Since the earliest period of our civilization, images have been an essential part of our history and culture, and have become a fundamental aspect of our relationship with others and the world. From the earliest prehistoric paintings in Altamira and Lascaux to the Aztec codices in ancient America, and from the 3000–year-old Egyptian hieroglyphs to the magnificent Renaissance paintings, humans have attempted to capture and depict scenes of our daily lives, our traditions, celebrations, rituals, and other meaningful individual and global events.

After the invention of photography in the 1830s, our society has had increased access to thousands, if not millions of images that have had a lasting impact. Photographs such as the Tiananmen Square protest by Jeff Widener, the disturbing and shocking pictures of torture at Abu Ghraib prison, the high-resolution images of Mars, or the Checkpoint Girl by Chris Hondros have influenced the course of history and educated people while helping us to shape opinions, and informing us of what is occurring in the world.

Life in the twenty-first century is inundated by still and moving images, produced for personal and professional gains, and motivated by social, economic, or political needs. Definitely, these images are, in one way or another, defining a generation’s identity, popularity, and power. The influence on human behavior may not be as overt initially, though its appeal lingers in the subconscious. However, the impact can be observed in cash registers, election results, and anonymous postings in media online, such as Facebook, Twitter, and Instagram, to name a few.

The rapid ascension of visual technologies as tools for delivering content, facilitating communication, developing critical thinking, and expressing creativity has become a game changer in encoding and decoding images. Young and old are bombarded daily with images without knowing what hit them. So it is important to teach them skills that will facilitate better understanding of what these images mean. Becoming visual- and media-literate must be part of one’s education.
What is Visual Literacy?

In 1968, John Debes coined the term “visual literacy.” The International Visual Literacy Association (IVLA) adopted a more inclusive definition of visual literacy as “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 manmade, 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.” (Fransecky and Debes 1972). However, with the introduction of technology in our society and the development of media and computer literacy, other scholars have offered their own definitions (Avgerinou and Ericson 1997; Horton 1983; Kress 2003; Rezabek 1999; Robinson 1984). The Association of College & Research Libraries (ACRL) states that “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” (Visual Literacy Standards Task Force, 2011). According to the ACRL, the abilities of a visually literate individual include the evaluation of images and their sources, the design and creation of meaningful images and visual media, the effective use of images of visual media, the understanding of ethical, legal, social, and economic issues surrounding the creation and use of images, and the effective localization of needed images and visual media, among others.

We live immersed in a visual culture and images surround us, not only when we walk to school or drive our cars to work, but also when we navigate the internet or attend the latest movie premiere. We also contribute to that culture with our smartphones or cameras. According to a Pew Internet & American life reports, the percentage of adults who own a cell phone has reached 91%, with 56% of them owning a smartphone (Smith 2013). In 2010, it was reported that 83% of teenagers take pictures with their cell phones (Lenhart et al. 2010). Sites such as Flickr, Instagram, Imgur, Panoramio, Photobucket, Picasa, and Pinterest offer the ability to share photos and to comment on them, creating an enormous repository of images. However, there is still a lack of understanding on how to read, use, and interpret these images. As Felten (2008) states, people can develop the ability to recognize, interpret, and use different visual forms. This learning process is a dynamic exercise that continues throughout our lives by acquiring more advanced ways to produce, analyze, and employ images.
**What is Media Literacy?**

The way we receive and assimilate information has been a transformative process, accelerated in the past few decades by the inclusion of the personal computer and the Internet. From the invention of the printed press to the ubiquitous presence of the smartphone in our daily lives, technology has made information more accessible; however, it also has caused an overflow of information which has sometimes proven challenging to interpret, classify, and understand. Our ability to create, process, dissect, and distribute information has been forever changed. There is a need to rationalize and understand the impact of media in our lives; thus, the need for cohesive strategies and regulations is imperative, especially in the educational setting. As Considine, Jorton, and Moorman argue (2009), students live in an environment in which reading and writing through digital media is pervasive. Students bring to school a different set of literacy practices and tools that are often unrecognized or underused by educators. Thus it becomes the teacher’s responsibility to connect the dots between what students already know, and what they need to learn. Same as with visual literacy, there is a need for evidence-based research strategies to help people to analyze and evaluate this continuous stream of information.

The National Association for Media Literacy Education (NAMLE) defines media literacy as “the ability to access, analyze, evaluate, and communicate information in a variety of forms—is interdisciplinary by nature. Media literacy represents a necessary, inevitable, and realistic response to the complex, ever-changing electronic environment and communication cornucopia that surround us.” The association argues that in order to become prosperous citizens, “individuals need to develop expertise with the increasingly sophisticated information and entertainment media that address us on a multisensory level, affecting the way we think, feel, and behave” (National Association for Media Literacy Education 2007).

The core principles of media literacy education, according to NAMLE, include active inquiry and critical thinking, must include all forms of media, build and reinforce skills for learners of all ages, and develop informed, reflective, and engaged participants, among others.

The Center for Media Literacy argues that there is a need for a more robust definition of media literacy. Their definition reads as follows: Media literacy is a twenty-first century approach to education which provides a framework to “access, analyze, evaluate, and create messages in a variety of forms—from print to video to the internet. Media literacy builds an understanding of the role of media in society, as well as essential skills to inquiry and self-expression necessary for citizens of a democracy” (Center for Media Literacy 2011).
From Dream to Reality

This edited book was an idea that became a dream, and finally a reality. It was an idea nurtured by the first editor, Danilo M. Baylen, as a graduate student enrolled in a visual literacy course more than 20 years ago. It became a dream when the first editor and his colleague, Cristine Goldberg, co-presented a session at the International Visual Literacy Association (IVLA) 2009 conference in Chicago. Two years ago, it became a reality when Adriana D’Alba, the second editor, joined the faculty at the University of West Georgia, and both editors found common and complementary interests in areas of instructional technology, instructional design, technology integration practices, and multimedia development.

What makes this edited book different? As editors, we believe that the 14 chapters provide an opportunity to showcase practice and evidence that supports curricular integration efforts of visual and media literacy in K-12 and higher education contexts. The chapters describe and discuss various models of integrating visual and media-based tools and resources, as well as provide ideas and advice from a wide range of experts and practitioners. Using the definitions from national and international groups of educators, researchers, and practitioners—NAMLE, ACRL, and IVLA—this book not only provides theoretical background but also step-by-step guidelines, expert advice, and practitioner experience to those interested, with a wide range of perspectives and possibilities on how to use and integrate visual and media-based tools and resources to promote literacy at all levels with various levels of guidance.

Finding Common Ground

The book was developed over a period of 9 months, during which potential authors went through a rigorous and extensive peer review process. After submitting the chapter proposals, potential authors received suggestions for manuscript development by an editorial team including the book editors. Authors were asked to identify their targeted audience and format (e.g., literature review/theoretical, evidence-based/data-driven, or case study), to align their topics to the adapted definition of visual and media literacy and outline potential implications. The subsequent blind peer review process included the participation of over 78 scholars, including potential authors. It also included practitioners from different professional backgrounds, such as higher education faculty (e.g., arts, sciences, education, library and information science), K-12 educators, and library media specialists. Reviewers were asked to provide extensive comments on the adequacy of literature, analysis of issues, and legitimacy of conclusions, while examining weaknesses and strengths of the submissions. Reviewers were also encouraged to include recommendations and constructive comments to improve the manuscripts. This exercise resulted in authors receiving feedback from four, or even five, different perspectives. Feedback
received from the majority of authors indicated that they were pleased with the review process and suggestions. Comments made mention that the review process had contributed to stronger manuscripts. After the second review, authors resubmitted their final work. The editors made the final selection from those chapters that were better aligned with the scope of the book.

Framing, Learning, and Teaching

The 14 book chapters are categorized into three sections: Framing, Learning, and Teaching. The first section on framing laid the groundwork for the conversation on visual and media literacy with connections to graphic design, multiliteracies, visual thinking, and culture (i.e., Chaps. 1–4). The second section focuses on learning specific content and illustrated how the use, application, or integration of visual or media literacy into the curriculum can be helpful (i.e., Chaps. 5–10). The last section focuses on teaching visual and media literacy. The chapters illustrate how visual or media literacy can be taught across disciplines.

Each chapter in this edited book includes a unique perspective and a critical analysis about the usefulness of visual and media literacy within different settings in the educational arena. It offers different strategies to include these inquiry-based, process-oriented concepts to improve the way we learn and teach.

Chapter 1, “Graphic Design as a Learning Process,” written by Kristina Lamour Sansone, contends that graphic design’s combined language of pictures and text is an essential literacy for teaching and learning. The author analyzes the value of using images and written words to construct meaning by using picture–text integrated projects in the classroom and presents a review of literature focused on the definition and history of graphic design, while discussing the relationship between this discipline and visual and media literacy. She provides definitions for the terms pictures and texts and how they integrate with each other, and delivers examples of these integrations. The chapter includes an analysis of picture-text integration in early childhood, and describes research associated with picture–text integrated literacies, based on Mayer’s multimedia learning and Paivio’s dual-channel theories.

Sansone presents the learning phases of graphic design, and offers diverse strategies to construct meaning. She also describes several useful examples on how her K-12 students use pictures and words in classroom activities, and enlists tools and resources for teachers and practitioners.

Chapter 2, “Reinforcing Multiliteracies Through Design Activities” presents an array of instructional strategies to develop the skills necessary to engage and process the extensive variety of information that students encounter in their daily lives. The author, Tonia Dousay, argues that educators must address curriculum that prepares visual literate citizens, and contends that this process can start with preservice teachers, but must include teacher educators and professional development personnel currently in service. Within the chapter, the reader encounters the definitions of visual and media literacy from different scholars and institutions.
The chapter provides a careful selection of design activities based on digital stories and comic books, and offers an analysis of their essential components, steps, processes, and digital applications used in their creation. The author presents sufficient literature background that supports the design of these activities, and delivers successful examples used in the classroom, along with standards and assessment procedures.

Dousay contends that, while design activities present outstanding benefits, there are challenges and considerations that must be addressed. Ethical dilemmas related to image manipulation, race, religion, and socioeconomic classes can influence the outcomes of these activities. In addition, the author presents an exploration of the availability of activities that promote multiliteracy for learners with disabilities.

Dabney Hailey, Alexa Miller, and Philip Yenawine, authors of Chapter 3, “Understanding and Teaching Visual Literacy: The Visual Thinking Strategies Approach,” present a comprehensive review of literature on the definition of visual literacy, and discuss in detail the Visual Thinking Strategies (VTS) method, developed by Abigail Housen and Philip Yenawine. The authors analyze Housen’s work and research process that ultimately resulted in the development of VTS, and provide an elaborated account of her first two of five proposed aesthetic stages: accountive and constructive viewers. The authors argue that previsually literate individuals reach basic visual literacy at the end of stage two. Readers of this chapter can examine the VTS protocol and its implications for teaching, while reviewing research-based evidence on the impact of VTS in elementary and healthcare education.

Hailey, Miller, and Yenawine indicate that visually literate people “have the disposition to sustain the act of observation, recognizing that taking time to look is an essential part of the inquiry process and remaining confident that such looking will reveal new information and possibilities,” and contend that visual literacy can be cultivated through VTS. The authors discuss the need for further research on the impact of visual thinking strategies in the development of visual literacy, and identify possible future research on the impact of VTS in areas such as critical thinking, attention and metacognition, standardized test performance in K-12 education, and diagnosis accuracy and patient satisfaction.

Brooke Scherer, author of Chapter 4, “Visual Communication and Culture: Design Education for a Globalized World,” offers a unique perspective on cultural awareness and visual communication among audiences of varying backgrounds. The author’s job experience working for a global advertising agency provides a valuable and candid account of successes and failures when trying to communicate an idea by thinking locally, but acting globally. She contends that current design pedagogy teaches students how to visually communicate with their peers, but does not account for culturally diverse audiences who do not share the same backgrounds and beliefs.

Scherer argues that there is still a lack of educational awareness regarding audience backgrounds, and hints at the need for the incorporation of these cultural issues into higher education curriculum using graphic design as a “discipline that both adapts, and advances through modern-day visually communicative needs.” In this chapter, readers can encounter foundational components that help to create effec-
tive designed visual communications. Those elements—dimensions, environmental context, symbolism, and consumer behavior—are included in a component matrix designed by Scherer, along with an example of how to use this tool.

In addition, this chapter describes and analyzes the stages of a practical project developed by Scherer’s students, where they were required to create global campaigns for American companies. Students were expected to conduct background research in the audience assigned by the instructor, formulated their findings in a formal presentation, and created the campaign utilizing Scherer’s component matrix.

Chapter 5, “Cameras in Classrooms: Photography’s Pedagogical Potential,” written by Jeff Share, introduces cameras as an ideal tool to be used in classrooms to support the teaching of different content through photography. The author discusses the power and limitations of photography and its ability to convey messages that no other medium can do in the same way. Photographic images, Share argues, can start or end wars, send people to jail, inspire political dissent, and have caused people to fall in love. The author presents documented examples and citations from multiple authors and scholars regarding this medium, and contends that “everyone today is a photographer.” He describes advances in technology as the perfect way to engage our society in picture taking. This engagement can benefit teachers and students alike, as the prohibitive expenses related to the purchase of photographic equipment and film development have been diminished by the introduction of digital cameras and smartphones.

The author presents a critical media literacy pedagogy used in the teacher education program at the University of California, Los Angeles, and analyzes five conceptual understandings of media education derived from this pedagogy. Share discusses a detailed account of his experiences using photography in both the elementary school and higher education settings, and concludes that photography and media are youth’s tools of choice for engaging with others and expressing themselves; thus, it is imperative for educators to prepare students to critically analyze visual images and printed texts.

Mary Christel examines image creation as a medium of communication in Chapter 6, “Presenting My Selfie to the Digital World: Visual Composition for Better Representation.” She argues that, although students have become instant creators of images aided by technological tools, they still lack advanced levels of digital, media, and visual literacies in order to access, analyze, interpret, evaluate, use, and create visual messages. The author contends that understanding the principles of visual composition allows novice and experienced image curators and creators to expand their insight and ability of image analysis for their emotional and narrative potential. The chapter presents a series of specific activities designed to prepare image producers to use these principles, resulting in producers using available technology in a manner that demonstrates their ability to interpret and select the essential tools to communicate their views, while examining and understanding existing media messages. Each of these activities, tied to the NAMLE standards, promote the use of a variety of social media channels to share visual and verbal messages.

Christel contends that students need to construct a set of digital citizenship competencies to support their emerging digital competencies, provides suggestions
for their development, and concludes with the idea that Common Core presents a unique opportunity for teachers and students to construct learning relationships to perfect their visual and media literacy awareness and image production skills.

Chapter 7, “Multimodal Composition in Teacher Education: From Consumers to Producers,” written by Jill E. Flynn and William Lewis, presents student project examples and multimodal assignments used in their undergraduate methods courses offered for English language arts teachers at the University of Delaware. The authors utilize digital tools such as iMovie, Windows MovieMaker, and VoiceThread to help students produce digital content directed to English language arts, while engaging in creative and reflective tasks.

In this chapter, Flynn and Lewis discuss the concept of “metaphorical construct,” introduced in the early 1990s as a method for group problem solving and innovation. They present several student examples and explain the process of using this approach: students select an element of the text they consider of high importance; then, identify a physical or cultural object related to the text and deconstruct it to its constituent parts; and finally, present their creative metaphor to their peers. The authors also create a connection between the “metaphorical construct” and digital tools, as they “provide an opportunity for students to not only read, but also practice composing multimedia texts, and to efficiently share their work with their peers.” The authors examine digital stories and their relationship with identity and teaching within the course “Literacy and Technology.” Students brainstorm ideas about the story they want to tell, use mind mapping digital tools, create storyboards using online resources, develop a script, and produce an artifact that describes their own stories.

Chapter 8, “Integrating Visual and Media Literacy in YouTube Video Projects,” written by Chareen Snelson, presents the social media platform YouTube as one of the largest depositories of online video, and defines its potential for the development of visual and media literacy competencies. The author describes the creation of a graduate-level course named “YouTube for Educators,” and accounts how visual and media literacies were infused in the curriculum. The chapter explains in detail the curricular, technological, and societal factors involved in the decision-making process to produce the course. It also identifies challenges encountered in the development and implementation phases, and provides advisement and solutions to those issues.

Snelson introduces an overview of visual and media literacy competencies and their embedment in the YouTube course. She describes in detail a series of projects divided in two broad categories: video curation and video creation. These projects include a video blog, a PowerPoint movie, a remix video, and interactive YouTube videos. The author concludes that although the course will most likely evolve as continuous evolution of social media and student experiences occurs, “visual and media literacy and educational technology competencies will remain central to future iterations of the ‘YouTube for Educators’ course.”

Taralynn Hartsell argues that graphic organizers help students and instructors organize information visually, and permits learners to examine patterns and relationships in Chapter 9, “Mapping Concepts for Learning.” She provides literature
background on visual learning theories such as dual coding, schema, and cognitive load, and discusses how these theories explain the basis which graphic organizers are built upon. Hartsell contends that concept maps serve as the foundation of lesson plan and module content, as they are graphical representations of ideas, relationships, and connections.

The chapter documents a case study where the author created concept maps to organize the content of a graduate-level course. Hartsell had previously used this strategy in her undergraduate courses; however, in those, students were the ones required to create concept maps regarding a subject area of their choice. She explains the content creation process and procedures implemented, paying special attention to the description of instructional materials and tools used during this exercise. The author also points out challenges and outcomes encountered during and after the course ended, and provides directions and recommendations for future research.

Chapter 10, “Using Scientific Visualization to Enhance the Teaching and Learning of Core Concepts,” introduces the readers to the concept of scientific visualization as a new type of literacy, which requires appropriate scaffolding for learners, while using static and dynamic visual and graphical media. The team of S. Raj Chaudhury, Lynn Mandeltort, Amy B. Mulnix, Eleanor V. H. Vandergrift, and Jennifer R. Yates, as authors, discuss the importance of incorporating graphical elements and activities that foster visual literacy, specifically in science, technology, engineering, and mathematics (STEM) courses, which are often viewed as abstract, uninspiring, and rigid. The chapter also illustrates how college-level faculty in STEM effectively uses media literacy skills to enhance their courses.

The authors argue that introducing scaffolding and opportunities for students to interpret, analyze, predict, and construct representations of phenomena with static and dynamic visual and graphical media in their courses, provided their pupils with a deeper understanding of the course content through visual interpretation. The authors present several vignettes and discuss their application in physics, chemistry, biology, and neuroscience courses, while introducing teaching takeaways for practitioners interested in each of these subject areas.

In Chapter 11, “Digital Knowledge Mapping as an Instructional Strategy to Promote Visual Literacy,” Darryl C. Draper presents a detailed account of an exploratory case study focused on the effectiveness of concept mapping and graphic organizers to promote visual literacy. The case study was conducted in an 8-week online graduate-level course named “Special Topics: Digital Knowledge Mapping/Management,” in which digital knowledge maps and graphic organizers were used both for course design and course activities. The research attempted to explain how these tools promote visual literacy and learning outcomes.

Draper provides literature-based definitions of Bloom’s taxonomy (revised), CmapTools, knowledge visualization, graphic organizers, knowledge vee diagrams, communities of practice, and ties the concepts and tools to visual and media literacy practices. The author also provides an explanation on how those tools supported the instructional activities, along with the design and development of the course. After the conclusion of the course, Draper analyzed students’ knowledge maps and their correspondent written justification and encountered four emergent themes:
research, construction process, organization, and behavior. The author concludes that digital knowledge maps are a viable tool in promoting visual literacy and learning effectiveness, and can also be relevant evaluation instruments for instructors and students alike.

Lindsay K. Mattock documents a case study developed in a higher education setting in Chapter 12, “Teaching Visual and Media Literacy Skills in Media Production Technology.” This chapter is mainly directed to archivists, librarians, and those charged with training informational professionals at the graduate level; however, as the author indicates, the approach presented within the chapter can be used in other academic disciplines where students are not required to create, but rather analyze and interpret specific media products and images.

Mattock discusses the need for visual and media literacy in the library and information science graduate curriculum, while providing a detailed literature review of visual and media literacy definitions. She includes well-documented research-based practices used by archivists and librarians, and offers a rationale for a visual and media literacy approach in an elective course named “Moving Image Archives” that addresses visual materials in the archival context. The author exhibits strategies and procedures followed in the design and revisions of the 12-week graduate course and discusses in detail the activities, outcomes, and feedback provided by students at the end of the term.

Chapter 13, “Visual Literacy and Art History: Teaching Images and Objects in Digital Environments,” presents a unique perspective on the use of visual and media literacy strategies for teaching art history at the undergraduate level. The author, Julia Finch, states that with the introduction of the Internet to the educational arena, professors and students can access digital image collections and virtual spaces without the financial burden or time restrictions that real spaces often present. The author cites that “students born into a digitally literate culture have a set of skills that is not only conductive to the study of art and architecture, but that can be honed through art history as a life skill that will serve them well beyond the classroom in our image-and media-saturated world.”

The chapter provides an art historical perspective on visual literacy and offers a particular view on digital imagery and applications for the classroom. It also analyzes how visual media literacy can be used to recreate material objects and digital environments where instructor and students can meet and have meaningful interactions while working on assignments and exercises that are easily accessible on their own media devices, such as smartphones, computers, and tablets. Finch also discusses the usefulness of visual thinking strategies (explained in deep detail in Chapter 3 of this book) as successful and necessary foundations for visual analysis assignments.

The author provides the reader a detailed explanation of four activities and assessments for visual literacy in digital environments, which include social media image sharing, understanding the digitized object, understanding digital spaces, and digital curating. These activities exhibit the opportunity for students and teachers to meet and interact, using digital environments and tools.

Finally, Chapter 14, “Teaching Visual Literacy: Pedagogy, Design and Implementation, Tools and Techniques,” written by Elizabeth K. Anderson, Rhonda S. Robinson,
and Kristin Brynteson, presents a case study which includes a detailed account of strategies applied to a newly redesigned graduate-level, interdisciplinary course in visual literacy offered through The Department of Educational Technology, Research, and Assessment at Northern Illinois University. In this chapter, the authors explain the reasoning for the redesign, present detailed steps of the process, and offer an elaborated account of materials, tools, and strategies used for the redesign. These include a themed blended approach, reflective writing, online portfolios, and collaborative projects in Weebly, interactive online discussions in Blackboard, and several low-stakes production assignments using diverse technological tools such as Animoto, Pixton, and GoAnimate. The authors provide several screen captures related to the course, which allow the reader to visualize its content and structure and introduce strategies for instruction and assessment.

The chapter enlists several student quotes taken from the end-of-course survey, which illustrate the successfulness of the modified class, and provide a detailed insight about student opinions and deep reflections regarding this blended course. The authors also offer implications across educational settings and provide recommendations for the delivery, design, instruction, and assessment of courses focused on, and beyond, visual literacy.

A Million Thanks

We, the editors, appreciate the chapter authors for their quality work. Though we divided the edited book into three sections, we believe that some of the book chapters can be placed in more than one section. The topics that each chapter addresses can apply to multiple sections. Furthermore, we believe that these chapters can serve as excellent materials for those interested in visual and media literacy—as a new teacher, faculty member, researcher, or practitioner. It may not give an immediate answer to one’s question, but it will at least provide an idea that may inspire an act of courage and a sense of adventure given the rapidly changing educational contexts.

This edited book has become a reality due to numerous individuals, from those who initially proposed, authored manuscripts, and acted as peer reviewers, and their multiple contributions. The editors would like to thank them all for what has been accomplished. At a personal level, the editors acknowledge a good friend, Cristine Goldberg, who cheered and provided sage advice “when things got tough,” while making this dream a reality, and three research assistants; Kristen Grabowski, Kendal Lucas, and Michelle Michael, who did more than their share of proofreading. Adriana expresses her appreciation to her husband, Lee Brown, for his support and understanding. Finally, we hope that you will enjoy reading the book chapters as we did, and will be inspired to do more teaching, learning, and research related to visual and media literacy in the near future.

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References


Essentials of Teaching and Integrating Visual and Media Literacy
Visualizing Learning
Baylen, D.M.; D'Alba, A. (Eds.)
2015, XXXIII, 292 p. 72 illus., 30 illus. in color., Hardcover
ISBN: 978-3-319-05836-8