Information Literacy Instruction in United States School Libraries

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In the United States, information literacy is informally defined as the ability to locate, evaluate, use, and communicate information purposefully. The American Association of School Librarians (AASL) sees information literacy as part of a cluster of interdependent literacies, and they tend to frame this set of knowledge, skills, and dispositions as "21st century learning." These standards drive curriculum to some degree, although curriculum in general is a local decision, as is library staffing and their academic preparation. Therefore, information instruction varies greatly across the nation – any may differ even within the same school district. This article detail the history and current status of information literacy and its instruction in U.S. K-12 education.

Defining Information Literacy

The term "information literacy" is hard to define, even within the United States. The common understanding of information literacy is the ability locate, evaluate, use, and communicate information purposefully. As such, information literacy is often conflated with research skills. The American Association of School Librarians (AASL) division of the American Library Association (ALA) sees information literacy as part of a cluster of interdependent literacies, and they tend to frame this set of knowledge, skills, and dispositions as "21st century learning."

The underlying idea of information literacy has a longer history, at least back to the last half of 19th century. Usually termed "library skills," academic librarians explained to college students how to find the materials they needed, sometimes with the help of library classification systems that were coming into vogue. Subsequently, related terms such as "research skills," "bibliographic instruction," and "user education" have been used, and their wordings reflect the content and approach.

The current term "information literacy" was coined in 1974 by Paul Zurkowski, president of the Information Industry Association, in his proposal to the National Commission on Library and Information Science. He emphasized the users' ability to apply information resources to their work, using techniques and skills to solve problems (Behrens, 1994). Even then, librarians and other professionals realized how much information had expanded and how handling information became more complicated. With the advent of consumer computers and public Internet connectivity in the 1980s, the role of technology in information access and use impacted the notion of information literacy. The ALA definition of information literacy, published in the 1989 Presidential Committee on Information, has remained the standard: "To be information literate, a person must be able to recognize with information is needed, and have the ability to locate, evaluate, and use effectively the needed information" (p. 1).

As noted above, AASL is drawing away from the somewhat speculative term "information literacy" to address students' information needs and behaviors within a larger framework of 21st century learning. This changing attitude reflects several social changes: in U.S. K-12 education, national conversation about 21st century skills, technology-based standards such as those posed by the International Society for Technology in Education, and the changing natures of information and technology themselves. One recent driving factor is Common Core State Standards (CCSS), which emphasizes deep and broad reading, critical thinking and problem-solving, and research skills. Thus, instead of using information literacy as the keystone, AASL (2007) asserted that a number of interdependent literacies are involved in gaining, using, sharing, and generating knowledge. Of special importance is the idea of creating information, not merely dealing with existing information. It should also be noted that AASL is currently review those learning standards, so their next iteration may move in another direction.

Curriculum

In the United States, ostensibly, information literacy standards drive the curriculum. The first explicit expectations for an information literacy curriculum were published in ALA's 1998 *Information Power*, which included information literacy standards for student learning. The document emphasized incorporating information literacy into content area instruction. The next iteration, *Standards for the 21st century learner* (AASL, 2007), provided four standards (noted above), four strands (skills, dispositions, responsibilities, and self-

assessment strategies), and benchmarks for grades 2, 5, 8, 10, and 12. An accompanying book, *Standards for the 21st century learner in action* (AASL, 2009), offers sample lessons for each grade.

These professional standards are not proscriptive, nor do they have governmental authority. As a result, probably the most common information literacy instruction conducted by school librarians consists of locating and evaluating resources, with an increasing focus on online search engines and digital databases. Attribution (that is, accurately citing the author of the information) is also a long-time subject that librarians teach. Beyond those basic skills, information literacy curriculum might include a range of concepts and skills, from understanding the nature and structure of information to creating informational media products with specific agendas and audiences in mind.

These descriptions reflect the variations of information literacy instruction in the U.S. and illustrate the situation that even though professional standards exist relative to information literacy, designing and implementing an information literacy curriculum is difficult to accomplish. While Common Core State Standards (CCSS) (which have a national "flavor") has been adopted in most states, educational policies and practices are largely state and locally governed. Therefore, no consistent national approach to information literacy curriculum exists. Some states have explicit information literacy standards, which might be stand-alone, or earmarked within other content standards. In other states such competencies are integrated into the language arts framework or across the curriculum with limited use of the term "information literacy." CCSS itself interweaves elements of information literacy, such as critical reading and research skills, without explicitly using the term "information literacy."

Since the general practice is to integrate and embed information literacy into the academic curriculum, creating an information literacy curriculum is problematic. While in a few cases, librarians teach separate courses in information literacy, they are more apt to work with individual teachers to insert information literacy. Such practices do no insure that every student will have the opportunity to learn and practice how to be information literate. Instead, a systematic approach offers a better chance for consistent information literacy instruction (Farmer, 2016). This entails a school-wide curriculum plan that maps information literacy across the grades and subjects. Such a process requires learning about each other's subject expertise, and how information literacy informs learning. The school librarian cannot control the process or the final decision; rather all teachers need to share the control and decision. Furthermore, administrative support and sufficient resource allocation are needed to implement this curriculum successfully. The result can be a powerful approach to teaching and learning, and increases a sense of ownership so that information literacy is not a "library or librarian thing," but rather is a fundamental and integral part of education.

Information Literacy Instruction

The question then becomes, "How does one become information literate?" In formal education, the classroom teacher is the main instructor. When information literacy is couched as research skills, the subject matter teacher spearheads the effort, helping students gain knowledge through the major writings in the subject, and helping student learn how to think critically about information and apply it to their needs. As a resource specialist, the school or academic librarian complements the teacher by focusing on locational skills instruction with the idea that collections of information can have structure – such as the library. As such, these skills fall well under the definition of "library skills." With the advent of online information, and new information collection structures such as online databases as well as new searching tools such as search engines and directories, those locational skills evolved. Furthermore, because the Internet has far less quality control than physical library collections, librarians have expanded instruction to include evaluation skills: what is the quality and relevance of the information? Such instruction transcends "library skills" since students can access information from many more information organizations than the library.

However, the instructional role of the school librarian has also changed over the years (Repman, 2012). The instructional role was not explicitly codified until ALA's 1988 *Information Power.* Of first concern was physical access to information, so that instruction was needed to help students find the physical items. As the mission enlarged to include intellectual access, then school librarians – as information specialists – began to instruct students on evaluating and extracting information. Indeed, school librarians understand the entire process of interaction with information, and have the expertise to instruct guide students throughout that process, especially in researching information. With this philosophical expansion of their instructional role, school librarians serve as partners in teaching, sometimes overlapping the instructional role of classroom teachers. They can also act as self-contained instructors. In general, school librarians are encouraged to collaborate with subject matter teachers to plan learning activities that integrate information literacy in meaningful contexts. It should be noted that information literacy continues to be regarded as the librarian's domain; classroom teachers are more likely to focus on critical thinking and projects.

Staffing

Variations in school librarian staffing, least allocated in primary education, largely drives information literacy curriculum and instruction. Such a linkage has existed from the start. While a few schools housed library collections and even fewer hired librarians to manage them, school libraries and school librarians are largely considered products of the 20th century. The first national school library standards were adopted by ALA and the National Education Association in 1925, but the basis for modern school library staffing and instruction is more appropriately dated back to 1960 (Repman, 2012).

Nevertheless, school library staffing – and standards for their qualification -- remain state and local decisions. Each state has its own basis for credentialing or licensing school librarians. The typical qualifications include teaching and librarianship coursework at the post-bachelor's degree level. Some states require a master's degree but others require only passing a written state examination. In some states, a school librarian must hold both a teaching credential and a school library credential, while others may require only a library science degree with at least one course on teaching and learning.

Thus, it is no surprise that the academic preparation of school librarians also lacks consistency with regard to information literacy. The two major accrediting bodies, ALA and CAEP (Council for the Accreditation of Educator Preparation), do not prescribe explicit standards in information literacy. As with K-12 education, school librarian preparation programs sometimes have a separate course for information literacy (often as part of a course on information and reference services, or part of a course on instruction), or they integrate information literacy throughout the curriculum. State licensure agencies for school librarians infrequently mention information literacy as part of the school librarians' curricular responsibility. In an innovative move, the California Commission on Teacher Credentialing recognizes a Special Class Authorization in Information and Digital Literacies for credentialed school librarians so they can serve as instructors of record for these subjects; the basic credential authorizes these school librarians to teach only student library aides.

Practices

In the United States, information literacy instruction practice tends to depend on the grade level, both in terms of curriculum and in instructional strategies.

Elementary School Libraries
For instance, in elementary schools, many school libraries use a fixed schedule, such as one hour a week, to insure that students have a chance to engage with books and other materials from the library (e.g., storytelling, acting out stories, singing songs), and to learn basic information literacy skills such as locating and using resources. As such, elementary school librarians are most likely of any group of school librarians to have a set information literacy curriculum. Nevertheless, best practice encourages collaboration with grade-level teachers so that the information literacy content supports whatever current topic is being taught in the classroom, and that library visits be scheduled according to learning needs of the class rather than an arbitrary frequency.

Specific instructional strategies largely reflect classroom practice: participatory and hands-on learning, a mix of individual and group activities, and occasional projects. The school librarian is usually the instructor, and the classroom teacher might not accompany the students at all (although this is not a good practice). The period of time may vary from twenty to fifty minutes, which drives the kind of activities. Usually students return materials at the start of the session, and the school librarian introduces the activity; for primary students, storytelling or reading aloud is the main activity with a follow-up student activity such as crafts, related game or song, or brief writing activity. Students normally have a few minutes to choose a book or other item to borrow. In higher grades, more academic information literacy skills are likely to the taught, such as the use of encyclopedias or simple databases.

Middle School Libraries
Project-based learning is a central aspect of middle school because at this developmental stage students have the interest and capacity to learn skills and processes. Middle school is an optimum time for students to learn research skills such as searching, evaluating, note-taking, and organizing information. In addition, at this level, students are often interested in exploring different technologies such as video and audio editing, social media, and coding. Both information and technology skills cross curricular lines, which enable school librarians to work with several teachers in the same grade, and schedule library use at the appropriate stage in a project. Planning a trip to Mars, improving the local water system, or creating a public service announcement about cyberbullying exemplify projects that can support information literacy fluency, and leverage the school librarian's expertise.

High School Libraries
High school curriculum tends to focus on specific academic domains such as mathematics and history. At this point, teachers want students to learn discipline-specific ways of inquiring about investigating the world. Therefore, information literacy instruction should reflect those specializations, and foster student-centered inquiry-based learning. In this learning environment, information literacy serves as a lingua franca for these domains to communicate with each other, and school librarians can facilitate such discussion as they work with all students and teachers. For instance, the information literacy skill of identifying an information need can be interpreted as developing a hypothesis in science or a thesis statement in history. In science students may gather information by performing an experiment, while a student in social studies may gather data by interviewing people. Likewise, students may demonstrate their findings using video for a civics course or an interactive digital map for a physical science course; the school librarians helps students understand how different media represent and communicate knowledge.

As in middle school, most use of the library is based on information need rather than a specific date. In fact, librarians welcome scheduling classes because it gives them an opportunity to discuss with teachers about possible assignments that can explicitly integrate information illiteracy. The school librarian may play a variety of roles as an instructional consultant: collecting print and media sources, creating a webliography of Internet sources, creating graphic organizers or other learning aids, scheduling a guest speaker for a webinar, getting Makerspace supplies. In a co-teaching model, the classroom teacher will introduce the assignment, and the librarian will instruct students in the information literacy aspect, be it locating primary sources online or creating web pages. As much as possible, instruction is hands-on, starting with a demonstration, then leading the class in the associated process, and then giving time for students to apply their new knowledge under the guidance of the teacher and librarian. Often the class will visit the library a couple of times, once to learn a skill and another time to work on the identified assignment; if students need more time, they can use the library individually or in small groups throughout the day. On the other hand, students might learn and practice information literacy remotely, with the school librarian available via telecommunications.

Conclusion

The United States reflects a diversity of ways to address information literacy, and the diverse roles that the school librarian can play. With local control, the librarian can collaborate with other school personnel to identify desired student learning outcomes, develop associated curriculum, design instruction, all to provide optimum learning in a positive engaging environment, be it physical or virtual. Ideal information literacy instruction is inquiry-based, locally contextualized, personally meaningful, intellectually stimulating, and creative. However, such instruction requires sufficient resources, intentional and imaginative curricular and instructional design, time allocation, training and preparation, collaboration, and school support. While national standards and initiatives impact information literacy instruction in the United States, implementation remains a community-based endeavor.

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