

Art Museum and Medical School Partnerships

Bibliography

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This is the fifth year presenting bibliographic resources for programs in which art museums partner with medical schools to cultivate medical students' skills in rigorous observation, critical thinking, communication, team-building, empathy in relation to diagnostic practices.

There are new resources pertaining directly to COVID-19 such as the re-shaping of courses to address new needs and transferring to virtual platforms. In the "Program Descriptions" section, see M. Jordon Love's article, "What Can Medical Students Learn from the Art History of Epidemics?" and "This Alabama Medical School is Training

Students to Diagnose Figures in Famous Paintings.” New video lectures about plagues and pandemics can be accessed in the “Video, Podcasts, and Other Media” section.

Participating art museums and medical schools who attended “The Art of Examination: Art Museum and Medical School Partnerships” Forum that took place on June 8 and 9, 2016 at the Museum of Modern Art, New York, initially contributed to this bibliography of journal articles, books and reports, and other media. One recommendation from the Forum is to continue to support the network of collaborators and partnerships between art museums and medical schools by offering a current listing of resources. These will advance the field by creating opportunities to exchange teaching methodologies and establish networks for research and evaluation.

New sources in this 2020 version are listed in **red**.

The Edith O’Donnell Institute for Art History, The University of Texas at Dallas continues to compile these resources and to store them on our website at <https://utdallas.edu/arhistory/medicine/resources/>.

The PDF of this bibliography includes embedded links. These links were all working at the time of publication; we cannot guarantee they will remain stable over time.

The Bibliography is Organized into 5 Sections

1. Program Descriptions
2. Medical Humanities
3. Research and Evaluation
4. Books and Reports
5. Video, Podcast, and Other Media

Program Descriptions

Anglin, Carlita; Carolyn Halpin-Healy; Peri Rosenfield. "Reflecting Art in Nursing Practice: Developing Visual Arts Programs to Transform and Strengthen Practice." *The Journal of Nursing Administration (JONA)* 50:Number 5 (2020): 274-280.

Retrieved from

<https://insights.ovid.com/jona-nursing-administration/jnad/2020/05/000/reflecting-art-nursing-practice/9/00005110>

Describes the development and implementation of a visual arts humanities program, Reflecting Art in Nursing Practice, for practicing nurses at NYU Langone Health, an academic medical center in New York City.

Bardes, Charles L., Debra Gillers, and Amy E. Herman. "Learning to Look: Developing Clinical Observational Skills at an Art Museum." *Medical Education* 35.12 (2001): 1157-1161.

Retrieved from

<http://onlinelibrary.wiley.com/doi/10.1046/j.1365-2923.2001.01088.x/abstract>

Frick Collection program in which medical students examine painted portraits, then apply the same skills to examine photographs of patients' faces.

Baruch, Jay. "From Museum to Bedside: The Need for Museum Educators in Medical Education." Manual/a resource about art and its making. Rhode Island: Rhode Island School of Design. Retrieved from

<https://risdmuseum.org/manual/450> *from museum to bedside the need for museum educators in medical education*

RISD program with Alpert Medical School.

Bell, Lawrence T., and Darrell J. R. Evans. "Art, Anatomy, and Medicine: Is There a Place for Art in Medical Education?" *Anatomical Sciences Education* 7.5 (2014): 370-378. Retrieved from

<http://onlinelibrary.wiley.com/doi/10.1002/ase.1435/abstract>

Student perception using an "Art in Medicine" 8-week course for first-year medical students at the Brighton and Sussex Medical School as a sample study.

Blanding, Michael. Harvard Medicine, "Museum Studies: Art Unleashes Emotions and Discussion Among New Doctors." Winter, 2016. Retrieved from

<http://magazine.hms.harvard.edu/art-medicine/museum-studies>

Overview of Boston programs in art of observation.

- Boisaubin, E. V., and M. G. Winkler. "Seeing Patients and Life Contexts: The Visual Arts in Medical Education." *American Journal of Medical Science* 319.5 (2000): 292-296. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/10830552>
Studying works by classic and contemporary artists to increase awareness of the complex nature of human beings and their conditions.
- Boudreau, J. Donald, Eric J. Cassell, and Abraham Fuks. "Preparing Medical Students to Become Skilled at Clinical Observation." *Medical Teacher* 30.9-10 (2008): 857-862. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/18825545>.
Four guiding principles to pedagogy eight core principles of clinical observation.
- Braverman, Irwin M. "To See or Not to See: How Visual Training Can Improve Observational Skills." *Clinics in Dermatology* 29.3 (2011): 343-346. Retrieved from [http://www.cidjournal.com/article/S0738-081X\(10\)00151-3/abstract](http://www.cidjournal.com/article/S0738-081X(10)00151-3/abstract)
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- Buetow, Steven, and Tim Kenealy. "Learning to 'See' in the Clinician-Patient Relationship." *Journal of Primary Health Care* 1.2 (2009): 148-150. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/20690368>
Ten strategies to enhance clinician's ability to see and increase perceptiveness.
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A student shares his experience in Harvard Medical School's Training the Eye program
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Montreal Museum of Fine Arts launched a year-long pilot program of "doctor-prescribed museum visits."
- DasGupta, Sayantani, and Rita Charon. "Personal Illness Narratives: Using Reflective Writing to Teach Empathy." *Academic Medicine* 79.4 (2004): 351-356. Retrieved from http://journals.lww.com/academicmedicine/Fulltext/2004/04000/Personal_Illness_Narratives_Using_Reflective.13.aspx
Describes a reflective writing exercise conducted in a second-year medical student humanities seminar.

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Yale Center for British Art study that measured students' observational abilities by analyzing their descriptions of representational paintings in pretests and posttests.
- Elder, Nancy C., Barbara Tobias, Amber Lucero-Criswell, and Linda Goldenhar. "The Art of Observation: Impact of a Family Medicine and Art Museum Partnership on Student Education." *Family Medicine* 38.6 (2006): 393-398. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/16741837>
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Qualitative evaluation on Art Institute of Chicago's "The Discerning Eye" program.
- Friedlaender, Gary E., and Linda K. Friedlaender. "Art in Science: Enhancing Observational Skills." *Clinical Orthopaedics and Related Research* 471.7 (2013): 2065-2067. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3676632/>
Introduction to the methodology of the Yale Center for British Art observational program including visual analysis exercises.
- Garino, Alexandria. "Improving Observation Skill in Physician Assistant Students." *The Journal of Physician Assistant Education* 19.1 (2008): 47-52. Retrieved from http://journals.lww.com/jpae/Abstract/2008/19010/Improving_Observation_Skill_in_Physician_Assistant.11.aspx
Study on improvement of PA visual skills from workshop at Yale Center for British Art.
- Gaufberg, Elizabeth, and Ray Williams. "Reflection in a Museum Setting: The Personal Responses Tour." *Journal of Graduate Medical Education* 3.4 (2011): 546-549. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3244323/>
Study on the Personal Responses Tour at Harvard Art Museums; its effectiveness led to it being a required exercise for first-year medical students.

- Gooding Holly C., Mariah Quinn, Barbara Martin, Alexandra Charrow, and Joel T. Katz. "Fostering humanism in medicine through art and reflection." *Journal of Museum Education* (2016); 41:2, 123-130. Retrieved from <http://www.tandfonline.com/doi/full/10.1080/10598650.2016.1169732>
The Brigham and Women's Hospital Department of Medicine and the Boston Museum of Fine Arts program combats physician burnout and empathy erosion.
- Grossman, S., J. Deupi, and K. Leitao. "Seeing the Forest and the Trees: Increasing Nurse Practitioner Students' Observational and Mindfulness Skills." *Creative Nursing* 20.1 (2014): 67-72. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/24730194>
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Weill Cornell Medical College art elective at the Metropolitan Museum of Art.
- Herman, Amy. "How the long arm of the law is reaching the Frick collection." *Museum News*. May/June 2007. Retrieved from [www.brooklyn.k12.ny.us/userfiles/42/Classes/28339/HSThe Art of Observation.pdf](http://www.brooklyn.k12.ny.us/userfiles/42/Classes/28339/HSThe%20Art%20of%20Observation.pdf)
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Ohio State University College of Medicine, Columbus Museum of Art: Art of Analysis.
- Karkabi, Khaled and Orit Cohen Castel. "Deepening Compassion through the Mirror of Painting." *Medical Education* 40.5 (2006): 197-203. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2929.2006.02439.x/abstract>
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- Kumagai, Arno K. "Perspective: Acts of Interpretation: A Philosophical Approach to Using Creative Arts in Medical Education." *Academic Medicine* 87.8 (2012): 1138-1144. Retrieved from https://www.researchgate.net/publication/227856860_Perspective_Acts_of_Interpretation_on_A_Philosophical_Approach_to_Using_Creative_Arts_in_Medical_Education
University of Michigan Medical School's Family Centered Experience art making.
- Lehe, Jennifer; Stone, Linda. "Art of Analysis: A Case Study in Fostering Empathy, Critical Thinking, and Mindfulness through Museum-University Partnership." Ohio State University presentation. Retrieved from <http://hdl.handle.net/1811/84728>
Presentation showcasing Columbus Museum of Art and The Ohio State University College of Medicine's Art of Analysis course.
- Liou, K. T., et al. "Playing in the "Gutter": Cultivating Creativity in Medical Education and Practice." *Acad Med* 91(3): 322-327. (2016). Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/26630602>
To cultivate medical students' creative capacity, the authors developed the Integrated Clinical Arts (ICA) program, a required component of the first-year curriculum at the Warren Alpert Medical School of Brown University.
- Love, M. Jordan. "What Can Medical Students Learn from the Art History of Epidemics?" *American Alliance of Museums*, July 27, 2020. Retrieved from <https://www.aam-us.org/2020/07/27/what-can-medical-students-learn-from-the-art-history-of-epidemics/>
The Fralin Museum of Art with the University of Virginia's retooled course after the shutdown of the University of Virginia due to COVID-19.

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Commentary in which a fourth-year medical student argues for the relevance of the arts and humanities and the need to sustain medical students' exposure to these through the medical curriculum.
- Naghshineh, Sheila, Janet Hafler, Alexa Miller, Maria Blanco, Stuart Lipsitz, Rachael Dubroff, Shahram Khoshbin, Joel T. Katz. "Formal Art Observation Training Improves Medical Students' Visual Diagnostic Skills." *Journal of General Internal Medicine* 23.7 (2008): 991-997. Doi: <10.1007/s11606-008-0667-0> Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2517949/>
Measured results showing an interdisciplinary course improved participants' capacity to make accurate observations of art and physical findings.
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Exploration of doctors and "objectivity".
- Phillips, P. S. "Running a Life Drawing Class for Pre-Clinical Medical Students." *Medical Education* 34.12 (2000): 1020-1025. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/11123568>
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- Pitman, Bonnie. "The Art of Examination: Medical School and Art Museum Partnerships." *San Antonio Medicine*. (July 2017): 14 – 17. Retrieved from <http://www.bcms.org/SAM/2017/SAMJuly2017/mobile/index.html#p=14>
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On the importance of slow looking.
- Roberts, H. J., and J. M. Noble. "Education Research: Changing Medical Student Perceptions of Dementia: An Arts-Centered Experience." *Neurology* 85.8 (2015): 739-741. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/26224726>
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On Birmingham Museum of Art observation program.
- Schaff, Pamela B., Suzanne Isken, and Robert M. Tager. "From Contemporary Art to Core Clinical Skills: Observation, Interpretation, and Meaning-Making in a Complex Environment." *Academic Medicine* 86.10 (2011): 1272-1276. Retrieved from http://journals.lww.com/academicmedicine/Fulltext/2011/10000/From_Contemporary_Art_to_Core_Clinical_Skills_.25.aspx
The Keck School of Medicine of the University of Southern California partnered with Los Angeles' Museum of Contemporary Art to design an educational experience to observe, describe, and interpret complex information.
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Outlines benefits of close looking exercises.
- Sheets, Hilarie M. "How an Aesthete's Eye Can Help a Doctor's Hand." *New York Times*, (October 30, 2016.) Retrieved from <https://www.nytimes.com/2016/10/30/arts/design/how-an-aesthetes-eye-can-help>
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University of Washington and Seattle Art Museum collaboration.

Stonehocker S, MD, Wood K, MD Candidate (2016), Robinson L, MD Candidate (2015), Brett-MacLean P, PhD. "The Art of Observation: Learning to See". *University of Alberta Health Sciences Journal* (July 2015): Volume 11, Issue 1, 23 – 24. Retrieved from <https://www.researchgate.net/publication/295707047>
University of Alberta Arts & Humanities in Health & Medicine Program.

"This Alabama Medical School is Training Students to Diagnose Figures in Famous Paintings. Why? It's a Surefire Way of Exposing Their Biases and Assumptions." *Artnet News*. June 29, 2020.
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New course at University of Alabama at Birmingham School of Medicine addressing ambiguity and bias; taught over Zoom.

Wellbery, Caroline, and Rebecca A. McAteer, MD. "The Art of Observation: A Pedagogical Framework." *Academic Medicine* 90.12 (2014): 1624-1630. Retrieved from http://journals.lww.com/academicmedicine/Citation/2015/12000/The_Art_of_Observation_A_Pedagogical_Framework.19.aspx
Resources to enhance scientific observation including a proposed curriculum for an eight-week arts observation seminar.

Williams, Ray. "Honoring the Personal Response: A Strategy for Serving the Public Hunger for Connection." *Journal of Museum Education* 35, no. 1 (2010), 93-101. Retrieved from <http://www.jstor.org/stable/25701644>
Describes an approach to gallery teaching that honors the memories, associations, and emotions that visitors bring to their encounters with works of art.

Zazulak, J., et al. "The Impact of an Arts-Based Programme on the Affective and Cognitive Components of Empathic Development." *Medical Humanities* 41.1 (2015): 69-74. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/25657263>
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Medical Humanities

Amtfield, Shannon L., Kristen Slesar, Jennifer Dickson, and Rita Charon. "Narrative medicine as a means of training medical students toward residency competencies." *Patient Educ Couns*. June (2013); 91(3): 280–286. doi:10.1016/j.pec.2013.01.014. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3992707/pdf/nihms-572162.pdf>

This study sought to explore the perceived influence of narrative medicine training on clinical skill development of fourth-year medical students, focusing on competencies mandated by ACGME and the RCPSC in areas of communication, collaboration, and professionalism.

Baruch, J. M. "Doctors as Makers." *Acad Med*. (2017): Jan;92(1):40-44. doi: 10.1097/ACM.0000000000001312. Retrieved from:

<https://www.ncbi.nlm.nih.gov/pubmed/27438158>

Expanding the traditional role of doctor as science-using, evidence-based practitioner to include that of doctor as a "maker" (creator) and artist.

Brody, Howard, and Mark Clark. "Narrative Ethics: A Narrative". *Hastings Center Report* Jan-Feb (2014): S7-S11. Retrieved from

<http://onlinelibrary.wiley.com/wol1/doi/10.1002/hast.261/full>

Report on the importance of narrative.

Campbell, Don. "This is your brain on art: a Q & A with Oshin Vartanian." University of Toronto. (2014). Retrieved from

<https://www.utoronto.ca/news/your-brain-art-q-oshin-vartanian>

The University of Toronto Scarborough's Oshin Vartanian is an expert on the neuroscience of aesthetics and creativity. In a recent study he explored the different ways people observe and appreciate art on a neurological level.

Campo, Rafael. "'The medical humanities,' for lack of a better term." *Journal of the American Medical Association* (2005): 294(9):1009-1011. Retrieved from

<https://jamanetwork.com/journals/jama/article-abstract/201480>

Observations on practicing medicine in a modern world.

Carey, Benedict. "In Battle, Hunches Prove to be Valuable." *New York Times*. July 27, 2009.

Retrieved from <https://www.nytimes.com/2009/07/28/health/research/28brain.html>

The brain's ability to observe plays in relation to the battlefield.

- Chapman EN, Kaatz A, Carnes M. "Physicians and Implicit Bias: How Doctors May Unwittingly Perpetuate Health Care Disparities." *JGIM* 28(11):1504-10. Retrieved from <https://link.springer.com/article/10.1007%2Fs11606-013-2441-1>
Bias-reducing observations and strategies.
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Call to adopt the model of narrative medicine.
- Christenson, Gary. "Why We Need the Arts in Medicine: Studies Show the Incorporating the Arts Can Save Money, Improve the Patient Experience – and Do a Lot More." *Minnesota Medicine* (2011). Retrieved from www.researchgate.net/publication/51622219 *Why we need the arts in medicine*
The benefits of the arts in healthcare from the director of the mental health clinic at the University of Minnesota's Boynton Health Service and president of the Society for the Arts in Healthcare.
- Collins, Francis S. MD, Fleming Renée, PhD. "Sound Health: An NIH-Kennedy Center Initiative to Explore Music and the Mind". *Journal of the American Medical Association* (June 2, 2017). Retrieved from <https://jamanetwork.com/journals/jama/article-abstract/2630954>
Sound Health: Music and the Mind initiative workshops in which music therapists, experts in the neuroscience of music, and supporters of biomedical research and the arts discuss the current state of the field and identify future research needs.
- De la Croix, Anne, Catharine Rose, Emma Wildig, and Suzy Willson. "Arts-Based Learning in Medical Education: The Students' Perspective." *Medical Education* 45.11 (2011): 1090-1100. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2923.2011.04060.x/abstract>
Analysis of student material about Performing Medicine, a collaborative program between a theatre company and The London School of Medicine and Dentistry.
- De Santis Sara, Giuliani Chiara, Staffoli Claudia, Ferrara Vincenza. "Visual Thinking Strategies in Nursing: a systematic review." In *Senses Sci* 2016; 3 (4):297-302
doi: 10.14616/sands-2016-4- 297302. Retrieved from <http://www.sensesandsciences.com/ferrarav3i4>
Systematic Review Visual Thinking Strategies in Nursing
- Elberly JB. "Look. Listen. Receive. Surrendering to the Art." *JAMA* 317(15):1508-1509. Retrieved from <https://jamanetwork.com/journals/jama/fullarticle/2618599>
How surrendering to an artwork benefits the medical professional.

- Evans, Brooke DiGiovanni, Heather Serrill Johnson, and Carole Krucoff. "Health and Wellness in Our Communities: The Impact of Museums." *Journal of Museum Education* 41.2 (2016): 77-81. Retrieved from www.tandfonline.com/doi/abs/10.1080/10598650.2016.1169733?journalCode=rjme20
How museums play into the social ideas of well-being and health.
- Ferrara Vincenza, De Santis Sara, Staffoli Claudia. "Art and medicina: from anatomic studies to Visual Thinking Strategies." in *Senses Sci* 2015; 2 (2):40 -44 doi: 10.14616/sands-2015-2-4044). Retrieved from: http://media.wix.com/ugd/00b67f_89512a6d4fdf434895216f5e044c3c9c.pdf
Review of art observation in medicine.
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Importance of humanities in a medical education.
- Freedberg, David and Vittorio Gallese. "Motion, Emotion and Empathy in Esthetic Experience." *TRENDS in Cognitive Sciences* 11.5 (2007): 197-203. Retrieved from <http://academiccommons.columbia.edu/catalog/ac%3A125567>
Explores mechanisms that enact empathetic responses.
- Gharib, Malaka. "Feeling Artsy? Here's How Making Art Helps Your Brain." NPR January 11, 2020. Retrieved from <https://www.npr.org/sections/health-shots/2020/01/11/795010044/feeling-artsy-heres-how-making-art-helps-your-brain>
Collections of new scientific studies on the positive affects art making has on the brain.
- Grossman, E., et al. "Flipped Classroom on Humanities: Medicine, Narrative and Art." *Medical Education* 49.11 (2015): 1142. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/26494071>
A module was developed in a virtual learning environment based on narrative medicine, with the purpose of discussing key subjects of adolescent health care.
- Haidet, P., J. Jarecke, N.E. Adams, H. L. Stuckey, M. J. Green, D. Shapiro, C. R. Teal, and D. R. Wolpaw. "A Guiding Framework to Maximise the Power of the Arts in Medical Education: A Systematic Review and Metasynthesis." *Medical Education* 50.3 (2016): 320-321. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/26896017>
A systematic literature review using the PubMed and ERIC databases; qualitative content analysis of 49 included articles, identifying themes related to educational characteristics, processes and outcomes in arts-based education.

Horowitz, MD, MPH, Carol R.; Anthony L. Suchman, MD; William T. Branch, MD; Richard M. Frankel, PhD. "What Do Doctors Find Meaningful about Their Work?" *Ann Intern Med.* 2003;138(9):772-775. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4303370/pdf/nihms655234.pdf>
Stories and examples on what is meaningful about doctors' practice and to remoralize doctors and help them advocate for their needs more clearly.

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"Empathy the Human Connection to Patient Care." Cleveland Clinic. Youtube. Posted February 2013.

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"Diagnostic Gaps: Skin Comes In Many Shades And So Do Rashes". NPR Morning Edition. Broadcast November 4, 2019.

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