States, distance-learning librarians also need to follow their accrediting body's guidelines for electronic library support. For example, the Southern Association of Colleges and Schools (SACS) states that "quality, relevance, accessibility, availability, and delivery of resources and services . . . regardless of location . . . must be taken into account in evaluating the effectiveness of library and learning resource support."<sup>3</sup>

## **Electronic Initiatives**

There is an abundance of research on how distance-learning (DL) librarians use electronic initiatives to provide "equal support." However, the sophistication of the support is generally determined by the attitude of financial administrators and the creativity of the librarians. Support may include full text and bibliographic database access, document delivery, and asynchronous research assistance via E-mail and even synchronous desktop videoconferencing E-mail applications adaptable to unique virtual meeting spaces.<sup>4</sup> These services can be delivered through a Web page designed exclusively for distance learners, accessible through a hyperlink in each online course.

Academic librarians can enhance their school's teaching and learning en-

BY ANN GREER



**A librarian uses telecommunications to answer a distance-education student's question.**

vironment by developing instructional tutorials. Because the Internet offers quick and easy access to both quality and mediocre information, students often need assistance in discerning the difference. Instructional tutorials can help distance learners develop information literacy and critical thinking skills that enable them to achieve their immediate academic goals and facilitate lifelong learning.

Librarians can also help teachers develop tools for assessing students' skills and achievements. The results of such assessment can provide one indicator of the quality of student learning for school administrators and accrediting agencies. These two areas will be explored in this article.

Figure 1

### Bloom's Taxonomy of Educational Objectives

Level	Type of Performance
6. Evaluation	Make critical judgments.
5. Synthesis	Devise plan and accomplish it.
4. Analysis	Identify relationships, elements, and organizational principles of a situation.
3. Application	Remember knowledge to solve problems.
2. Comprehension	Transpose, interpret, and extrapolate.
1. Knowledge	Recall words, facts, dates, principles, theories, etc.

Adapted from Benjamin S. Bloom, ed., *Taxonomy of Educational Objectives: The Classification of Educational Goals: Handbook I, Cognitive Domain* (New York: Longmans, Green, 1956).

## Developing and Measuring Critical Thinking Skills

The critical-thinking skills necessary for learning are based on Bloom's Taxonomy of Educational Objectives (see Figure 1).<sup>5</sup> Tutorials should emphasize learning-outcomes assessment as recommended in the *Information Literacy Competency Standards for Higher Education* from the ACRL.<sup>6</sup> Learning outcomes reveal how library users have been changed because of their use of library support. Assessment tools may also measure the library's contributions to the institution's goals.<sup>7</sup>

The tutorials developed by the SAU's DL librarian match Bloom's six performance levels and the ACRL's five learning-outcomes standards.<sup>8</sup> Some tutorials fit into more than one level and standard; therefore, the samples in Figure 2 do not show all the possibilities.

The SAU DL librarian also developed tools, such as surveys, for assessing distance learners' academic achievement (see Figure 3). Research suggests that surveys

## Librarians can also help teachers develop tools for assessing students' skills and achievements.

should be administered not only at the end of a course, but also during the semester to monitor the strengths and weaknesses of class content.<sup>9</sup> Therefore, since Spring 2000, the DL librarian has administered both interim-course and post-course tools.

### Conclusion

Librarians who provide electronic library support to culturally diverse distance learners must continually seek better ways to deliver and assess instruction.<sup>10</sup> Library support for such students

must emphasize (1) developing and fostering critical thinking so students can locate, evaluate, and use information resources effectively; and (2) measuring and documenting information literacy. ✍

**Dr. Ann Greer** is Associate Professor of Information Sciences at Southern Adventist University in



Collegedale, Tennessee, where she is the coordinator for electronic distance education library support. She earned both a B.A. and a Ph.D. via distance education from Indiana University, Indianapolis, Indiana, and Nova Southeastern University, Ft. Lauderdale, Florida, respectively. She attended on-campus classes at Louisiana State University, Baton Rouge, Louisiana, for her M.L.I.S. degree.

### REFERENCES

1. Southern Adventist University, *Southern Adventist*

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Researching an online question.

Figure 2

### Integration of Tutorials, Bloom's Levels, and ACRL's Standards

Tutorials	Bloom's Levels	ACRL Standards
Easy Online Database Search Instructions, Search Tips	Level 1 - Knowledge	Standard 2 - Accesses effectively & efficiently information needed
Search Engines	Level 1 - Knowledge Level 2 - Comprehension	Standard 1 - Determines the nature & extent of information needed
Scholarly and Non-Scholarly Resources, Peer-Reviewed Journals	Levels 1 & 2, Described above	Standards 1 & 2, Described above
Evaluate Internet Resources	Level 3 - Application Level 6 - Evaluation	Standard 3 - Evaluates information and its sources critically
Search Engines	Level 5 - Synthesis	Standard 4 - Uses information effectively to accomplish a specific purpose
Style Formatting Ethical Issues	Level 4 - Analysis Level 6 - Evaluation	Standard 5 - Understands issues and uses information ethically and legally

University 2003-2004 Graduate Catalog (Collegedale, Tenn.: 2003), p. 6.

2. College & Research Libraries News, Guidelines for distance learning library services: A draft revision. (Chicago: Ill.: American Library Association, 2003), p. 268.

3. From the "Must Statements" of the *Criteria for Accreditation, Educational Support Services* Section 5.1.1, of Southern Association of Colleges and Schools. Criteria for Accreditation: Commission on Colleges (1998), <http://www.sacscoc.org/SectV.htm>.

4. See <http://www.digitalspace.com/virtualmeetings/elements.html>.

5. Benjamin S. Bloom, ed., *Taxonomy of Educational Objectives: The Classification of Educational Goals: Handbook I, Cognitive Domain* (New York: Longmans, Green, 1956).

6. See <http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm>.

7. Thomas G. Kirk, Jr., "Library Program Assessment." See <http://archive.ala.org/acrl/kirk.pdf>.

8. Association of College & Research Libraries, *In-*

*formation Literacy Competency Standards for Higher Education*, <http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm>

9. Donald E. Riggs, "Distance Education: Rethinking Practices, Implementing New Approaches," *College & Research Libraries* 58:3 (May 1997), pp. 208, 209.

10. Association of College & Research Libraries, Library Instruction for Diverse Populations Bibliography, <http://www.ala.org/ala/acrlbucket/is/publicationsacrl/diversebib.htm>.

Figure 3

## Sample Survey Designed to Elicit Learning Outcomes

The tutorials helped me learn how to locate and use resources with the use of search engines \_\_\_\_ Yes \_\_\_\_ No  
[Nos. 2 (comprehension), 3 (application) & 5 (synthesis) on Bloom's levels]  
[Nos. 2 & 4 on ACRL standards]

evaluate World Wide Web resources \_\_\_\_ Yes \_\_\_\_ No  
[No. 6 (evaluation) on Bloom's levels]  
[No. 3 on ACRL standards]

avoid plagiarism \_\_\_\_ Yes \_\_\_\_ No  
[No. 6 (evaluation) on Bloom's levels]  
[No. 5 on ACRL standards]

use style manuals (APA, MLA, etc.) for citations \_\_\_\_ Yes \_\_\_\_ No  
[Nos. 1 (knowledge) & 2 (comprehension) on Bloom's levels]  
[Nos. 2 & 5 on ACRL standards]

As a result of having used electronic library services, I gained skills that allowed me to complete class assignments satisfactorily \_\_\_\_ Yes \_\_\_\_ No  
[Nos. 1 (knowledge) & 4 (analysis) on Bloom's levels]  
[Nos. 1-5 on ACRL standards]

The library services enabled me to evaluate information to determine its validity, authority, and reliability \_\_\_\_ Yes \_\_\_\_ No  
[Nos. 2 (comprehension) & 6 (evaluation) on Bloom's levels]  
[Nos. 3 on ACRL standards]

helped me to locate and use information as a self-directed searcher \_\_\_\_ Yes \_\_\_\_ No  
[Nos. 3 (application) & 5 (synthesis) on Bloom's levels]  
[Nos. 1, 2 & 4 on ACRL standards]

Before	After
____ No prior knowledge	____ I did not gain any additional searching skills
____ I already had basic searching skills	____ I gained basic searching skills
____ I already had intermediate searching skills	____ I gained intermediate searching skills
____ I already had advanced searching skills	____ I gained advanced searching skills