

2010

# Blurring Borders, Visualizing Connections: Aligning Information and Visual Literacy Learning Outcomes

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## Repository Citation

Benjamin R. Harris, (2010) "Blurring borders, visualizing connections: Aligning information and visual literacy learning outcomes", *Reference Services Review*, Vol. 38 Iss: 4, pp.523 - 535.

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**Blurring Borders, Visualizing Connections:**

**Aligning Information and Visual Literacy Learning Outcomes**

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## **Introduction**

Every day, university students are faced with countless activities involving the reading and analysis of information delivered in visual forms, as they locate, create, and manipulate similar types of texts. In classrooms that are increasingly electronic and arguably “virtual,” scholars like Jay David Bolter have concluded that “literacy in electronic environments may have more to do with the production and consumption of images than the reading and writing of either hypertextual or linear prose” (1998, p. 7). Visual research and the use of images in scholarly communities and discourses is no longer the province of specialists, but a common activity in the lives of students that connects their “school life” and their “real life” away from school. In a world raining with images, where an abundance of visual texts acts as naturalized and peripheral parts of every waking moment, it is reasonable to expect that many of our students may not be critical readers of images and visual information.

As faculty members, librarians, students---as all of us---become more active seekers, users, and creators of images, it is increasingly vital that we work to connect information literacy with the visual literacy initiatives. To aid such efforts, this study offers a strategy for aligning visual literacy and information literacy competency standards in a manner that facilitates the revision of teaching and learning practices in the library and traditional classroom. Guidelines for instructional scenarios are offered that may be useful in a library instruction session or as part of a course curriculum. The implications of this alignment between literacies, in both theory and practice, are offered, along with suggestions for further inquiry.

### **Blurring Borders between Visual and Information Literacy**

With the development of information literacy theory and practice over the last 20 years, information literacy instructors and advocates have become increasingly aware of the fact that students require some of the same assistance provided in relation to written sources as they learn to locate, evaluate, and use images. In addition, readers/viewers will often locate, evaluate, and use written texts to facilitate critical readings and the use of images and visual information. As these activities overlap and blur during the research process, the relationship between information literacy and visual literacy becomes intertwined.

As librarians have noticed an increase in the use of images during the research process (due to necessity or the researcher's conscious decision), teachers across disciplines have become more conscious of the proliferation of information transmitted in visual forms. However, teachers and librarians will both agree that students rarely possess the skills needed to adequately address an increasingly visual informatic realm. As Barbara Maria Stafford has written,

the information highway is an immense cabinet of curiosities, a crammed mosaic of disparate technologies and services joining computers, telephones, fax machines, high-definition televisions, and space satellites into a global communications net. Given the sheer quantity and complexity of displayable data, knowing how to make appropriate choices will depend upon astute collaboration among equals across many fields (1996, p. 78).

Stafford would surely include library and information professionals as ideal partners in such collaborations.

In an attempt to navigate formerly alphabetic or print-centric conceptualizations of information literacy, a number of writers have encouraged information literacy advocates to recognize that information provided in visual form requires the same types of information literacy abilities associated with written texts. James Marcum was an early entry in this discussion, arguing that “some librarians do not think visually, remaining more comfortable in a world of language, text, and print...librarians must become multi-literate. It will be necessary to abandon control in favor of interactivity, to learn to communicate with visual language, to become skilled at information visualization for presentation, and to master the tools of visual knowledge” (2002, p. 201). Loanne Snavely paralleled this call in 2004, contending that

...as commercial image databases and local digital image collections become more pervasive, and as various disciplines continue to rely more and more heavily on visual materials, librarians are and will be teaching more about information literacy issues in the visual realm, about effective searching strategies, appropriate sources, and evaluative techniques for assessing images (2005, p. 32).

Harris argued that as we consider the visual in relation to information literacy theory and practice, we should not “create an opposing hierarchy where images rule words, but understanding the shifting relationship between word and image at this juncture in information literacy theory is imperative” (2006, p. 213). During the last five years, the discussion continues in more subtle forms as librarians discuss the influence of multimedia resources and assignments in information literacy instruction (Harris, 2007; Warner, 2007; Chen and Williams, 2009).

One of the challenges involved in connecting visual and information literacy development has been a lack of consensus regarding the definition and objectives for visual literacy learning. The most serviceable among the definitions commonly cited is available from the International Visual Literacy Association (IVLA), and is based on the original definition of the concept developed by Eugene Debes in the late 1960s:

Visual literacy refers to a group of vision competencies a human being can develop by seeing and at the same time having and integrating other sensory experiences. The development of these competencies is fundamental to normal human learning. When developed, they enable a visually literate person to discriminate and interpret the visible actions, objects, symbols, natural or man-made, that he encounters in his environment. Through the creative use of these competencies, he is able to communicate with others. Through the appreciative use of these competencies, he is able to comprehend and enjoy the masterworks of visual communication (Avgerinou, 2010).

While lengthy, and while not specific in regard to developmental strategies or the assessment of visual literacy competencies, the Debes/IVLA definition conceptualizes and isolates the activities of a visually literate individual.

Of course, it has its critics. As a Delphi Study on the practicality of the Debes/IVLA definition contends, this extended description “does not provide sufficient detail about the visual literacy construct to conduct research on the effects of visual sensory experiences on achievement or comprehension variables” (Brill, Kim, and Branch, 2007, p. 11). The authors of the Delphi study conducted research to determine the value of a revised definition:

A group of acquired competencies for interpreting and composing visible messages. A visually literate person is able to: (a) discriminate, and make sense of visible objects as part of a visual acuity, (b) create static and dynamic visible objects effectively in a defined space, (c) comprehend and appreciate the visual testaments of others, and (d) conjure objects in the mind's eye (2007, p. 9).

While an improvement upon the Debes iteration, the lack of a serviceable visual literacy definition that carries weight across disciplinary borders makes it difficult to align the conceptual goals of visual and information literacy. Therefore, greater benefit can be achieved by analyzing and comparing the desired learning outcomes shared by advocates of both literacies.

### **Blurring Borders**

As one blurs the borders between different literacies, it is often a tendency to collapse the literacies into one another. As opposed to distinct learning outcomes or teaching objectives that have been crafted together by an assignment or classroom activity, we may feel compelled to elide the outcomes of two literacies into a single combined outcome. Indeed, many individual programs will tailor the information literacy standards to their local culture and community, and a number of American Library Association (ALA) sections have revised and refined standards to suit their particular needs. As of this writing, the Association of College and Research Libraries (ACRL) member's section assigned to consider issues and revisions related to the *Information Literacy Competency Standards for Higher Education* is developing guidelines for the assessment of visual information literacy development.

However, for the purposes of this discussion, blurring borders between literacies recognizes that *borders do exist* and will continue to exist, but that they are not discrete or static. Aligning outcomes can show the spaces *shared* by both literacy theories, as opposed to collapsing the different goals and values held by various constituencies into a single objective. While the desire to collapse or elide borders is often well-intentioned, and while there are obvious benefits for teachers in both disciplines, at this point it may be more instructive to align similar standards while maintaining the integrity of the original version.

Upon analysis, the ACRL's *Information Literacy Competency Standards* includes a number of performance indicators and learning outcomes directly related to research involving images and visual texts. For example, Standard 1, Performance Indicator 2 includes a learning outcome in which the information literate student "identifies the value and differences of potential resources in a variety of formats (e.g., multimedia, database, website, data set, audio/visual, book)" (2000, p. 8). Similarly, Standard 5, performance Indicate 2 includes an outcome stating that the student "legally obtains, stores, and disseminates text, data, images, or sounds" (2000, p. 14). Clearly, it would not be difficult to associate information literacy standards already in place to the goals of visual literacy advocates.

Since such connections are rarely so obvious, it may be helpful to reverse the process and see where information literacy fits within visual literacy objectives. Considering the argument that visual literacy definitions are varied across several disciplines, this study will reference a set of visual literacy outcomes that have been developed using a cross-disciplinary perspective. Drawing on varied definitions of visual



literacy and the outcomes and abilities expected of visual literacy learners, Maria Avgerinou offers eleven competencies for visual literacy (2009, p. 29-30). These competencies suggest the kinds of abilities that people need to critically navigate and understand images and image/text constructions, and while the assessment of visual literacy development is not clearly stated, the potential for the evaluation of learning and learners is suggested. In another study, Avgerinou (2007) indicates that a number of these competencies show strong correlations with one another. Mirroring the overlap and blur between different types of literacy, the achievement of one visual literacy competency may facilitate or enhance the development of other competencies.

While all eleven of Avgerinou's visual literacy competencies carry value, and while it may be possible to align all of these competencies with at least one of the information literacy standards, three of her constructions are particularly relevant in making connections between visual and information literacy learning objectives. In the following section, these competencies are paired with standards and performing outcomes drawn from the ACRL *Competency Standards*. Classroom scenarios suggesting practical teaching situations that seek to achieve these learning outcomes are provided.

### **Aligning Visual Literacy Outcomes with the ACRL Standards**

#### *Knowledge of Visual Conventions*

According to Avgerinou, the visually literate viewer must attain knowledge of “visual signs and symbols and their socially agreed meanings (within the western culture)” (2009, p. 29). For example, skulls or skeletons were often included in the mise-

en-scene of paintings before and during the Renaissance as a *memento mori*, or a reminder that everyone has only a limited lifespan. Photographs of Sojourner Truth will often include props such as reading material and glasses to portray Truth in contrast to earlier visual depictions of African-American women. In addition, the use of certain colors or the placement of certain images within the frame of an image may have specific significance.

The development of a knowledge of visual conventions will often require additional research involving written text. In order to understand the meaning of a skull or skeleton in an 18<sup>th</sup>-century painting, or to contextualize the use of certain props in a photographic image, researchers may need to locate reference books, online sources, or other written materials to understand the convention. For this reason, Information Literacy Competency Standard 1 focusing on the student's ability to understand when additional information is required and Standard 2 related to location and access of materials would be an ideal alignment between VL and IL objectives.

### *Critical Viewing*

Avgerinou states that critical viewing involves “applying critical thinking skills to visuals” (2009, p. 29). Compared to the other competencies, this may be the most complex yet often receives the least attention. We can expand on this brief explanation by saying that the viewer must ask “why” questions about the image. As they work to understand the image, viewers will have developed an understanding of who created the image and how it was constructed, what the image includes or depicts, when the image was created and also the time period or setting of the events depicted in the image (if

different from the time during which the image was created). A critical viewer then asks why the image was created. Why did the author create the image, from this vantage point, including these elements? Why might the author have excluded other options? Why is the time period of the image (and/or its creation) important to our understanding of the image? One may also venture to determine if cultural, social, economic, etc. differences between the author and the viewer have an impact on viewing the image critically.

Information Literacy Competency Standard 3 states that an information literate learner “evaluates information and its sources critically and incorporates selected information into his or her knowledge base” (2000, p. 11). While varied forms of the term “critical” are an obvious connection between these competencies, the outcomes for Standard 3 in the *Standards* may also enlighten our understanding of the visual literacy competency. Performance Indicator 2 states that the information literate student “recognizes the cultural, physical, or other context within which the information was created and understands the impact of context on interpreting the information” (2000, p. 11). While such activities are often associated with written text, these abilities are also vital in students’ viewing of images, as they think beyond what they see to consider why it matters.

### *Visual Thinking*

After a student has developed some facility as a critical viewer of images, he or she will begin to develop the ability to create similar types of images. As a visual thinker, one has the “ability to turn information of all types into pictures, graphics, or

forms that help communicate the information” (Avgerinou, 2009, p. 30). A bar graph depicting statistical data, a series of photographs explaining the steps in a process, or a painting that uses design and color to portray a specific event or emotion are all examples of visual thinking.

The translation of information, whether it is visual, written, or numerical, into another visual form relates to the goal of IL Standard 4: “The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose” (ACRL, 2000, p. 13). The outcomes for Standard 4, Performance Indicator 3 state that the information and visually literate student (a) “chooses a communication medium and form that best supports the purposes of the product or performance and the intended audience”; (b) “uses a range of information technology applications in creating the product or performance”; (c) incorporates principles of design and communication”; and (d) “communicates clearly and with a style that supports the purposes of the intended audience” (ACRL, 2000, p. 13). These outcomes, while presumably meant to assess evidence of information literacy development during live presentations, would be equally appropriate as outcomes for visual literacy assessment.

### **Classroom Scenarios**

The symmetry between these three visual literacy competencies and the ACRL’s *Standards* offers an exemplar for aligning outcomes in similar fields. The following “classroom scenarios” illustrate situations in which both visual literacy and information literacy instruction can be provided. Two of the scenarios may be integrated into a

library instruction session; the others must be integrated into the curriculum of the course as an assignment. While examples may appear to be discipline-specific, each scenario could be retooled for different purposes, courses, and instructors across disciplines. Additional suggestions are provided in the appendices.

### *Scenario One: Image Analysis*

First, ask students to analyze a photograph and list all of the elements they see in the image. These elements may include people, wildlife, components of a landscape, architecture, other pictures, words, etc. Ask students to imagine how each component is relevant to the image as a whole. Finally, ask students to list sources of information that may help increase their understanding of the image.

There are a number of directions that students may take in an image analysis activity. For example, in one of the most famous photographic images from Martin Luther King Jr.'s "I Have a Dream" speech, King is flanked by various individuals in uniforms and other manners of dress. Most photographs show a podium equipped with many microphones. Many images of King at the March on Washington will also show the Lincoln Memorial in the background, including the fluted Doric columns that surround the structure.

A student might want to focus on the microphones in the image and discuss how the recordability and preservation of the speech is one element that makes this moment in history so memorable. The ability to record and deliver this speech to a wide number of people must have had an impact on its reception. In addition, one could theorize the importance of location to this speech by analyzing the background images of the Lincoln

Memorial's large white columns. Students may also be encouraged to consider elements that are missing from an image. There are no women in the photographs of Martin Luther King giving his famous speech. One might conduct additional research and offer either a historical text or an argument based on this "missing" component.

The use of an image such as the March on Washington photograph can function in several ways to achieve learning outcomes related to ACRL Standards 1 and 2. First, the image can act as an object of engagement and invention. Librarians and others tout numerous ways of developing topics and working toward a thesis, and yet photographic analysis is rarely mentioned as an option. Looking at images---an engaging activity for many students---is one way of capturing their attention and interest in both the assignment and the instruction session itself. Second, this activity can be used to develop an initial research plan as students begin thinking about the types of sources they may need or specific information that would help develop their line of inquiry. Such an activity could also be deployed to illustrate the ways that writers narrow their lines of inquiry, from an unmanageably large subject (the March on Washington), to a more narrow topic (the architecture depicted in many images of the March), to a thesis (the rhetorical impact of the Lincoln Monument as a backdrop for King's speech at the March).

To achieve the "Knowledge of Visual Conventions" outcomes related to visual literacy development, the analysis and listing strategy encourages students to practice and hone their abilities at "close viewers" of visual texts. Through such a process, students can better understand the symbolic impact of certain components of an image. When students understand that a background of large, white, classical columns in a photograph

has an impact on the viewing/reading of the image, they will begin to think about the obvious and sometimes subtle ways that images transmit information.

*Scenario Two: Contextualizing “Art”*

After analyzing a painting (individually or in groups), students should attempt to answer the following questions: What is the time period of the painting? What is the situation or event being depicted? Who are the main actors and what is the setting? Some of these answers may be evident from the image itself, or the title may be useful to help determine settings, people, and situation. However, additional research is often required to answer one or more of these questions about a particular work of art. Therefore, ask students to conduct research to verify the time period, the event depicted, and the historical circumstances depicted in the image. Students should consider the variety of sources they might use to help “set” this image in time.

While the painting may be used to guide students to written research sources, this activity may also act as a starting point for an assignment integrated within a course. Students could conduct research and write or present on such topics as the historical or contemporary reception of the image, or the artist’s reasons for making specific choices. For a more creative take on the assignment, students could be asked to create a new character to “live” in the world of the image. Students would use information collected about location, time period, and the situation to create a character, describing their physical appearance, dress, and background information. Then, students may write a narrative from their character’s point of view, or develop a dramatic interpretation from the character’s perspective. This exercise moves beyond the development of topics for

research, and beyond the selection of information to help “flesh out” the image, allowing students to recreate the image by including additional characters within the frame.

In terms of visual literacy development, this kind of analysis of the image allows students to conduct “critical viewings” of paintings that encourage them to look beyond the cultural value of the text. Often, students are distracted by the presumed authority of the painted image, because it is often defined as “art”---something that one can have a personal opinion on, but for many viewers, the activity of spectatorship ends there. A different kind of attention is required when analyzing painting as opposed to photographs. Elements in a photograph are often (but not always) a happenstance of time and situation, whereas all of the included or excluded components of a painted image are undoubtedly purposeful.

For the information literacy educator, this activity encourages students to look closely at visual images, while also enhancing their ability to brainstorm for the kinds of sources that might help them develop their understanding of the image. This is also a prime opportunity to discuss the relationship between titles and images, between words and pictures, and depending on the painting used in the exercised, other image-specific issues could be considered.

### *Scenario Three: Visual Displays of Information*

Begin the activity by providing students with 3 examples of a visual display of information. Ask students to analyze the examples, paying particular attention to any captions or legends designed to assist the reader. Then, students should evaluate the images and rank them from “most useful” to “least useful.” Students should be able to



answer the following questions: Why is this information presented in a visual display? What technologies were used to create the image? As you evaluate the effectiveness of the image, what criteria do you consider? What does this evaluation say about the researcher, the research, the publication, and the expected audience for the publication?

This activity may offer an opportunity for students to focus on captions or titles associated with an image, a key step in the reading/viewing process that can lead to questions about the reciprocal relationship between words and images: How do labeling conventions help the reader to understand information provided in a visual form? When would it be inappropriate or unhelpful to display data in such a manner? Speaking to Edward Tufte's concerns in the book *Beautiful Evidence*, when can the aesthetic appeal of the visual display of information impair the reader/viewer's ability to understand the information? Likewise, when can visual design help to communicate the information in a more effective and engaging manner?

While the visual literacy competency related to "visual thinking" requires that learners understand and create information in visual forms, this ability is also beneficial to information literacy development. A comparison of visual displays of data published in magazines, newspapers, and journals---on a similar subject or related to a similar discipline---can help a reader determine the publication's target audience. A display of visual data related to obesity that is situated within the design of a scale or a display related to the impact of an oil spill on wildlife that is shaped like a fish may be appropriate for certain types of publications. An extensive and complicated visual display may suggest that a specific audience is expected by that writer and/or editor. While one may talk about the differences between scholarly and popular literature, many

educators are aware that showing students the difference---or allowing them to find these distinctions independently---facilitates more effective retention during the learning process.

#### *Scenario Four: Scholarly/Professional Imaging Practices*

To begin, ask students to choose an image created by professionals or scholars in a particular area of study. Then, students will conduct research to determine the process used to create the image. Students should endeavor to answer a number of questions about the image: Is the image included to illustrate something or to provide evidence? Is the image used by the professional or scholar useful in their publication or is it included solely for the benefit of the reader? Were special tools, software, or skills in visualization required to create the image?

While images are often intended to illustrate or display information, they can also be an integral component in the research process. Asking students to consider the imaging practices of a professional or scholar, and to locate information on the development or creation of that image, creates an opportunity to conduct research into the ways that information is created in various forms using different media. Understanding the disparate methods associated with scholarly and professional inquiry can help the student to replicate the process, or to consider the ways that the process may/may not relate to their own endeavors.

For example, underwater archaeologists use specific kinds of images to help them in their work. Photographs, x-rays, and sonar scans allow researchers and practitioners to make new discoveries or claims; these images are not “window dressing” for the

research. Similar examples can be provided from medical practitioners, business communications professionals, and scholars in the sciences. Increasingly, as more disciplines and professional arenas gain access to efficient imaging techniques and technologies, the benefits of these resources in the creation of new information and knowledge becomes increasingly important.

From both an information literacy and a visual literacy standpoint, this assignment can be associated across several standards to reinforce the fact that conducting research and creating images are purposeful, practical activities. Students are all too cognizant of which tasks will be useful later, and which tasks seem like “school” work as opposed to “real life” work. Considering assignments that connect the work of the classroom with the work of the world may not only be more engaging for students, but may also be more prescient in light of their future research and work endeavors.

### **Conclusion**

This argument for aligning learning outcomes is meant to create a “way in” to a discussion about the ways that classroom activities and assignments can work can function to enhance multi-literacy development, and such alignments have numerous possibilities. First, such negotiations place teaching librarians in the position of dealing with the standards of another discipline. This allows the librarian to learn about their liaison areas or teaching specialties in a more productive way. Further, this process enhances the teaching librarian’s critical thinking and understanding of both the new standards and the information literacy standards with which they are familiar. Such a move can be useful in communicating with faculty about the learning outcomes for

specific classes and assignments. When we are better able to facilitate the connections between what *we* want and what *they* want, our mutual goals can be translated into mutual effort.

Blurring borders between information literacy and other literacies, as well as other disciplines, has numerous implications for future research, pedagogy, and practice for librarians and others. What are the implications of scholarship on critical theory in information literacy instruction as we negotiate and dissolve borders? How do we expand beyond outcomes-focused instruction toward subject-focused pedagogy? How can we encourage or enhance disciplinary deployment of information literacy principles to expand conversations on ethics in research? And, as always, what are the practical strategies we can deploy to enhance information literacy instruction that layers and blurs with subject areas and their literacies? We will continue to explore these questions as images continue to increase their value during the research process, and we will complicate these issues with as the creation and distribution of multimedia texts requires our consideration of audio-visual and oral/aural texts.

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### **Appendix: Strategies for Using Images During Library Instruction Sessions**

The following examples can be used during a library instruction session to integrate images and visual literacy training with information literacy instruction. A proposed alignment of visual literacy and information literacy outcomes addressed by the activity is included.

*Activity: Use images to discuss the quality and authority of information sources*

*Outcomes Aligned: Visual Discrimination (Visual Literacy); Standard 3—Evaluating Sources (Information Literacy)*

In classes requiring the use of fine arts images, offer several examples of the same image--one available on the internet, one available from a subscription database, and one available in print form. Ask students to consider the differences in quality and facility between these various textual forms. This may also encourage discussion on the proliferation of “copied” fine arts works available online, without attribution or consideration for the authenticity of the work (whereas a museum publication will be less likely to publish images of reproductions of visual texts, without purpose or explanation). Instructors may ask students to locate an image online and view the text in different browsers. Can they detect a difference in pixel quality, color saturation, etc? How does this impact their use of the image, particularly in relation to image analysis?

*Activity: Using images to discuss the manipulation or revision of information*

*Outcomes Aligned: Visual Discrimination (Visual Literacy); Standard 3-Evaluating Sources (Information Literacy)*

Offer students various examples of the same image that has been located online. One may be cropped, another altered, or manipulated in a different fashion. Working in groups, students will use the internet or library sources to locate the original or primary image. Where did they locate the original image? How do they know that it has not been cropped, altered, or manipulated? What does this say about the authority or the intentions of the image publisher? Encourage students to consider the difference in value or the impact of using images that have been altered by a second party and published on the internet.

*Activity: Use images to discuss different types of information sources*

*Outcomes Aligned: Knowledge of Visual Conventions (Visual Literacy); Standard 1-Recognizing different types of information sources, Standard 3-Evaluating Sources (Information Literacy)*

During the course of discussions on the difference between scholarly and popular literature, ask students to consider the visuals associated with various kinds of publications. Can an analysis of these images assist in determining the scholarly or popular character of the article/publication?

*Activity: Use examples of visual displays of information to develop “best practices”*

*Outcomes Aligned: Knowledge of Visual Conventions, Visual Thinking (Visual Literacy); Standard 3-Evaluating Sources (Information Literacy)*

In a situation where students must/should create visual representations of information (graphs, charts, etc.), offer various examples of information presented in similar visual

forms. Ask students to work in small groups to locate the 'best practices' evidenced in the examples and to locate opportunities for improvement as well. As a class, synthesize student responses to help develop guidelines for presenting information in a visual form.