

## **Research & Information Fluency: Strengthening Learning Outcomes across a Continuum**

Working with the world of information has gotten increasingly complex—not just the information itself but also the mechanisms for accessing the information. In an age of information overload, people face an increasingly complex dilemma of how to find relevant information efficiently. In past projects, the Entrepreneurial Library Program (ELP) team has observed that professionals often devote a great deal of time trying to figure out which resources exist, what to use, and how to use them – often with some inefficiencies. Market research studies, such as one by *LexisNexis*, reaffirm this finding by stating that sixty-eight percent of professionals wish they could spend less time organizing information and more time using the information that comes their way.

Some have called the 21<sup>st</sup> century the Information Age because a vast amount of information and data from a variety of sources can be easily overwhelming. The Association of College & Research Libraries (ACRL) suggests that the solution can be found in information literacy. ACRL offers the most recognizable and accepted definition of information literacy. Beyond a basic definition, they also describe the abilities of an information literate individual, such as determining the extent of information needed, accessing the needed information effectively and efficiently, and using information effectively to accomplish a specific purpose (please refer to the [ACRL website](#) for more information about the definition).

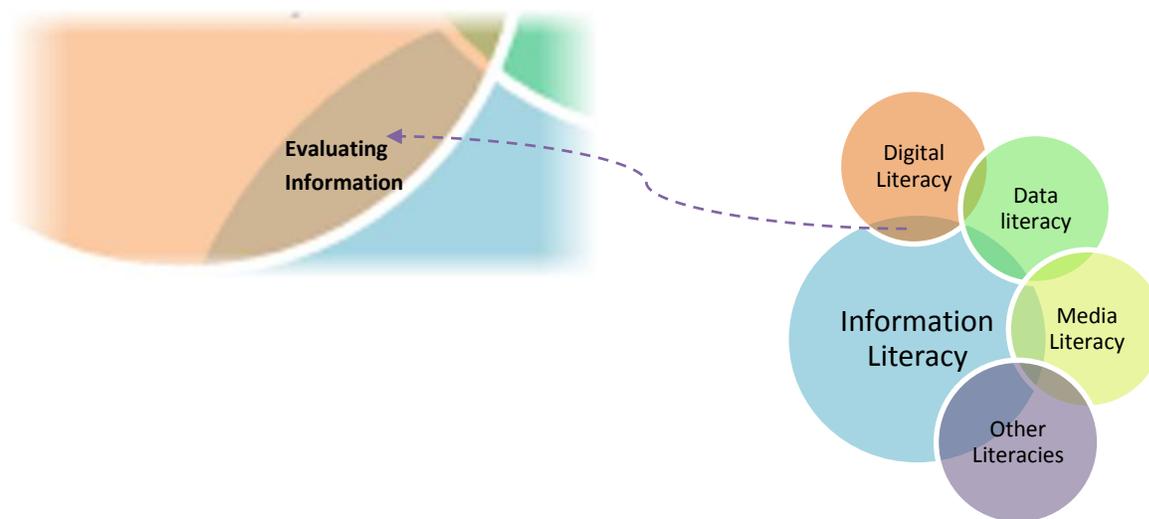
The Entrepreneurial Library Program’s (ELP) view of information literacy (sometimes referred to as information fluency) is broad and ultimately connected tightly to content and learning outcomes along a continuum as a learner develops. Information literacy is most useful when embedded into curriculum and accepted professional standards. ELP’s case studies have helped build expertise in understanding how content and instruction relate to professional indicators that is then embedded into the curriculum for stronger learning outcomes. ELP essentially flips information literacy to focus on the end-user learning stage, whether that is K-12, the working world, higher education, or life-long learning.

For ELP, information literacy overarches other types of literacies—such as digital, data, computer, media, and visual. Each literacy concept can be broken out into a bank of research skills that are modular and adaptive, following a natural progression of skills in each level of learner development. These skills align to accepted professional standards, such as ISTE NET-S, ACRL’s Information Literacy Standards, or Middle States. Aligning to standards creates stronger learning outcomes at various learning levels that can be assessed to provide valuable information related to strengthening instructional content. Embedding literacies into the curriculum result in stronger outcomes as learners move through different stages in the learning process.



The ACRL information literate criteria establish a common framework and list of desired traits, but ELP suggests that the transformation hinted at in using information for a specific purpose is a critical aspect. In case studies ELP conducted at the K-12 level, this transformational piece is present in The American Association of School Libraries (AASL) 21<sup>st</sup> Century Learner Standards, especially about using “the writing process, media and visual literacy, and technology skills to create products that express new understandings.” (AASL 2.1.6)

ELP views information literacy as the overarching and overlapping with other literacies, such as media, visual, digital, and data literacy. Understanding how different literacies compare to each other and relate to curriculum can provide teaching professionals and librarians with insight into creating and designing material that is focused, relevant, and addresses a particular learning need. The diagram below illustrates ELP’s view of how different types of literacies overlap with each other. Some learning outcomes relate just to one circle, but each literacy overlaps with a common area. For example, evaluating information is one skill where information literacy and data literacy overlap.



Embedding information literacy into curriculum and other standards can help strengthen outcomes. In 2011, ELP tied information literacy skills to the Common Core curriculum for 9<sup>th</sup> and 10<sup>th</sup> grade in order to create stronger outcomes for the students in an English Language Arts program. In the example below, skills and concepts included in the instructional material become integral to teaching the students the process of writing and searching for information.

**Mapping Information Literacy Standards to the English Language Arts, Common Core for grade 9-10**

Key for Benchmark Skills: Introduced (I) | Reinforced (R) | Mastery (M)

Common Core Writing Standards for Grade 9-10 Students	Benchmark Skills (Student goals)	Information Literacy Indicator
<p><b>W.9-10.7</b> Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p>	<p>Focuses on the purpose of research by formulating specific questions to be answered (I)</p> <p>Plans inquiry by articulating questions to gather information to support a thesis or argument (I)</p> <p>Conducts iterative searches based on information located, including modifying keywords and consulting different sources of information (R)</p> <p>Develops a research plan and identifies keywords, synonyms and related terms to use in a search strategy (M)</p>	<p>AASL 1.1.1 AASL 1.1.3 AASL 2.1.1 ISTE NETS-S 3 ISTE NET-S 4a ACRL 1</p>

Mapping to indicators and thinking about student outcomes helped to reinforce student objectives when looking at the Common Core through a lens of a person needing to search and locate information for writing a paper. Whether students go to college or into a vocation, it is critical to establish a framework that integrates information literacy skills into the curriculum for stronger outcomes.

*Where are we going with this?*

ELP currently is testing benchmark creation and learning outcomes in various populations along the learning continuum. By carefully developing frameworks tied to information, digital, or other literacies, ELP has been demonstrating that stronger learner outcomes are possible by mapping to accepted professional standards such as Middle States or the Common Core.

Through our piloting and developing of frameworks, ELP has deepened our understanding about how different literacies – such as digital, media, data, and other areas – differ yet sometimes converge and overlap. It is through a careful understanding of these overlaps and differences that ELP thoughtfully develops and assesses materials created in order to determine the strongest possible learning outcomes for various populations.

It is possible to map indicators more generally if no curriculum exists, but ELP thinks that embedding customizable learning outcomes within curriculum makes the end result much for valuable and relevant. Incorporating literacies into subject specific content allows the learner to relate the literacy skills to real life applications and more clearly understand their value.

### **References:**

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### **Credits:**

This document reflects the work and initiatives of ELP's information literacy incubation team which includes Barbara Pralle, Anita Norton, Jennifer Castaldo, and Susan Payne. This document was prepared by Susan Payne and Jennifer Castaldo, Librarians in the Entrepreneurial Library Program.

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