MCS Selective

Art Observation and Diagnostic Medicine

Following the lead of the Icahn School of Medicine's course entitled "The Pulse of Art", this selective "harnesses the power of significant works of art to increase the observation skills and empathic responses of medical students." Courses on art, observation, diagnostic accuracy and empathic physician-patient communication are ongoing at many medical schools, including Yale, Harvard, Lerner/Cleveland Clinic, and Mt. Sinai. This selective draws on art-based principles of observation in order to enhance visual diagnostic skills in physicians and medical practitioners. In the past, this course at SBSOM has attracted speakers the leading figures nationally in this field: Dr. Sal Mangione, MD (Jefferson SOM), art historian Bobbi Coller, PhD (Icahn SOM) and ophthalmologist Dr. Vincent deLuise, MD (Yale and Cornell SOMs).

Instructor

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Syllabus

Detailed Description:
At first glance, there seems to be a chasm between the realms of art and medicine. The polarization of these crafts has deprived physicians of tools that are critical to advancing patient care. However, this divisiveness has not always existed: the great masters of the Renaissance were attuned to the inherent relationship between art and science. Accurate depictions of physical space and human anatomy fostered significant breakthroughs in physics, anatomy, and mathematics.

As the field of medicine grows more streamlined, physicians are spending less time with their patients. Though efficiency is paramount, without a corresponding refinement of physician training, patients are suffering harm secondary to misdiagnosis. This epidemic is so prevalent in fact, that the World Health Organization (WHO) cites medical error as the #3 cause of death in the country second only to heart failure and cancer. The umbrella term "medical error" is rather broad, but can be subdivided into more precise categories, including technological errors, medication errors, and diagnostic errors. In particular, diagnostic error can occur by either misdiagnosis, missed diagnosis, or simply a delay in diagnosis. These errors make up a significant portion (~35%) of the umbrella term "medical error," which has claimed so many patient lives. Physicians are under tremendous time constraints when working with patients, and without diligent efforts to sharpen our skills as clinicians, our patients may suffer.

In order to remain agile, it is critical that physicians hone their skills in particular areas of medical practice, such as in clinical diagnosis through the practice of observation, and the development of

intuition, or gestalt. This effort will work to combat the technological advances of modern medicine that tempt us to relinquish many of our clinical skills i.e. "conveyor belt medicine," as well as the constraints of healthcare as a business. One of the most useful tools in the diagnostic arsenal is the power of the gaze. The practice of art observation will help students sharpen their visual acuity as well as visual literacy***; in short, we will seek to enhance students' ability to perceive visual information accurately, and to describe what they see***. This will aim to make students adept diagnosticians, and thus more efficient and precise in their medical practice. Active observation is a skill that is trainable, and it is one that is immensely useful when our time with patients is limited.

These fundamental skills have been rather neglected thus far in the medical education system, save for a few pioneering institutions such as Yale, Brown, Harvard and Mt. Sinai. Unfortunately, it is quite common for physicians to unconsciously project what they believe the patient should look like/present with, in order to meet an anticipated diagnosis at the expense of observing reality, especially when under pressure.

Visual learning results from the integration of higher cognitive, perceptive, and motor functions. This interdisciplinary course will seek to offer students an encounter with art fundamentals with the aim of training their gaze and enhancing their diagnostic proficiency as this level of observation practice translates to medicine.

Educational Objectives

At the conclusion of this course, you will:

1. Be more observant of your patients. This course will train your gaze by teaching you how to systematically observe visual arts.
2. Articulate visual information and observations in a clear and organized fashion, much akin to the sign out and patient presentation processes.
3. Become more self- aware of your inherent internal biases.
4. Increase empathy by analyzing pieces that depict the illness experience.

Topics and Dates

04/25/23 | Week One | 1:00 PM - 3:00 PM
Room TBD

An Introduction to Art Principles and Observation in Medicine
Instructor: **Gina M. Polizzo MD**
PGY-2 Emergency Medicine

During this session, we will explore basic art elements and principles such as form/shape, line, color theory, and texture in order to equip students with the language necessary to formulate accurate descriptions of the art they observe. We will then work through dissecting and interpreting a number of art pieces, with a focus on human expression. Subsequently, these skills will be translated to a guided interpretation of subtleties of human expression in patients, an exercise which uses these critical art observation skills to build empathy in physicians.

Articles to Read:

1. Schlegel, A., Prescott, A.A., Fogelseon, S.V., Xueting, L., Zengang, L., Kohler, P.L., Riley, E., Tse, P.U., Meng, M. *"The Artist Emerges: Visual Art Learning Alters Neural Structure and Function."* 2015. Neuroimage vol 105, pp 440-451. http://www.dartmouth.edu/~peter/pdf/62.pdf
2. Dolev J.C., Friedlaender L.K., Braverman I.M.. Use of Fine Art to Enhance Visual Diagnostic Skills. *JAMA*.2001;286(9):1020–1021. doi:10.1001/jama.286.9.1019 https://jamanetwork.com/journals/jama/fullarticle/1031468

Optional Reading:

3. Graber, M. (2013). The incidence of diagnostic error in medicine. *BMJ Quality & Safety*, *22*(Suppl 2), ii21-ii27. DOI: 10.1136/bmjqs-2012-001615 http://qualitysafety.bmj.com/content/early/2013/06/14/bmjqs-2012-001615#T1

05/02/23 | Week Two | 1:00 PM - 3:00 PM

"Slow Looking:" Art and Observation in the Toolkit of Clinical Diagnosis

Instructor: **Guest Lecture featuring Dr. Vincent de Luise**
Yale School of Medicine | Ophthalmology

"In this talk, I will present a set of "slow-looking" strategies to analyze representational and non-representational ("modern") art. These strategies and skills can be transferred to help in building clinical diagnostic skills. I will begin by overviewing my work curating a rubric of medical humanities education for medical schools, which includes "slow looking," "slow listening," "musicking," narrative medicine, movement and dance, and mindfulness training. I will then focus on eye disease represented in art (Ghirlandaio, Brueghel, Rembrandt and Munch,) and conclude with an examination of several famous artists (Euphronios, Titian, Goya, Degas, Monet, Mary Cassatt, Georgia O'Keefe, and Chuck Close) who had eye conditions and how those conditions were not obstacles, but rather opportunities, for them to further their creative genius."

05/16/23 | Week Three | 1:00 PM - 3:00 PM

Art Observation: In Practice
Instructor: **Gina M. Polizzo MD**
PGY-2 Emergency Medicine

This class will challenge us to use the new language and perspectives we have learned in previous sessions, as we apply them to the analysis of various art pieces depicting illness and the human condition. In particular, we will harness our gaze to foster our diagnostic skills, as well as our practice of empathy. We will also utilize beloved puzzles and other tools to strengthen our looking skills. If time permits, we can also engage in a round of Art Observation Jeopardy.

05/30/23 | Week Four | 1:00-3:00 PM

Artist Feature: Guided Art Exercise, Final Project TBD

Articles to Read:

Wolff, B. 2018, January. "Want to Focus Your Attention? Go to a Museum." *Forbes Magazine.* https://www.forbes.com/sites/benjaminwolff/2018/01/07/want-to-boost-your-career-go-to-a-museum/#2471e19c7d99

Evaluation

The course is now P/F. Attendance and participation are required for each class.

Number of Students

Minimum 6
Maximum 15

Additional Resources:

1) Bowen He et al. The art of observation: a qualitative analysis of medical students' experiences | BMC Medical Education 2019 https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-019-1671-2

2) Salvatore Mangione et al
The Art of Observation and the Observation of Art: Zadig in the Twenty-first Century.
https://pubmed.ncbi.nlm.nih.gov/30225766/

3) Salvatore Mangione et al
The observation of art and the art of observing individuals with physical differences
- https://pubmed.ncbi.nlm.nih.gov/33982435/

4) Carol Wellbery et al.
The Art of Observation: A Pedagogical Framework
Academic Medicine Dec 2015 https://pubmed.ncbi.nlm.nih.gov/26164640

5) This article by Gurwin et al is often cited.
Jaclyn Gurwin et al. A Randomized Controlled Study of Art Observation Training to Improve Medical Student Ophthalmology Skills - https://pubmed.ncbi.nlm.nih.gov/28781219/

6) Observation as an Act Of Creation: The Art of Looking
https://www.dailyartmagazine.com/observation-as-an-act-of-creation/

7) Laura Moynahan et al., Applying art observation skills to standardized patients
- https://pubmed.ncbi.nlm.nih.gov/31266613/

8) How to Use Your Eyes
This is a wonderful book by the artist and art teacher James Elkins of the School of the Art Institute of Chicago. Elkins also wrote the book What Painting Is, a brilliant exegesis of the alchemy of paint pigments.
Each chapter in this book How to Use Your Eyes is so valuable that it could be an experience episode in the course on *Stop!Look! Listen!*

How to Use your Eyes by James Elkins
https://www.amazon.com/How-Your-Eyes-James-Elkins/dp/0415993636

9) W.W. Campbell. Augenblickdoagnose.
Seminars in Neurology 1988
https://pubmed.ncbi.nlm.nih.gov/9608614/