

Students as Curators: Visual Literacy, Public Scholarship, and Public Health

Debby R. Walser-Kuntz

Carleton College

Cassandra Bryce Iroz

Carleton College

Visual Literacy and Science

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 (Hattwig et al. 2012, 62).

Designing a public exhibition is one way for students to meet the goals of the Visual Literacy Competency Standards for Higher Education quoted above. Students able to combine visual literacy with strong writing will be better prepared “to function creatively and confidently in the working environments of the twenty-first century” (Weber 2007). Scientists rely on visual images, animations, and 3D models to convey research findings and concepts, yet educational research shows that students “do not necessarily automatically acquire visual literacy during general instruction,” but must be explicitly taught these

skills (Schönborn et al. 2006). Exhibition design provides a powerful pedagogical approach, helping students learn to “author” in a manner distinct from traditional writing.

Libraries and museums “educate and inform the public about the subject of the exhibit in a balanced and usually unbiased way” (Walbert 2004) and expand the general public’s “engagement with and understanding of” a topic (Smithsonian Institution 2002). In order to successfully engage people of all backgrounds, exhibit designers must focus on and carefully consider their audience (Smithsonian Institution 2002). Producing such exhibits encourages students to think creatively and to practice a range of skills, including critical thinking, problem solving, research, teamwork, goal setting, and technological literacy (Walbert 2004). Further, exhibitions that are interdisciplinary, such as those dealing with public health, require students to “apply skills or investigate issues across many different subject areas or domains of knowledge” (Great Schools Partnership 2014). Because the final product involves everyone, students must articulate their ideas and defend their choices in an iterative process (Great Schools

Partnership 2014). This group approach requires students to work in a multi-member team resembling what they may encounter in a future career (Smithsonian Institution 2002). In addition to developing collaborative skills, increasing visual literacy, and fostering innovation, exhibition design assignments increase student engagement with course content and “facilitate student expression in media that are not purely textual” (Lippincott et al. 2014).

Exhibition Design as a Teaching Strategy: Students as Curators

We incorporated a public exhibition as a final project for *Public Health in Practice*, a program novel in its design of combining domestic study away with local academic civic engagement (ACE) projects (Walser-Kuntz and Iroz 2015). Students enrolled in an introductory course to learn about public health models, best practices for working with and in a community, and effective communication of health messages. They then studied off campus for two weeks in both the state’s and nation’s capital cities and participated in a follow-up course back on campus; it was in this final course that students developed the exhibition. Inspired by the Association of Schools and Programs of Public Health “This is Public Health” campaign, we titled our exhibit “This is Public Health: Public Health in Practice.” The goals of the exhibit included (1) sharing our experience with the broader campus, (2) educating others on important aspects of public health, and (3) exposing students to a career field they might be interested in pursuing. As public health is an interdisciplinary field, we aimed to show how it is approached from multiple angles and how all students, regardless of major, might participate. The central location of the library—both geographically and intellectually—allowed students, faculty, staff, and visitors the opportunity to explore the exhibit.

Throughout the process, students engaged in many tasks required of professional museum exhibition curators, including brainstorming, identifying key themes, and thinking about audience “take aways,” all while presenting a balanced view (Walbert 2004). To guide the process, the class partnered with the library curator; partnering made the endeavor “less risky” and more successful, as we were new to exhibition design as a pedagogical approach

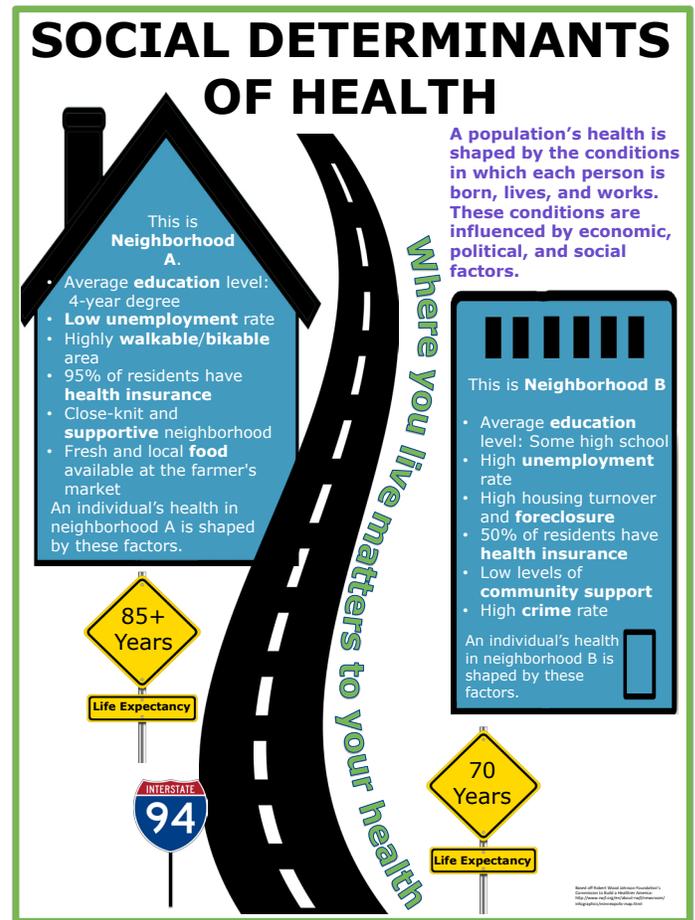


FIGURE 1. Social Determinants of Health

(Lippincott et al. 2014). While the librarian’s expertise in visual design and exhibit planning was invaluable, she was new to public health concepts and thus provided an important perspective. She helped us balance detail and eliminate jargon that we had become accustomed to using in our own conversations with one another and with public health professionals.

Although the curator served as a consultant, the students built the exhibition from the ground up with few imposed guidelines or restrictions and took on all the typical roles required for successful execution of an exhibit. These roles include curator (responsible for the overall concept of an exhibit), designer (ensuring the material is understandable, visually appealing, and coherent), and educator (linking content to the audience) (Smithsonian Institution 2002). The entire process encouraged students to reflect on their learning, synthesize and simplify concepts for a general audience, and consider topics from a different perspective. The iterative process of

designing the exhibition required a constant review and refinement of ideas, forcing a concise articulation of key points and a clear rationale for the inclusion of an image or design feature. Fonts and color choices received close scrutiny, and the final product required open discussion and compromise. We invited our academic technologist specializing in presentation and visual design to walk through a mockup of our exhibit and give feedback on images, written messages, and the overall feel of the exhibit. This formative assessment activity continued “the exciting dialogue between exhibit makers and exhibit users” and improved the final exhibit (McLean 1993).

Exhibition Design as a Teaching Strategy: Student Outcomes

Planning the exhibit met the visual literacy competency standard number six: the visually literate student designs and creates meaningful images and visual media (Hattwig et al. 2012). Learning goals met by each student included producing visual materials for scholarly use, using design strategies and creativity in image production, experimenting with image-production tools, and revising work based on evaluation (Hattwig et al. 2011). It allowed us to authentically return to “communicating health messages,” a topic covered earlier through research projects, classroom activities, and visits with public health professionals. One particular classroom activity required students to select, analyze, and present an infographic while the class discussed its effectiveness. Infographics are tools frequently used to disseminate public health information to a general audience; thus this media format served as inspiration for the exhibit design. On our study away, students visited with a science museum curator who shared the importance of considering the cultural and educational backgrounds of a diverse audience when communicating and translating science. This visit informed students as they curated, designed, and made decisions about the educational content of their own exhibit.

Student ownership of the project was strong; their investment throughout the process resulted in lively class discussions as we planned, compromised, and refined. The exhibit-planning process encouraged students to reflect on their experiences and synthesize all they had learned

through their coursework, study away, and ACE projects into clear, concise messages for the public. In addition to gaining enhanced visual literacy and collaboration skills, their understanding of the core concepts of public health increased. Being forced to articulate complex public health models and approaches in a single sentence required a high degree of understanding (Figure 1). On occasion, students struggled with whether or not to include certain topics or images as they recognized the potential harm. This sophisticated understanding of the ethical implications of their exhibit addressed standard seven of the visual literacy standards as students followed “ethical ... best practices when...creating images”; it further demonstrated how each student had become “a competent contributor to a body of shared knowledge and culture” (Hattwig et al. 2011; Hattwig et al. 2012).

Exhibitions and Civic Engagement

Our public health program emphasized working with community. To include visitors in our exhibit we included a large rolling white board with the prompt “What is public health to you?” Visitors left comments and we took photos throughout the exhibit to capture their responses. Anecdotally we heard that many students, faculty, and staff visited and enjoyed the exhibit; we did not, however, formally assess visitor outcomes. In the next iteration of the course, we will incorporate an additional “prototype” step in which we invite students from another course to provide feedback. Although the exhibit is no longer installed, it exists online with an additional interactive component (<http://apps.carleton.edu/ccce/issue/health/public-health-in-practice/>).

The *Public Health in Practice* exhibition provided a novel way to incorporate public scholarship into a course. A recent survey of liberal arts faculty indicates that an exhibition is a well-understood form of public scholarship and one that is highly regarded (Christie et al. 2015). In our case, the infographic-style posters educated visitors about important aspects of public health, while highlighting the field’s breadth and interdisciplinarity and raising awareness of related careers; the exhibit thus addressed the Institute of Medicine’s recommendation that all undergraduates learn about public health

(Petersen et al. 2013). Although our exhibit focused on public health, most science courses touch on topics that could become the basis for interesting and educational exhibits that provide an enriching opportunity for students and public audiences alike.

About the Authors



Debby Walsler-Kuntz (dwals@carleton.edu) is a Professor of Biology and the Broom Faculty Fellow for Public Scholarship at Carleton College in Northfield, MN. Debby received her Ph.D. in immunology from the Mayo Graduate School in Rochester, MN. Her research focuses on the impact of environmental factors, including the plastics component bisphenol-A and a high fat diet, on the immune system. She ventured into the world of academic civic engagement more than ten years ago after recognizing that her bright and talented students could still learn, and in fact might learn more, while sharing their knowledge with others.



Cassandra Iroz is a 2014 graduate of Carleton College with a B.A. in Biology. After graduation, she worked as an educational associate in Carleton's Center for Community and Civic Engagement and as the teaching assistant for the Public Health in Practice program. In this role she assisted in organizing and facilitating coursework, travel, and community based academic civic engagement projects all relating to public health.

References

- Christie, L., P. Djupe, S. O'Rourke, and E. Smith. 2015. "Whose Job Is It Anyway?: The Place of Public Engagement in the Liberal Arts". Working Paper, Furman University.
- Great Schools Partnership. 2014. The Glossary of Education Reform: Exhibition. <http://edglossary.org/exhibition/> (accessed December 17, 2015).
- Hattwig D. J. Burgess, K. Bussert, and A. Medaille. 2011. ACRL Visual Literacy Competency Standards for Higher Education. Chicago: American Library Association. <http://www.ala.org/acrl/standards/visualliteracy> (accessed December 17, 2015).
- Hattwig, D., K. Bussert, A. Medaille, and J. Burgess. 2012. "Visual Literacy Standards in Higher Education: New Opportunities for Libraries and Student Learning." *Libraries and the Academy* 13 (1): 61–89.
- Lippincott, J., A. Vedantham, and K. Duckett. 2014. "Libraries as Enablers of Pedagogical and Curricular Change." <http://www.educause.edu/ero/article/libraries-enablers-pedagogical-and-curricular-change> (accessed December 17, 2015).
- McLean, K. 1993. Planning for People in Museum Exhibitions. Washington, DC: Association of Science-Technology Centers.
- Petersen, D., S. Albertine, C. Plepys, and J. Calhoun. 2013. "Developing an Educated Citizenry: The Undergraduate Public Health Learning Outcomes Project." *Public Health Reports* 128: 425–30.
- Schönborn, K., and T. Anderson. 2006. "The Importance of Visual Literacy in the Education of Biochemists." *Biochemistry and Molecular Biology Education* 34 (2): 94–102.
- Smithsonian Institution. 2002. The Making of Exhibitions: Purpose, Structure, Roles, and Process. Washington, DC: Office of Policy and Analysis.
- Walbert, K. 2004. "Museum Exhibit Design." <http://www.learnnc.org/lp/pages/629> (accessed December 17, 2015).
- Walsler-Kuntz, D., and C. Iroz. 2015. "Public Health in Practice: Combining Local Academic Civic Engagement with Domestic Study Away." Working Paper, Carleton College.
- Weber, J. 2007. "Thinking Spatially: New Literacy, Museums, and the Academy." *Educause Review* 42 (1): 68–69.