



Visual literacy in educational practice

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In the 21st century the ability to interpret digital, visual and audio media is a form of literacy which is as basic as reading and writing skills. Visual literacy is required of us as much as textual literacy. Visual literacy gives educators a chance to increase the quality of their teaching and to connect with learners in more interesting way. The article elucidates the definition of visual literacy, types of visual assessment, challenges of visual literacy, and proves that visual literacy is important for learning and teaching in educational practice. Research shows that visual literacy is an essential component of science and technology education today, using visual treatments in lessons raise learning with various degrees of success. The article may encourage teachers pay their attention to visual literacy, an aspect of learning that is relatively neglected by them.

Key words: *visual literacy; images; students; learning; research*

*We are a visually illiterate society...
Our world is changing fast — faster than we can keep up
with our historical modes of thinking and communicating.
Visual literacy — the ability to both read and write visual information;
the ability to learn visually; to think and solve problems
in the visual domain — will, as the information revolution evolves,
become a requirement for success in business and in life.*

Dave Gray, founder of visual thinking company XPLANE

Introduction

In the 21st century the ability to understand digital, visual and audio media is a form of literacy which is as basic as reading and writing skills. Visual literacy is required of us as much as textual literacy. Visual images are increasingly appearing in learning and teaching resources in

education environment, and we should be ready to accept the reality of today.¹ Educators are interested in transitioning text to a visual format as it decreases the learner's cognitive load by providing clarity to complex concepts and modify meaning.²

The article elucidates the definition of visual literacy, types of visual assessment, challenges of visual literacy, proves that visual literacy is important for learning and teaching in educational practice.

Research Focus

Recently, there has been a rise in the number of publications and researches dealing with the use of images in the classroom, which testify of the advent of the Digital Era and necessity to respond to the needs and tastes of a new kind of public which has been called by some the "visual generation". Using images in educational practice, taking into account that they perform a mere illustrative function, as a result their informative richness may be ignored.³ That's why some researchers are coming up with new approaches, based on image analysis, art history and semiotics. In such a way such approach will help students to investigate cultural meanings of images and motivate them for new reality in terms of educational practice through profound technological progress have made visual literacy as a compulsory skill.⁴ According to Gunther Kress and Theo Van Leeuwen:

... most texts now involve a complex interplay of written text, images and other graphic or sound elements...But the skill of producing multimodal texts of this kind, however central its role in contemporary society, is not taught in schools... In terms of this essential new communication ability, this new 'visual literacy', institutional education ... produces illiterates.⁵

¹ Bleed, R. (2005). *Visual Literacy in Higher Education*. ELI Explorations, p. 3.

² Metros, S. E. (2008). *The Educator's Role in Preparing Visually Literate Learners*. Theory Into Practice, the College of Education and Human Ecology, 47, p. 105.

³ Calado de Oliveira, N. S. (2012). *Approaching Images from a Cultural Perspective in the Foreign Language Classroom*. e-TEALS: An e-journal of Teacher Education and Applied Language Studies 3, p. 32.

⁴ Ibidem, p. 33.

⁵ Kress, G. – Leeuwen, T. (2006). *Reading Images: The Grammar of Visual Design*, 2nd ed. London and New York: Routledge, p. 17.

Definition of visual literacy

Visual literacy refers to a group of vision-competences which may develop human being by seeing and simultaneously having and integrating other sensitive experiences. These competences enable a visually literate person to interpret visible actions, symbols, objects that he meets in the surroundings.⁶ Depending on the person's background, the definition on visual literacy may be different. An artist is able focus of visual literacy as an advance of artistic expression.⁷ Ralph Wileman defines visual literacy as "the ability to 'read,' interpret, and understand information presented in pictorial or graphic images". Associated with visual literacy is visual thinking, which is characterized as "the ability to turn information of all types into pictures, graphics, or forms that help communicate the information".⁸ A similar definition for visual literacy is the following "the learned ability to interpret visual messages accurately and to create such messages".⁹

Visual literacy is a multidisciplinary concept which have developed in 1966 with the thinking of John L. Debes. In determining the role of visual literacy he differentiated four types of learning experiences which contribute to the development of visually literate individuals:

- The nature of the learning experience should allow learner to do something in such a way that there occurs a meaningful interaction between him and whatever he sees;
- The nature of the learning experience should give practice in choosing particular visual phenomena from his environment which are important to him;
- The nature of the learning experience should be excoGITATED so that may exist opportunities for the learner to make meaningful visual statements;
- The nature of the learning experience should motivate the learner to practice his ideas visually.¹⁰

⁶ Purvis, J. R. (1973). *Visual Literacy: An Emerging Concept*. Educational Leadership, Vol. 30, Issue 8, p. 714.

⁷ Bleed, R. (2005). *Visual Literacy in Higher Education*. ELI Explorations, p. 6.

⁸ Wileman, R. E. (1993). *Visual communicating*. Englewood Cliffs, N.J.: Educational Technology Publications, p. 114.

⁹ Heinich, R. – Molenda, M. – Russell, J. D. – Smaldino, S. E. (1999). *Instructional media and technologies for learning* (6th ed.). Upper Saddle River, NJ: Prentice-Hall, p. 64.

¹⁰ Debes, J. L. (1968). *Audiovisual Instruction*. 13, Some Foundations for Visual Literacy, pp. 961–964.

So, through the use of mentioned competences person is able to communicate with other people. In this understanding of visual literacy, Debes describes five steps of visual communication, namely: 1) seeing; 2) learning; 3) communication; 4) interpretation; 5) Comprehension.¹¹ Competencies of visuals and their epistemological appropriateness are greatly discussed in arts, architecture, philosophy as well as in communication, educational, and media studies.¹² As human beings, our brains are wired for images. Researches prove that we process visuals 60,000 times faster than text. Because, we take in all the data from an image at the same time while we process text in a sequential fashion.¹³

Visual literacy usually begins to develop as a viewer finds his/her own relative understanding of what she/he presents, usually based on concrete and circumstantial evidence. It includes the intentions of the maker, applying systems for thinking and rethinking one's point, and acquiring a set of information to support conclusions and judgments.¹⁴

Types of visual assessment

A broader visibility allows discuss, enjoy and critique all types of visual texts. Following from it, assessment of visual texts should acknowledge the three dimensions of the affective, critical and compositional. It is worth mentioning the specific features of these dimensions. They are:

1. Affective – in the process of examining images expressions of enjoyment are signs of effective engagement. Besides, these can also be approved by observation of gestures, the engaged discussion about a picture and pleasure which children get participating in the activity. The affective means when every person share his/her views on the image, presenting their personal interpretation in such a way.¹⁵
2. Critical – the assessment of sociocritical understanding may vary depends on age categories and learning situation. For younger

¹¹ May be available at: <http://doc.utwente.nl/59769/1/Velders07visual.pdf> [access: 01. 12. 2013].

¹² Ratsch, U. – Stamatescu, I. O. – Stoellger, P. (eds.) (2009). *Kompetenzen der Bilder: Funktionen und Grenzen des Bildes in den Wissenschaften*, Tübingen: Mohr Siebeck.

¹³ Burmark, L. (2004). *Why Visual Literacy?* excerpt from the book *Visual Literacy: Learn to See, See to Learn*.

¹⁴ Yenawine, P. (1997). *Thoughts on Visual Literacy*. In: Ed. Flood, J. – Brice Heath, S. – Lapp, D. *Handbook of Research on Teaching Literacy through the Communicative and Visual Art*, p. 1.

¹⁵ Barnard, M. (2001). *Approaches to understanding visual culture*. New York: Palgrave.

students, how the illustrator didn't draw the picture clearly might be precursors to more complex critiques of choices made in illustrations. Although each aspect of visuality is considerable, ideological critique is the most challenging for students and teachers.¹⁶

3. Compositional – The usage of specific metalanguage is the main aspect of this dimension. Concepts such as color, angles, symbols, lines reflect a metalinguistic knowledge about visual texts. Teachers should notice such concepts especially when they are listening children response while give an assessment.¹⁷

Challenges of visual literacy

Physical landscapes and virtual screen-scapes are filled with garish and unpaid graphics competing for people attention. The noise and visual overload is dangerous for us. Psychologist Kenneth J. Gergen calls this phenomenon as postmodern consciousness, supposing that is *"a syndrome in which Americans are so bombarded with a multitude of images, personalities and relationships that they have trouble hanging on to their own personal identity and recognizing the authenticity of traditional reason and emotions"*.¹⁸

Another concern is that although our students are consumers of media and have easy access to visually rich Web, visual saturated media, photo dependant social networks and sophisticated gaming, they are not visually literate. They also lack a visual vocabulary necessary for nonverbal communication. The students can view and read pictures, but could not interpret and craft images.¹⁹ They are able string together video clips to make a movie, but couldn't script a story.²⁰

¹⁶ Anstey, M. – Bull, G. (2000). *Reading the visual: Written and illustrated children's literature*. Sydney, Harcourt.

¹⁷ Kress, G. – Leeuwen, T. (1996). *Reading images: The grammar of visual design*. London: Routledge; Unsworth, L. (2001). *Teaching multiliteracies across the curriculum: Changing contexts of text and image in classroom practice*. Buckingham, Open University.

¹⁸ Gergen, K. *The media's new means*. In: Willis, J. (ed.), (1994). *The age of multimedia and turbonews*. Westport: Praeger, p. 27.

¹⁹ Metros, S. E. (2008). *The Educator's Role in Preparing Visually Literate Learners*. Theory Into Practice, the College of Education and Human Ecology, 47, p. 103.

²⁰ Metros, S. – Woolsey, K. (2006, May/June). *Visual literacy: An institutional imperative*. EDUCAUSE Review, 41(3), pp. 80–82.

Visual literacy in education

Nowadays students live in an information environment satiated with visual images, and educational materials are no exception. Educational materials must compete for attention in this rich visual environment, all types of teaching resources from traditional textbooks to the latest educational technologies contain pictorial representations.²¹ In order to perceive and analyze an image, the audience (students) should be able to understand the aim and recognize the techniques.²² Successful reading of an abstract scientific diagram demands very different skills from those who are necessary for reading ordinary pictures of everyday content such as illustrations in a shopping magazine or photographs in a newspaper. This proves that it is essential that today's students develop the general visual literacy skills so that to deal with scientific graphics, but in addition they must also learn about particular types of scientific pictures that belong to a specific field of technological or scientific study.²³ Students should also learn how to make ethical judgments about a visual message's availability, fidelity, and worth.²⁴

Research made by Lih-Juan Chanlin proves that using visual treatments in lessons raise learning with various degrees of success. Comparing text elements with graphics and lesson with text only influence students with different prior knowledge levels as students get descriptive knowledge. Students with a high level of prior knowledge of the subject better responded with the animated form of graphics while learning descriptive facts. Chanlin's study suggests that the effectiveness of visual elements in learning is related to the prior knowledge of the students and students with different prior knowledge levels react differently to contrasting presentation forms.²⁵ Besides, Chanlin's study proposes that by providing visual control of animated graphics leads to enhances learning, especially in males.²⁶

²¹ Lowe, R. (2000). *Visual Literacy and Learning in Science*. ERIC Digest, ERIC Clearinghouse for Science, Mathematics, and Environmental Education, p. 3.

²² Baker, F. W. (2012). *Media Literacy in the K-2 Classroom*. International Society for Technology in Education, p. 44.

²³ Ibidem.

²⁴ Metros, S. E. (2008). *The Educator's Role in Preparing Visually Literate Learners*. Theory Into Practice, the College of Education and Human Ecology, 47, p. 102.

²⁵ Chanlin, L. (1998). Animation to teach students of different knowledge levels. *Journal of Instructional Psychology*, 25(3), pp. 166–175. Retrieved December 26, 2001, from EBSCOhost database (Academic Search Elite).

²⁶ Chanlin, L. (1999). Gender differences and the need for visual control. *International Journal of Instructional Media*, 26(3), pp. 329–335. Retrieved December 26, 2001, from EBSCOhost database (Academic Search Elite).

In order to understand and correctly interpret technical visuals teachers must develop students' capacities. While teaching of certain knowledge and skills is recommended to begin when children are quite young, even though they begin formal studies of technology and science. For example, teachers may guide, showing students how to develop their own diagrams of a simple commonplace object such as a piece of fruit. Teacher could demonstrate students how to use a range of diagram techniques to devise a picture that communicates information about the object in a scientific manner starting with the real object. This technique is widely used in scientific and technological diagrams being a way of indicating internal structures that are hidden from view.²⁷ Supplementary exercises based on an existing picture which require students to elaborate, analyze or modify the original in various ways can also facilitate to improve comprehension skills.²⁸

The teaching implications of visual literacy include the necessity to:

- integrate visual literacy across all curriculum areas;
- develop critical thinking skills in connection to visual images;
- be aware of visual literacy principles in the design of teaching and learning objects;
- encourage students to look at underlying assumptions that are put in the images surrounding young people’;
- ensure there is a balance between visual and textual literacies in the classroom.²⁹

Perhaps, teachers may think that pictures are self-explanatory and their function is to make their subject matter easier. That's why it is necessary to embed visual literacy into teacher education programs especially for the new ones at the beginning of their career who are still developing their pedagogical methodologies.

Conclusion

Computers and other form of information technology are widely used in educational practice. The same situation is observed with visual literacy. New modes of creative expression and reality are driving the need for visual literacy. Being visually literate will be prerequisite in the

²⁷ Lowe, R. (2000). *Visual Literacy and Learning in Science*. ERIC Digest, ERIC Clearinghouse for Science, Mathematics, and Environmental Education, pp. 3-4.

²⁸ Ibidem.

²⁹ Bamford, A. *The Visual Literacy White Paper*, p. 5.

future as visual media are integral to how we entertain, educate and communicate. Visual literacy gives a chance to educators to increase the quality of their learning and to connect with learners in more interesting way.³⁰ Visuality plays a considerable role in communication and it is especially important for students so that remember what they have read. Visual literacy is an essential component of science and technology education today.³¹

The presented article may encourage teachers pay their attention to visual literacy, an aspect of learning that is relatively neglected by them.

³⁰ Bleed, R. (2005). *Visual Literacy in Higher Education*. EL'I Explorations, p. 10.

³¹ Lowe, R. (2000). Visual Literacy In Science and Technology Education. *UNESCO International science, technology & environmental education newsletter*, Vol. XXV, No. 2, p. 2.