Visual literacy: teaching and learning in the academic library of the 21st century and beyond

by Alessia Zanin-Yost

Introduction

Although the term visual literacy was established in 1969, the concept has not been fully integrated into the library world, nor does it have the same level of influence as information literacy. A number of factors are responsible for visual literacy's limited integration. These factors include multiple definitions, hesitations about how to incorporate visual literacy into library instruction, and uncertainty about assessing learning and teaching, changing technologies, and expectations of students. In 2011, the American Library Association (ALA) approved the Association of Research and Colleges Libraries (ACRL) definition and standard for visual literacy. With a national understanding of visual literacy, it is possible that visual literacy will become as influential as information literacy.

However, many questions still arise, such as 'Why do we need a new literacy?', 'What is the role of libraries and librarians in providing services, resources, and teaching for visual literacy?', and 'How can librarians teach visual literacy?'. The article discusses visual literacy in the academic library, the ACRL definition and standard, the importance of including this literacy in teaching and learning, how images can be used to increase visual literacy, an example on how to incorporate the standard and graphic novels.

Thinking and communicating through visuals

The cave paintings in Lascaux France or at the National Park of Kakadu in Australia tell stories of people that lived long ago. These pictures were part of a system of communication that was understood by the people of that time and place. The arrival of the press changed how people communicated. Textual information took over visual information. Since then, every invention changed the way we communicate, search for, use, and create information.

Since the mid-XX century we have been living in a digital revolution. Technology has rapidly changed, and we have adapted to it by altering our information processing behaviors. The arrival of social media and mobile devices has changed how we

ALESSIA ZANIN-YOST, Robert E. Eiche Library, Pennsylvania State University, 3000 Ivyplace Park, Altoona PA 16601, e-mail arz10@psu.edu.

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communicate, especially how we see and decipher images[1]. Therefore, we must change how we teach and learn in order to accommodate both digital natives, those born into a technological world, and digital immigrants, those adapting to technology[2].

There is no doubt that the Internet has become the most influential medium for teaching, learning, and entertainment. Today's society has adapted to a type of communication that is mode dynamic. The Internet offers a way of learning and teaching that is multimodal: text and images overlap and require knowledge of both information and visual literacy. In Australia, 42% of children use the Internet about seven hours per week; in the United States, 48% of people 15 years and older use a smartphone for browsing the Web, finding maps, playing games and taking pictures; and in Europe, rates of excessive use of the Internet by children ranges wildly, with Italy having the lowest rates and Estonia the highest[3]. In the world of education, primary and secondary schools of many countries provide a free connection to the Internet to facilitate teaching and learning through a visual mode that allows for more creativity and flexibility[4]. Mary Burns, senior technology specialist of the Education Development Center, commented that students need not only to be able to read and write, but also to «navigate the real world, they must also be visually literate-able to decode, comprehend, and analyze the elements, messages, and values communicated by images»[5].

David Lewis noted that today's world «is saturated with images, moving and still, alone and in all manner of hybrid combinations with text and sounds [...]. Competence with images is now a prerequisite of competence in life»[6]. Today, being visually literate

1 The author defines picture, image and visual as the same: the representation of something that is natural or artificial, still or moving, represented through any medium. This definition is a development of a previous description in the use of the terminology. Alessia Zanin-Yost, *Seeing is learning: the synergy of visual literacy.* In: *Using qualitative methods in action research*, Douglas Cook and Lesley Farmer editors. Chicago: ACRL, 2011, p. 213-224.

2 Jennifer George-Palilonis; Vincent Filak, *Blended learning in the visual communications classroom: student reflections on a multimedia course*, « Electronic journal of e-learning», 7 (2009), n. 3, p. 247.

3 Australian Bureau of Statistics, *Children of the digital revolution*. 2011, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Main+Features60Jun+2011>. Thom File, *Computer and Internet use in the United States*. Current Population Survey Reports. U.S. Census Bureau, Washington (DC), 2013, p. 20-568. David Smahel [*et al.*], *Excessive Internet use among European children*, «EU Kids Online», November 2012, <http://www.lse.ac.uk/media%40lse/research/EUKidsOnline/EU%20Kids%20III/Reports/ExcessiveUse.pdf >.

4 Marco Gui; Gianluca Argentin, *Digital skills of internet natives: different forms of digital literacy in a random sample of northern Italian high school students,* «New Media & Society», 13 (2011), n. 6, p. 963-980. National Center for Educational Statistics, *Teacher's use of educational technology in public schools.* 2010, <http://nces.ed.gov/pubs2010/2010040.pdf>. Sehnaz Baltacci-Goktalay; Zehra Ozdilek, *Pre-service teacher's perceptions about web 2.0 technologies,* «Procedia Social and Behavioral Sciences», 2 (2010), p. 4737-4741. Romina Cachia; Anusca Ferrari, *Creativity in school: a survey of teachers in Europe*. Luxembourg: Publications Office of the European Union. 2010, <http://ftp.jrc.es/EURdoc/JRC59232.pdf>.

5 Mary Burns, *A Thousand Words: promoting Teachers' Visual Literacy Skills,* «Multimedia & Internet Schools», 13 (2006), n. 1, p. 16.

6 David Lewis, *Reading contemporary picture books: picturing text*. London, New York: Routledge, 2001, p. 59-60.

is more important than ever. Research shows that the use of the Internet increases with age, with a growth between the age of 11 and 17, and the validity of the information is strongly based on the quality of the images[7]. By understanding how people use and interpret visual information, educators can develop a curriculum that is parallel to current and future needs, thus better preparing learners changes[8].

Cultural and scientific institutions have steadily been transferring their collection into digital format, making more visuals available. People have access to an ever-increasing amount of maps, works of art, letters, and photographs. Yet, these collections are seldom integrated into teaching because there has been resistance to moving beyond traditional text-based teaching. Susan Metros and Kristina Woolsey note that:

> Academics have a long history of claiming and defending the superiority of verbal over visual for representing knowledge [...] however, in the last decade, digital technologies have broken down the barriers between words and pictures, and many of these same academics are now willing to acknowledge that melding text with image constructs new meaning[9].

What is visual literacy?

The concept of visual literacy is not new. Learning through images precedes learning with text, but the term 'visual literacy' was first coined in 1969 by John Debes, pioneer of the visual literacy movement and co-founder of the International Visual Literacy Association. Debes defined visual literacy as «a set of competences owned by a person to discriminate and interpret the visible actions, objects and symbols, natural or man-made, that he encounters in his environment, and to apply the competences to communicate with others and to appreciate visual texts»[10]. Since then research has focused on the many aspects of visual literacy, such as visual thinking, visual learning, mental imagery, and symbol systems[11].

7 Economic and Statistics Administration, *A Nation online: how Americans are expanding their use of the Internet,* U.S. Department of Commerce, 2010, <http://www.esa.doc.gov/Reports/nation-online-how-americans-are-expanding-their-use-internet>. Andrew Flanagin [*et al.*], *Kids and credibility: an empirical examination of youth, digital media use, and information credibility*. MIT Press, 2010. Denise Agosto, *A model of young people's decision-making in using the Web*, «Library and information science research», 24 (2002), n. 4.

8 Barbara Stafford, *Good looking: essays on the virtue of images*. Cambridge (Mass.): MIT Press, 1996, p. 23. Johanna Rosier; Pam Dyer, *Visual literacy: a necessary skill for planning graduates,* «Social alternatives», 9 (2010), n. 3, p. 65. Stephen Apkon, *The age of the image: redefining literacy in a world of screens*. New York: Farrar, Straus and Giroux, 2013, p. 101.

9 Susan Metros; Kristina Woolsey, *Visual literacy: an institutional imperative,* « New horizons», May/June (2006), p. 80.

10 International Visual Literacy Association. *What is Visual Literacy?*. 2012, <http://ivla.org/drupal2/content/what-visual-literacy-0>.

11 Rudolf Arnheim, *Visual thinking*. Berkley: University of California Press, 1969. Francis Dwyer, *Strategies for improving visual learning*. State College (PA): Learning Services, 1978. Alessia Zanin-Yost; Erin Tapley, *Learning in the art classroom: making the connection between research and art,* «Art documentation», 27 (2008), n. 2. Malcolm Fleming; Deanne Hutton, *Mental imagery and learning*. Englewood Cliffs (NJ): Educational Technology Publications, 1983. Allan Paivio, *Imagery and verbal processes*. New York: Holt, Rinehart & Winston, 1971.

Visual literacy is not merely the ability to identify an image, its colors and shapes, but to place all of the visual information in a very specific context. This requires breaking the image down into pieces and analyzing each component. In short, visual literacy is the ability to process complex information. This is because what we see is affected by our previous knowledge, religious, social, and cultural preferences, and upbringing. When we look at a picture, we need to detach ourselves from the personal emotional meaning and interpret the image as others would. For example, in Western societies the image of a person wearing all black will most likely be associated with mourning, but in Chinese culture this image will not have such meaning because white is the color connected with mourning. The ability to separate and understand the various layers of information in an image requires visual attention, «the mechanism that turns looking into seeing»[12].

The ACRL visual literacy standards

In 2011 the ALA approved the ACRL definition of visual literacy:

> Visual literacy is a set of abilities that enables an individual to effectively find, interpret, evaluate, use, and create images and visual media. Visual literacy skills equip a learner to understand and analyze the contextual, cultural, ethical, aesthetic, intellectual, and technical components involved in the production and use of visual materials. A visually literate individual is both a critical consumer of visual media and a competent contributor to a body of shared knowledge and culture[13].

According to ACRL, a visually literate individual is able to[14]:
– determine the nature and extent of the visual materials needed,
– find and access needed images and visual media effectively and efficiently,
– interpret and analyze the meanings of images and visual media,
– evaluate images and their sources,
– use images and visual media effectively,
– design and create meaningful images and visual media,
– understand many of the ethical, legal, social, and economic issues surrounding the creation and use of images and visual media, and access and use visual materials ethically.

The visual literacy standards were developed with the information literacy standard in mind. Each one of the standard listed above has a series of performance indicators with learning outcomes. As with information literacy, the librarian should strive to select the standards that will reflect the learning[15]. The standards, outcomes, and indicators should be selected according to the course content and students' level of learning. In developing a visual literacy session, the librarian should collaborate closely with the faculty to design a lesson that will be most helpful for both students and faculty. Throughout and at the end of the library lesson, the librarian should

12 Marisa Carrasco, *Visual attention: the past 25 years,* «Vision research», 51 (2011), p. 1484.

13 International Visual Literacy Association. *What is Visual Literacy?* cit.

14 *Ibidem*.

15 In the United States, academic librarians can have tenure status. This rank is different for every university. Bolger and Smith report that 34% of the librarians working in 134 universities were on a tenure track. See bibliography.

assess students' learning so that future changes can be made. Teaching visual literacy is a process that requires planning, application, evaluation, and re-application.

The role of the librarian in teaching visual literacy

In the American universities is customary that in a class a professor integrates a lesson that focus on how to find and use information. These lessons, called research session or information literacy session that last fifty minutes, are taught by the librarian and are based on the ACRL information literacy standards. These standards help the librarian to decide which skills the students should develop in order to successfully complete the assignments requested by the professor. The benefits of incorporating a research session have been discussed throughout the literature for several years, and the instructors understand that the research session helps the students understand better the content of the course and develop critical thinking skills[16].

Within the context of visual literacy this is not the case; these standards are not currently applied to visual information. The instructors assume that the students already have the critical thinking skills to find visual information. Often times the students are not able to decipher and translate the information from a graph, images are copied and pasted into a research or power point presentation without understanding copyright restrictions, or that the images lack citations. On the other hand, the students think they know how to find information because they have familiarity with various technologies[17]. However, knowing how to use a technology and have access to visual information «does not necessarily mean that individuals are able to critically view, use, and produce visual content. Individuals must develop these essential skills in order to engage capably in a visually-oriented society»[18]. This is where the librarian comes in.

The visual literacy cannot be taught without the integration of information literacy because the two competencies are connected with each other[19]. For example, is imprudent to interpret a graph of sales without researching the store management. To show the students that all types of information are connected the librarian should incorporate both literacies in the research session. Like in information literacy, the librarian should not cover the course content. The role of the librarian, expert in the field of information, is to teach how to find and use visual information, keeping in mind the ACRL visual literacy standards.

From several conversations with other librarians, the author has found that there is some tension when talking about services and resources in relation to

16 Michael Eisenberg; Carrie Lowe; Kathleen Spitzer, *Information literacy: essential skills for the information age,* Westport (Conn.): Libraries Unlimited, 2004. Melynda Burke, *Overcoming challenges of the technological age by teaching information literacy skills*, «Community & junior college libraries», 16 (2010), n. 4, p. 247-254. Heidi Gauder; Fred Jenkins, *Engaging undergraduates in discipline-based research*, «Reference services review», 40 (2012), n. 2, p. 277-294.

17 Shannon D. Smith; Judith Borreson Caruso, *Key findings: the ECAR study of undergraduate students and information technology.* 2010, <http://net.educause.edu/ir/library/pdf/EKF/EKF1006.pdf>.

18 American Library Association. Association of College and Research Libraries (ACRL), *ACRL Visual Literacy Competency Standards for Higher Education*. 2011, <http://www.ala.org/acrl/standards/visualliteracy>.

19 Alessia Zanin-Yost, *Three for one: teaching sustainable education, information literacy, and visual literacy with the inventory compilation assignment*. In: *Focus on educating for sustainability,* ed. Maria Anna Jankowska. Sacramento (CA): Library Juice Press, 2014.

visual literacy. It is important to note that visual literacy has been one of the tasks that librarians perform. Jennifer Mayer and Cheryl Goldenstein's report that out of 225 librarians, 74% help patrons to find online images, 56% answer questions related to copyright issues, 43% help with technical problems, and 7% assist patrons with design[20].

Librarian create visual information every day: handouts, screen shots, and other visuals are often included in library skills sessions, homepages of the library, research guides, posters and publicity are all form of visual information. Overall, librarians are comfortable with the creation of visual information. However, teaching visual literacy is different because there is the tendency to underestimate the importance to educate about these skills as well as the lack of knowledge on how to integrate it during a research session.

How to teach visual literacy

Although the development of a national definition and standards will help librarians feel more equipped to teach visual literacy, librarians still have many questions about the best approaches. The same methods used in teaching information literacy should be applied to visual literacy.

The example in this section illustrates the phases of developing and implementing a visual literacy lesson.

1. *Identify what the students need to learn*

This requires collaboration between the instructor and the librarian, an understanding of the assignment requirements, and a familiarity with what has been covered in the course. Connecting the visual literacy instruction with an actual assignment will allow the students to place the research instruction in context with what they need to do. For example, if the students need to research the fashion in the United States during the 1950s this simple task actually requires learning several skills such as understanding how to use the library catalog, how to effectively use keywords, and find images through the databases and the Internet. Students might not be familiar with the topic, or they might find information that it is not clear. When appropriate, showing images at the beginning of the research session will allow them to visualize what they need to do. For example, showing clips of the movies *Grease*, *Mad Man* or *The Help* will allow the students to get clues about the fashion of the 1950s.

2. *Identify what standard, performance indicators and outcomes to use*

Looking at the ACRL standards, the librarian needs to select the most appropriate. The chart below gives an idea of which standard, performance indicators and outcomes can be selected. The column on the left list the tasks the students need to learn, while the other three columns indicate the application of the ACRL standard[21].

20 Jennifer Mayer; Cheryl Goldenstein, *Academic librarians supporting visual culture: a survey of image access and use,* «Art documentation», 28 (2009), n. 1, p. 19-20.

21 Numbers and letters in the standard, performance indicator and outcomes columns refer to the actual ACRL Visual Literacy Standard. Any of the standard, performance indicator and outcome can have multiple applications, like the use of outcome 'd' for both 'learn how to use keywords' and 'finds images with the databases'.

Task	*Standard*	*Performance Indicator*	*Outcome*
Learn how to use the catalog	2. Find and access needed images and visual media effectively and efficiently	1. Selects the most appropriate sources and retrieval systems for finding and accessing the needed images and visual media	*a. Identifies interdisciplinary and discipline-specific images sources.* *e. Selects the most appropriate image source for the current project.*
Learn how to use keywords		2. Conducts effective image searches	*a. Develops a search strategy appropriate to the image need and aligned with with available resources.* *d. Identifies keywords, synonyms, and related terms for the image needed, and maps those terms to the vocabulary used in the image source.*
Finds images with the databases			*d. Identifies keywords, synonyms, and related terms for the image needed, and maps those terms to the vocabulary used in the image source.*
Finds images online			*e. Uses images to find other images through exploration, social linking, visual search engines, or browsing.*

3. *Assessment*

This last phase needs to be parallel to what the librarian has taught and what the students had to do. The assessment can be part of the grade or not. If the library assessment is part of the grade, the faculty needs to be part of the development of the assessment and the students need to know what they are being evaluated. For example, to find out if the students fully understood how to use the catalog this assessment can be used:

Task	*Standard*	*Performance Indicator*	*Outcome*	*Assessment*
Learn how to use the catalog	2. Find and access needed images and visual media effectively and efficiently	1. Selects the most appropriate sources and retrieval systems for finding and accessing the needed images and visual media	a. Identifies interdisciplinary and discipline-specific images sources. e. Selects the most appropriate image source for the current project.	The student will: list where the resources used were found (book, magazine/ newspaper, etc.) and a brief explanation of which resources where selected over others.

Comparing th,e requirements from the assignment and the final products, the librarian should note trends. The librarian can also do a short in-person evaluation, for example by asking the students what problems they encountered and if the library instruction met their needs.

Other ideas to integrate visual literacy could be:
– political comic strips from newspapers to introduce the concept of bias in the information,
– photos to talk about copyright and the research process,
– ads to discuss about commercial messages/bias, the connection between text and image, and the veracity of the information,
– graphs to show how the same information can look different by using a variety of graphs.

What are graphic novels doing in the library?

One of the goals of a public, academic or media library is to support reading and to have a collection of comic books in a library is not something new[22]. Currently, there is not a clear definition about what constitute a graphic novel or a comic book. Graphic novels and comic books define a format, not a genre. Both formats use text and images to tell a fictional of non-fictional story. The biggest differences are:
graphic novels:
– one stand-alone story, the story can be a series, but each volume has a beginning and an end,
– narrative and images are complex,
– single publication,
– sold in bookstores;
comic books:
– short sequential story, each volume can include more than one episode,
– narrative and images are simplistic because the story is short,
– periodical publication (weekly or monthly),
– sold in newsstands.

Graphic novels are beloved by many because they offer a combination of textual and visual information: the reader needs to use both types of information to understand the story. Graphic novels offer an alternate way to read and to learn[23]. Today's graphic novels are not limited to fantasy subjects such as *Diabolik* or *Superman*, but also explore social problems that can be used as an educational tool. For example, the series *Amelia Rules!* By Jimmy Gownley follows the life of 11 years old Amelia and how children deal with everyday issues such as friendship, problems at school, and sickness.

In the United States graphic novels have a long history as leisure reading material beginning with Richard Outcault comic strip *The Yellow Kid* in 1895. However, it was the publication of *Maus* in 1991 by Art Spiegelman that changed the world of the graphic novels. Spiegelman showed that graphic novels could cover serious topics. *Maus* is a biography between fiction and reality; it is the story of the author's parents during the Holocaust. In the story, all in black and white, the characters are represented as animals: the Jews are rats, the Polish are pigs, and the Germans are cats. The decision to use a graphic novel and to represent the ethnic groups as animals was a complex

22 Larry Dorrell; Ed Carroll, *Spider Man at the library*, «School library journal», 27 (1981), n. 10, p. 17-19. D. Highsmith, *Developing a focused comic book collection in an academic library*, «Acquisitions librarian», 4 (1992), n. 8, p. 59-68.

23 Philip Crawford, *A novel approach: using graphic novels to attract reluctant readers*, «Library media connection», 2004, p. 26-28. Stephen Krashen, *The power of reading: insights from the research*. Portsmouth (NH): Libraries Unlimited, 2004.

one that was influenced by other cartoonists and artists[24]. In 1992, *Maus* won the Pulitzer Prize, the only graphic novel to have ever received such high honor. Winning the Pulitzer allowed graphic novels to change their status from leisure reading to a more academic type of reading. Today *Maus* is used in elementary and higher education institutions to teach about respect, diversity, culture, philosophy, communication, ethics on human research, history and sociology.

Graphic novels provide a bridge between text and image because they can be adapted to a variety of levels and subjects. Graphic novels and comic books are not meant to replace prose books but to augment the experience of exploring and developing critical thinking skills that combine both visual and textual information. For example, in a college course the concept of diversity can be explored by understanding why the humans in *Maus* are represented by animals. In this case, the librarian can show the students how to find information that show racism, and compare how racism is represented today.

The benefits of using graphic novels in education have been evaluated by many[25]. Among the recurring characteristics are an increased interest in reading and vocabulary development. In collaboration with the faculty, the librarian can provide suggestions on which graphic novels are most appropriate for the topic and age of the students. The Young Adult Library Services Associations (Yalsa) offers a list of the ten top graphic novels of the year which can be used in both primary and secondary education[26].

Conclusion

Technology will change how we find and use information, how we communicate, and how we develop our future critical thinking skills. Research has shown that visuals are an important element in our future education; therefore, both faculty and librarians need to adapt their teaching. The ACRL Visual Literacy standards establish the foundations for librarians to incorporate visual literacy skills into their library sessions. Textual literacy was important in the past, and it will remain relevant, but it will not be the main literacy. We need to be flexible and understand that a «culture's predominant mode of literacy depends on the technology and mass media it embraces»[27].

Like information literacy, visual literacy can be incorporated in any setting and for any group level. Different medium, like comic book and online resources, will become more accepted and integrated into traditional text-based education.

Visual literacy should not be confined to higher education, but should begin in the early years of critical development. By providing exposure to visual literacy, librarians can equip their patrons with the skills needed to succeed in the multi-dimensional XXI century learning environment and beyond.

24 *Life after Maus with Art Spiegelman [HD] Late Night Live,* «ABC RN», 2013, <https://www.youtube.com/watch?v=3xTM-ewN9yM&list=RD3xTM-ewN9yM#t=56>. *Art Spiegelman discusses Maus & MetaMaus*, «BBC News», 2011, <https://www.youtube.com/watch?v=UBudVIoRrio&list=RD3xTM-ewN9yM&index=2>.

25 Elizabeth Friese, *Visual narratives*, «Knowledge quest», 41 (2013), n. 3, p. 24-29. Lorena O'English; Gregory Matthews; Elizabeth Blakesley Lindsay, *Graphic novels in academic libraries: from Maus to Manga and beyond*, «Journal of academic librarianship», 32 (2006), n. 2, p. 173-182.

26 Yalsa, *Great Graphic Novels*, <http://www.ala.org/yalsa/great-graphic-novels>.

27 Richard Sinatra, *Visual Literacy Connections to Thinking, Reading and Writing*. Springfield (IL): Charles C. Thomas, 1986, p. 10

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