

Information literacy standards for teacher education

Approved by the ACRL Board of Directors, May 11, 2011

By the EBSS Instruction for Educators Committee

The quickly changing information and technology landscape requires increasingly sophisticated information literacy skills for the navigation, evaluation, and use of information (Jenkins, 2006). Teachers play a key role in providing students with diverse opportunities to learn how to use information wisely. Those preparing to become prekindergarten to 12th grade (PK–12) teachers require a comprehensive understanding of information literacy to guide their own knowledge creation activities that will ultimately affect their future students. Yet, researchers have shown that future teachers often enter teaching without the necessary information literacy skills and knowledge (Lavery & Reed, 2006). Experiences in pre-service, graduate, and continuing education programs shape how teachers model and facilitate student learning in their own classrooms. The development of information literacy tools and knowledge is fundamental to teacher education students' abilities to evaluate and use diverse and continually changing information sources in their academic work and pre-service teaching. Once in their own classrooms, PK–12 teachers model for their students how to critically navigate the current maze of information and how to use information to construct credible arguments: Information literacy competence enables pre-service teachers to develop a robust understanding of the role of information in their lives, and to model information literacy to PK–12 students.

Intended audience

The *Information Literacy Standards for Teacher Education* provides a bridge between the ACRL *Information Literacy Competency Standards for Higher Education* (2000) and the application of the information literacy standards in teacher education contexts (Cook & Cooper, 2006). The intended audiences are teacher education librarians and faculty members, and secondarily teacher education students. As the majority of education students enrolled in higher education institutions, PK–12 pre-service teachers are the intended teacher education students, regardless of their content-area specialization.

Purpose

The main purposes of the *Information Literacy Standards for Teacher Education* are to:

- Guide teacher education faculty and instruction librarians in developing information literacy instruction for teacher education students.
- Enable the evaluation and assessment of such instruction and curricula through benchmarking outcomes.

Secondarily, the *Standards* aim to communicate to teacher education students expectations for information literacy knowledge and skills they need to develop and apply in their academic work and pre-service teaching. The *Standards* also aim to lead teacher education students to consider how they might integrate information literacy into their future cur-

riculum, instruction, and assessment activities once a member of the teaching profession.

Sources consulted

The *Information Literacy Standards for Teacher Education* were built upon the framework and foundation of the ACRL *Information Literacy Competency Standards for Higher Education* (2000). In addition, the EBSS Instruction for Educators Committee used the resources gathered by previous committee members on the “EBSS Connecting the Standards” Web site.¹ The site was designed to provide examples of collaborative practices that help bridge the ACRL *Information Literacy Competency Standards for Higher Education* to existing education standards, such as those from the American Association of School Librarians (AASL) and the Association for Educational Communications and Technology (AECT). The Web site facilitated a point-by-point analysis of standards documents from relevant education-specific associations and organizations. In addition, the committee reviewed literature in both library science and education focusing on information literacy standards for teacher education students.

Development process

This project was initiated in 2007 at the ALA Midwinter Meeting in Seattle. Initially under the auspices of the Education and Behavioral Sciences Section (EBSS) Ad Hoc Information Literacy Steering Committee, the project was then assigned to the Instruction for Educators Committee given the committee’s goals: to identify the issues and problems encountered by librarians serving schools, colleges, and departments of education in colleges and universities and to make distinctive contributions as education library specialists to the field of bibliographic instruction.

The committee began its work with a literature review and then considered the ACRL *Information Literacy Competency Standards for Higher Education* (2000) within the domain of teacher education. Professional standards for PK–12 education and educators, as cited above, as well as professional

association members were consulted. Drafts of the standards were circulated to the EBSS Executive Committee, EBSS members, and faculty instructing pre-service teachers, and revised based on the feedback received. The “Checklist for Developing Subject-Specific Information Literacy Standards,” developed by ACRL’s Information Literacy Advisory Committee, served as a guiding document throughout the development process.

Standard One. The information literate teacher education student defines and articulates the need for information and selects strategies and tools to find that information.

Performance Indicators:

A. Defines the need for information.

Outcomes include:

1. Identifying the purpose for which information is needed. Examples: for a research paper, lesson plan, oral presentation, class exercises or project, or for action research on classroom practices.
2. Determining the factors that influence the information need. Examples: The nature, extent, type, and format of information needed; the intended audience, such as school children, college classmates, or professional educators; or the scope, length, purpose, and role of the specific information-seeking task.
3. Exploring general information sources to increase familiarity with the scope of the information need. Examples: specialized education almanacs, encyclopedias, handbooks, bibliographies, dictionaries, curriculum or textbook collections, or trusted and evaluated online journals, blogs, wikis, newsfeeds, and news articles.
4. Defining or modifying the information need to achieve a manageable focus.
5. Reviewing the initial information need to clarify, revise, or refine initial impressions and ideas.

B. Articulates the need for information.

Outcomes Include:

1. Formulating key questions to develop and clarify the information need.

2. Breaking down the information need into component concepts and terms.

3. Brainstorming and selecting synonyms and alternative words that represent the component concepts.

C. Selects strategies to fulfill the information need.

Outcomes Include:

1. Recognizing that disciplines produce, organize, disseminate, describe, and preserve knowledge in different ways that influence the way it is searched or accessed. Example: Researchers looking for materials about elementary and secondary-level students will find that psychology often uses terms such as *childhood* and *adolescence* to describe school children and that these terms should be used when accessing information from psychological sources.

2. Understanding how information in the discipline of education and related behavioral and social sciences is formally and informally produced, organized, disseminated, described, accessed, and preserved.

3. Considering the relevancy of literature of other disciplines (e.g., psychology, social science, English, law) to address the information need.

4. Recognizing that fulfilling the information need may require combining existing information with original thought, experimentation, and/or analysis to produce new information.

5. Recognizing the key associations, institutions, organizations, government agencies, and platforms for information discovery, retrieval, and analysis.

6. Considering the value and potential of various information sources to fulfill the information need. Examples: finding a historical photograph for a lesson plan, incorporating popular literature in a scholarly research paper, or using an audio oral history for a class presentation.

7. Identifying the value and potential of information sources specific to the field of

education to fulfill the information need. Examples: accreditation standards, certification requirements, curricula, handbooks, manuals, reference materials, statistics, textbooks, professional reviews, children's books, and professional association resources.

8. Creating a realistic plan and timeline to acquire the needed information based upon task, product, performance, or practice expectations and outcomes.

D. Selects tools to find information.

Outcomes Include:

1. Knowing where the needed information of the desired types and formats is available and how it can be accessed. Examples: knowing that bibliographic data about scholarly articles can be found in databases such as ERIC (Education Resources Information Center) and PsycINFO, or that education statistics can be accessed from the National Center for Education Statistics (NCES) Web site.

2. Determining the availability, accessibility, and usability of information sources.

3. Making decisions on whether or not to broaden the information-seeking process by including sources available through inter-library loan, local school or public libraries, or other institutions or organizations.

Standard Two. The information literate teacher education student locates and selects information based on its appropriateness to the specific information need and the developmental needs of the student.

Performance Indicators:

A. Locates information.

Outcomes Include:

1. Selecting tools that will provide access to the desired types and formats of information.

2. Using the selected tools to access information.

3. Choosing and using efficient and effective approaches for locating information in the selected tools.

a. Employing various classification schemes and identifying data. Examples: Library of Congress, Dewey Decimal, or PsycINFO classifications.

b. Employing advanced search strategies in various electronic information retrieval systems through the use of command languages, protocols, or search parameters. Examples: Boolean and proximity operators, truncation, or other limiters (e.g., peer-reviewed, empirical study, etc.), or using the advanced search (Reading level, Interest level, Lexile Range) on a Web site to identify materials to use in a lesson plan.

c. Employing proper terminology by translating concepts into accurate keywords and synonyms by using provided tools, such as controlled vocabularies, thesauruses, or indexes. Example: Student keeps a record of their search terms, including keywords, descriptors from the *Thesaurus of ERIC Descriptors*, Library of Congress Authorities, or other subject headings.

d. Revising searches based on results.

e. Employing linkages among documents to identify additional pertinent information. Example: following cited references or hyperlinks.

f. Employing specialized online or in-person services. Examples: interlibrary loan, virtual reference services, Curriculum Materials Center, the Children/Teen librarian at the local public library, school librarians, professional associations, community resources, or other experts and practitioners.

B. Selects information.

Outcomes Include:

1. Assessing the quantity, quality, and relevance of the information found.

2. Determining the intellectual and professional aspects of choosing information sources that meet the information need appropriate for the intended audience. Examples: selecting topical information for a lesson plan that aligns to specific state or national standards for a specific age group; selecting professional literature to use when giving a presentation on teaching methodologies.

3. Choosing the relevant content from a source to meet the information need.

4. Using the features of an information source to select the appropriate main ideas, data, and practices.

Standard Three. The information literate teacher education student organizes and analyzes the information in the context of specific information needs and the developmental appropriateness for the audience.

Performance Indicators:

A. Organizes information.

Outcomes Include:

1. Using various processes to maintain, organize, and manage located resources. Examples: saving and organizing information into files, folders, an accessible filing system, bibliographic management software (RefWorks, Zotero, EndNote, Procite, etc.), or Google Docs; or using a photocopier, scanner, or other piece of audio/visual equipment.

2. Tracking materials, practices, phrases, documents, or reproducible visual or statistical data for a given information need.

B. Analyzes information.

Outcomes Include:

1. Analyzing the structure, logic, and presentation of information and any supporting arguments or methods.

2. Selecting criteria to determine whether the preferred information contradicts or verifies other pieces of information and investigating differing viewpoints encountered.

3. Determining how an individual's educational philosophy or theoretical perspective affects his or her use, selection, and presentation of information. Examples: keeping current by reading professional publications; or actively modeling information seeking, evaluation, and use for students; searching for data on an author's philosophy or perspective.

4. Recognizing the commercial, cultural, historical, physical, or other context within

which the information was created and understanding the impact of context on interpreting the information. Examples: evaluating and considering the purpose of a Web site: to inform or educate, to sell a product, or to promote an idea or stance; evaluating and considering authorship and currency of information when preparing a unit of study; considering multiple review sources when selecting classroom materials.

5. Recognizing the usefulness of and differences between information sources. Examples: research reports, case studies, surveys, and statistics; or primary, secondary, and tertiary sources.

Standard Four. The information literate teacher education student synthesizes, processes, and presents the information in a way that is appropriate for the purpose for which information is needed.

Performance Indicators:

A. Processes information.

Outcomes Include:

1. Determining whether to incorporate or reject viewpoints of information encountered.

2. Recognizing interrelationships, consistencies, and inconsistencies among information, concepts, curricula, data, or practices and combining them with supporting evidence. Example: reading and using peer-reviewed articles to make and support pedagogical changes in the classroom.

3. Extending ideas, information, and concepts, when possible, to a higher level of abstraction to construct new information, theories, or hypotheses. Example: realizing that concepts used in teaching one subject, for example probability in a mathematics class, can be transferred to other subject areas and tested there.

4. Drawing conclusions based upon the information gathered.

5. Testing theories, hypothesis, or information with appropriate accepted methodologies, such as observation, surveys, or tests.

B. Synthesizes information.

Outcomes Include:

1. Using analysis tools such as spreadsheets, databases, statistical software, as well as social networks, and multimedia equipment to investigate the interaction between pieces of information, materials, practices, ideas, documents, or other data.

2. Integrating new information with previous information or knowledge to form new perspectives and theories or to enhance professional practice. Example: using the findings of a scholarly journal article as a basis for trying a new instructional method in the classroom.

C. Presents information.

Outcomes Include:

1. Articulating conclusions based upon the information gathered.

2. Applying new and prior information to the planning, creation, and execution of a specific and applicable task, product, performance, or practice.

3. Choosing a communication medium and format that best supports the learning outcomes of the task, product, performance, or practice as well as learning styles of the intended audience.

4. Determining if the information representation is appropriate, sensitive, and responsible for the diversity (e.g., class, cultural, disability/ability, ethnicity, race, religion, sexual orientation, etc.) represented in the intended audience.

5. Using a range of technology applications in accomplishing the task or creating the product, performance, or practice. Examples: creating a wiki for a group-writing project or developing an eportfolio for a job interview.

6. Organizing and presenting the information in a manner that supports the purposes and format of the task, product, or performance. Examples: in an outline, storyboard, lesson plan, or research paper.

7. Ethically and legally manipulating text, images, and data, as needed, by transferring and/or transforming them from their original

locations and formats to a new context or format.

8. Participating in class or profession-sponsored communication forums designed to encourage discourse.

9. Interacting, collaborating, and publishing with peers, professors, or other experts. Examples: publication—presenting at the state education association conference.

Standard Five. The information literate teacher education student evaluates discrete pieces of information as well as the entire information-seeking process.

Performance Indicators:

A. Evaluates individual pieces of information.

Outcomes Include:

1. Examining, comparing, and critically analyzing information from various sources in order to evaluate and ascertain reliability, validity, accuracy, authority, timeliness, and point of view or bias.

2. Recognizing and using the differences between information sources as an evaluation tool.

3. Determining probable accuracy of the information by questioning the source of the information, the limitations of the information, and the evidence for any conclusions made. Examples: analyzing the publisher and author of information, identifying the intended audience, determining flaws in the scientific method used, or understanding how statistical information leads to a result.

4. Recognizing prejudice, deception, or manipulation of information and avoiding the use of stereotypical or offensive information. Example: critically examining information to find subtle prejudice or stereotypes and deciding whether to use the information in light of such problems.

B. Evaluates the information seeking process.

Outcomes Include:

1. Determining if the information found adequately addresses the information need and identifying any remaining gaps.

2. Determining whether alternative strategies, tools, or investigative methods should be used to fill gaps.

3. Revising strategies as necessary, and continuing to search using the new strategy, tool, or investigative methods until all the needed information is obtained. Example: searching an alternative database with a different focus, such as PsycINFO in place of ERIC.

Standard Six. The information literate teacher education student knows how to ethically use and disseminate information.

Performance Indicators:

Ethically uses and disseminates information.

Outcomes Include:

1. Understanding the ethical, legal, and socio-economic issues surrounding information and information technology. Examples: Family Educational Rights and Privacy Act (FERPA), the Individuals with Disabilities Education Act (IDEA), the Ethical Standards of the American Educational Research Association (AERA), or problems arising from the creation, collection, recording, distribution, and processing of information.

2. Demonstrating an understanding of intellectual property, copyright, and fair use of copyrighted material. Examples: the ethics of downloading and using electronic files such as digital images, video, or MP3s; fair use implications of transforming or combining works to create something new with a different purpose, or of using copies of texts and multimedia clips in the classroom.

3. Demonstrating and understanding the sociopolitical issues that surround information use, selection, and dissemination. Example: analyzing a book challenge.

4. Demonstrating an understanding of what constitutes plagiarism; giving proper credit to others' ideas.

5. Selecting and using an appropriate documentation style to cite or give credit to original information sources. Examples: using the *Publication Manual of the American Psychological Association*, *MLA Style Manual and Guide to Scholarly Publishing*, or *The Chicago Manual of Style*.

6. Using materials, practices, phrases, documents, or reproducible visual or statistical data without copyright restrictions. Examples: seeking out government publications free of copyright or Creative Commons licensed materials.

7. Taking appropriate steps to obtain permission to use copyrighted material. Examples: contacting authors, publishers, and producers for permission, or purchasing content through appropriate vendors.

8. Complying with institutional policies on access to information including those related to printing, downloading, using, or disseminating copies of articles, and policies related to human subjects research. Example: talking with Internal Review Boards within universities and reviewing set policies of each institution.

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Emory University Libraries has been awarded

a two-year grant of \$695,000 by the Andrew W. Mellon Foundation to establish a collaborative digital humanities center. The grant will provide startup funds for the Digital Scholarship Commons (DiSC) in the Robert W. Woodruff Library. The proposal plan calls for DiSC to establish a site for transdisciplinary collaboration, drawing faculty members and graduate students into new collaborative working relationships with librarians, and launching four large-scale and four smaller-scale seed projects that will draw on the library's collections and services in new ways. While there are other digital scholarship centers across the country, most use a vertical approach, gathering scholars working within the same subject such as history or English. DiSC is described as a place where scholars can collaborate with technologists to build a digital scholarship project, analyze data, or explore new ways to combine humanities-based research with information technology.

Council on Library and Information Resources (CLIR) has been awarded

\$117,567 by the Alfred P. Sloan Foundation for research on how to build capacity for data curation within disciplines. The project will be managed by CLIR's Digital Library Federation (DLF). The project will consist of three interrelated activities. The first will be an environmental scan of professional development needs and of education and training opportunities for digital curation in the academy. The second will be an anthropological study of five sites where digital curation activities are under way. The third will be a report that analyzes the results of the two research efforts and includes a proposal, informed by the findings, for amending the curriculum for CLIR's Postdoctoral Fellowship in Academic Libraries program. //

Ed. note: Send your news to: Grants & Acquisitions, *C&RL News*, 50 E. Huron St., Chicago, IL 60611-2795; e-mail: agalloway@ala.org.

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Note

1. The EBSS Connecting the Standards Web site is currently being transferred to another format. //