The Art of Observation: A Pedagogical Framework

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Abstract

Observational skills, honed through experience with the literary and visual arts, bring together in a timely manner many of the goals of the medical humanities, providing thematic cohesion through the act of seeing while aiming to advance clinical skills through a unified practice. In an arts observation pedagogy, nature writing serves as an apt model for precise, clinically relevant linguistic noticing because meticulous attention to the natural world involves scientific precision; additionally, a number of visual metaphors employed in medicine are derived from close observation of the natural world. Close reading reinforces observational skills as part of integrative, multidisciplinary clinical practice. Literary precision provides an educational bridge to recognizing the importance of detail in the clinical realm. In weighing multiple perspectives, observation applied to practice helps learners understand the nuances of the role of witness, activating reflection consonant with the viewer's professional identity. The realization that seeing is highly filtered through the observer's values allows the act of observation to come under scrutiny, opening the observer's gaze to disturbance and challenging the values and precepts of the prevailing medical culture. Application of observational skills can, for example, help observers recognize and address noxious effects of the built environment. As learners describe what they see, they also develop the communication skills needed to articulate both problems and possible improvements within their expanding sphere of influence. The ability to craft this speech as public narrative can lead to interventions with positive impacts on physicians, their colleagues, and patients.

There has been growing interest in recent years in using arts observation in medical education as a means of honing clinical skills. Although correlation does not imply causation, a surge in arts observation programs can be viewed as a corrective response to a confluence of cultural trends. By cultural trends, we mean efficiency-enhancing trends, which include an ever-increasing emphasis on scientific digests—point-of-care-guides, fast facts, and bottom lines—and a growing reliance on imaging and technology to inform diagnosis and treatment.[1,2] Providers' increased use of technological shortcuts parallels a decrease in their face-to-face interactions with patients: A 2012 study found that interns and residents spend only 12% of their training in direct contact with patients, down from 18% in 2003.[3] As Abraham Verghese and his colleagues have eloquently argued,[1,4,5] this reduced focus on the bedside physical exam not only results in potentially delayed or missed diagnoses but also sacrifices a valuable therapeutic and symbolic ritual involving the physician's healing touch and bedside presence. The resulting truncations in doctor–patient relationships, as well as in interprofessional relationships, may help explain the popularity of arts observation programs, which are well suited to satisfy a yearning for slow, intense, and mindful interactions. Thus, the current interest in observational skills can be situated within an explanatory framework that has arisen in response to the depersonalization of individuals within the medico-scientific enterprise and to the efficiencies of practice.

Evidence supports the use of arts-based teaching tools and visual thinking strategies to enhance clinical observation skills,[6–11] and a substantial number of medical schools and residency programs have developed formal programs in this area.[6,11–13] The literary and visual arts have long-standing and venerable roles in fortifying the lessons of clinical empathy, communication skills, critical thinking, and attention, to name just a few of the instrumental claims of the medical humanities.[14–16] Engaging the arts specifically as a means of honing observational skills may deliver these humanistic offerings in a more consistent, integrated, and nuanced way than other medical humanities pedagogies, for several reasons.

First, "observation" readily cleaves to the scientific paradigm, bringing to mind the meticulous microscopy practiced by veteran observers such as Antonie van Leeuwenhoek and the empirical anatomical and physiological explorations pioneered by William Harvey or John Hunter. Close observation, in other words, is an accepted, even essential, scientific habit that is easily understood within the medical culture. Second, observation implicates the observer, thus providing a means of acknowledging and studying the connection between the subject (the observer) and the object (the matter being observed).[12] Specifically, teaching observational skills harnesses the notions of "mindfulness" and "collectivity" that have replaced outdated interpretations of subjective engagement, focused on limited conceptions of the doctor–patient dyad. For example, teaching "empathy" presupposes the subject's active participation, but empathy only represents one sort of observational lens. An insistence on empathy risks other

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kinds of connections between subject and object being overlooked.[17–19]

Third, observation teaches the learner to name the norms of the medical culture and, if necessary, to imagine them otherwise. This is, perhaps, similar to what is meant by "critical thinking" or "reflection."[20] Yet because of the physicality of observation, embedded as it is in the senses, the act of observation has a natural alliance with practice, encouraging articulation of real-world solutions.[21,22] This existential dimension builds on the representational modality of the arts, which in turn are known for the instigations and subversions that occur in the very act of making visible the invisible or making strange what is ordinary.[23] In short, observational skills, honed through experience with the arts, bring together in a timely manner many of the goals of the medical humanities—attention, self-awareness, and critique—providing thematic cohesion through the act of seeing while aiming to advance clinical skills through a unified practice.

In this article, we review the pedagogical benefits of arts observation, which we define as a multifaceted entity encompassing science writing, visual images, narrative medicine, and the built environment. Rather than conscripting observational skills training as a strictly restorative exercise by aligning our pedagogy with the traditional interpretive and empathic stance of the medical humanities, we seek to show how close attention can be both wholesome and disruptive. Our approach to close observation begins with cultivating self-awareness, a subjective engagement that relies on visual and linguistic precision to foster attentive patient care. We then show how careful noticing deepens the moral imperative of "seeing rightly," using behavioral and institutional deficits in the local medical environment as examples. We conclude that cultivating observational skills is an essential step toward articulating problems that regularly arise but may be invisible in the conduct of patient care. In Table 1, we offer a suggested curriculum for an eight-week arts observation seminar as a formal framework within which to elaborate these themes.

Fostering Scientific Attention: Science Writing

As an overarching strategy in teaching close observation—adaptable to different educational settings—we recommend examining descriptive texts focusing on natural or scientific processes. At the most basic level, consider the nearly ubiquitous use of visual metaphors in medicine to describe pathological findings—including such terms as *bamboo spine*, *apple core lesion*, *nutmeg liver*, *oat cell carcinoma*, and *miliary* [millet seed] *tuberculosis*. These terms largely derive from medicine's historic practice of close observation of the natural world.

The selected texts should offer students the opportunity to analyze the observer as a participant in what is being observed. Exposing learners to well-crafted scientific writing against the background of mindful self-awareness invites them to discover the ways in which the writer's precise noticing meshes with the writer's objective precision. Exploring this relationship leads to a better understanding of how historical and cultural contexts generate notions of objectivity.[24]

The long tradition of clinical observation in science and medicine has a strong anchor in nature writing. A natural setting which, to the uninitiated, may first appear to be an inert scene will, on closer examination, reveal an overwhelming flurry of activity involving a host of miniscule players. In *Pilgrim at Tinker Creek*, Pulitzer Prize–winning author Annie Dillard[25] describes the goings-on this way:

> What I see sets me swaying. Size and distance and the sudden swelling of meanings confuse me, bowl me over…. I look at the lighted creek bottom: snail tracks tunnel the mud in quavering curves. A crayfish jerks, but by the time I absorb what has happened, he's gone in a billowing smokescreen of silt. I look at the water: minnows and shiners.… I look at the water's surface: skaters, bubbles, and leaves sliding down. Suddenly, my own face, reflected, startles me witless.… Finally, with a shuddering wrench of the will, I see clouds, cirrus clouds. I'm dizzy, I fall in.

Dillard's science-based writing makes visible the connection between rigorous description and scientific observation. But it also positions Dillard, the narrator/observer, as a participant. She is not afraid to situate herself in the scene. Her startled discovery of her own reflection suggests that the world teeming around her includes her. She is part of it. She "fall[s] in." This is the beginning of the subject's alignment with what is being observed, without forfeiting—indeed, made possible by—clinical precision.

Another powerful example of the precise noticing of self and nature can be found in David G. Haskell's *The Forest Unseen*.[26] The title hints at the author's task of resolving a disconnect between the observer and the observed. Humans, the title implies, are often oblivious to what is going on in the natural environment, but, for those who look, nature is full of activity worth seeing. Haskell describes his visits, over the course of a year, to a small, circumscribed space in the forest, a space he calls the "mandala." He watches the aliveness within this space and makes it come alive for the reader who follows his gaze. In the act of doing so, he experiences himself as a participant, which in turn imbues the reader with an understanding of humanity's connectedness to and dependence on nature. This mutuality is a lesson that goes beyond empathy, as empathy cannot fully divest itself of its paternalism.[18] In a powerful chapter, Haskell[26] describes the visit of a moth to his finger, where it inserts its proboscis to extract salt, an ingredient essential to successful mating. The half hour he allows his guest to suck provides him with an opportunity to ponder his contribution to the intricate interdependence of creatures in the context of their ingestions and excretions.

Jim Crace is another writer who recruits subjectivity into objective description. His novel *Being Dead*[27] centers on a middle-aged husband and wife who, having undertaken a nostalgic outing, are murdered while picnicking on a beach. To the reader—and to each other—the two characters are singularly dull and uncharismatic, which lends more drama to the biological events occurring after the couple's deaths than to any preceding biographical details. Page after page, Crace describes the decomposition of their bodies. Here is a brief excerpt focusing on the wife's moment of death:

> There were still battles to be fought but these would be *post mortem*, the soundless, inert wars of chemicals contesting for her trenches and her bastions amid the debris of exploded cells. Calcium and water usurped the place of blood and oxygen so that her defunct brain, almost at once, began to swell and tear its canopies, spilling all its saps and liquors, all its stored immersions of passion, memory and will, on to her scarf, her jacket and the grass.
>
> Less than a minute.[27]

Table 1
Proposed Curriculum for an Eight-Week Arts Observation Seminar

Week	Topic	Activities/select readings	Pedagogical aim
1	What observation is and why it matters	Countering inattention: Students learn how observation requires framework, knowledge, and labor. *Readings:* Elkins, *How to Use Your Eyes*[59]; Schmidt, "The save"[60]; Fitzgerald, "Curiosity"[61]	Students understand: • How seeing is the result of trained practice • How medical culture determines what is noticed and by whom
2	Observation and mindfulness: Role of the self	Photography exercise: Students take pictures documenting important details in their daily routines. *Readings:* Excerpts from Dillard, *Pilgrim at Tinker Creek*[25]; Haskell, *The Forest Unseen*[26]; Crace, *Being Dead*[27]	Students understand: • How personal circumstances dictate what is and is not noticed • How noticing is integral to scientific accuracy and clinical judgment
3	Visual thinking strategies	Arts observation exercises: Students practice description (can include clinical parallels such as describing dermatologic lesions or physical findings). *Reading:* Dolev et al, "Use of fine art to enhance visual diagnostic skills"[9]	Students understand the link between description and interpretation
4	Museum visit	Selected viewings of art with trained art historians: Students learn context, practice description, and note emotion. *Reading:* Kennicott, "How to view art: Be dead serious about it, but don't expect too much"[62]	Students understand and can identify the different cultural and historical lenses through which images are filtered
5	Close reading/ witnessing	Reflective writing exercise: Students describe a witnessing experience. *Readings:* Caschetta, "What wasn't passed on"[34]; Jamison, *Empathy Exams: Essays* (excerpt)[63]; poems by W.H. Auden[44] and W.C. Williams[45] on the painting *Landscape With The Fall of Icarus*	Students understand: • How literary interpretation correlates with and differs from the process for arriving at a diagnosis • How empathy and interpretation are culturally mediated • How witnessing is a platform for constructing cultural norms
6	Sounds and surrounds	Exploration of the built environment in pairs: Students occupy different environments (e.g., emergency department waiting room, cafeteria, hospital hallway) and observe sounds and behaviors. In class, they analyze clinic and hospital design elements. *Readings*: Chopra and McMahon, "Redesigning hospital alarms for patient safety: Alarmed and potentially dangerous"[53]; Detsky and Krumholz, "Reducing the trauma of hospitalization"[54]	Students understand how the built environment determines what medical personnel and patients say and do
7	The medical culture	Students find or create art that represents the acculturation process of the first year of medical school. *Reading*: Eisner, "Art and knowledge"[64]	Students understand how observation can produce countercultural improvements
8	Student presentations	Analysis of text or visual art or presentation of original student artwork that applies and advances course theme	Summary application of observation, interpretation, and emotional awareness

By associating the microcosm of relentlessly busy and destructive cellular processes with the backstory of a couple whose relationship lost its luster long ago, the writer brings up the problem of the couple's unlived life. It is almost as if there were more joy in the biological activity of microbes, flies, and other creatures feasting on carrion than there had been in the lives of the unfortunate protagonists.

Writers such as Dillard, Haskell, and Crace do not shy from expressing emotion in their biological writings. They thus show the path that leads one from objective observation to subjective engagement, an essential practice in clinical settings. Trainees and practitioners can use these sorts of analyses as springboards for understanding and monitoring their personal values, their frustrations, and their inner resources, all of which influence their interactions with patients.[28]

Attention and the Precision of Interpretation

Recognizing the connection between scientific observation and literary craft, author and educator Anne McCrary Sullivan[29] has been a vocal advocate for the unique value that the arts—poetry in particular—can bring to the tasks of teaching and honing attention. She credits her mother, a marine biologist, with much of her insight into the importance of close observation and exact description. Through writing and studying poetry, she argues, a student can learn to be more observant and to describe findings with greater precision.

As readers, we appreciate the way precise writing brings specific images and sensations to our mind's eye; as clinicians, we recognize the importance of finding proper descriptors. Literature, especially the more concise form of poetry,

requires precision in word choice as the author paints a picture with language. Writers have noted this feature of poetic language. To cite just one example, Rainer Maria Rilke[30] narrates the death of French poet Felix Arvers, delayed briefly by a nurse's egregious mispronunciation of the word "corridor" in a nearby hallway. Rilke describes the poet's resulting angst as follows: "He was a poet and hated the approximate."

The study of poetic precision provides an educational bridge to recognizing the importance of detail in the clinical realm, where exactness is critical to providing safe, high-quality medical care. Reviewing examples of literary precision can help students learn how to avoid crude or sloppy descriptions and how to analyze observations that lack appropriate nuance. What clinician has not, for instance, had the experience of a mother describing her child as "lethargic" in a consult over the telephone? The mother in most instances does not realize "lethargic" is a technical term that conjures up images of a child *in extremis* that should set off alarms in the attentive practitioner's mind. Physicians should not allow worn, mechanically repeated words and phrases to lull their clinical attention. A good teacher of medicine focuses on students' or residents' proper use of descriptors and gently instructs his or her junior physicians on the proper choice of word.

Interpretive precision, a central educational theme in narrative medicine programs, readily complements linguistic precision. Although close reading is a technique familiar to educators, it warrants discussion in the context of an arts observation pedagogy. Rather than forming the centerpiece of a medical humanities agenda,[16] careful narrative interpretation reinforces observational skills as part of integrative, multidisciplinary practice. For teaching purposes, short writings lend themselves to fruitful analysis, through an interpretive process often described as analogous to interpreting patients' experiences.[31–33] As an example, Mary Beth Caschetta's autobiographical essay "What wasn't passed on"[34] can be used to teach how an individual's layered past informs the present, how family systems galvanize around illness, and how withholding judgment is one of life's most challenging tasks. Importantly, these lessons are deeply embedded in unpretentious, accessible prose that nonetheless requires the reader's close attention.

To illustrate the power of literary detail as revealing and nuanced as facial expressions, we need only examine the first two short paragraphs of Caschetta's conversational essay. Caschetta begins by describing her arrival at the family home to help her mother after abdominal surgery. Almost immediately, it becomes apparent that the mother's illness is not the story's theme; instead, the mother's illness reconfigures the alliance between father and daughter. It is this relationship that becomes the author's true subject. She hints at this shift in the fourth sentence, when she, the daughter, has assumed her mother's role: "In the evenings, my brothers stopped over to drink beer and eat *whatever my father and I had cooked up*"[34] (our emphasis). In the next paragraph (quoted in its entirety), the reader learns more about the author's family system:

> Usually when my family got together for a meal, the dinner table turned into a minefield. My father and brothers were conservative; my mother and I were progressive. Goading was their sport; dodging was ours. It was a game we had played for years, but no one seemed in the mood this time. Even my volatile father was mellow, having switched from his usual gin to wine.[34]

The family's politically progressive women have always been goaded by its politically conservative men. Alcohol symbolically reinforces the male bonds: The brothers come over to drink beer in the first paragraph, while the father drinks wine in the second paragraph. But alcohol also serves to signal the new connection between father and daughter, because the father, who usually drinks gin, is this time "mellow" and chooses wine, as though that is a concession to the feminine. So in the first two paragraphs, we learn that this is a family whose dysfunction expresses itself through politics and alcohol; at the same time, we learn that the mother's illness has changed the family dynamics, causing daughter and father to join together as caretakers, which in turn makes the father take a more relaxed approach, evidenced by his choice of drink.

Further close interpretation of the essay reveals many other nuanced details about the family relationships as well as the dense and necessary manner in which they unfold. Even a short text such as this one commands deep attention to elucidate its subtleties. No wonder that Harvard art historian Jennifer Roberts,[35] after spending a three-hour session gazing at John Singelton Copley's painting *Boy With a Squirrel*, feels justified in demanding the same time commitment of her students. Continued, unremitting, and patient observation rewards the observer with ever-new insights, suggesting not only that the present, like Haskell's[26] forest mandala, contains a great deal more information and detail than is originally expected, but also that this yield delivers, and indeed changes, over time.

Attention and the Conundrum of Witnessing

Through careful and deliberate choice of lines, colors, and words, the arts have the inherent ability to make visible the invisible, articulating truths that have perhaps escaped our conscious noticing. Seeing is not just descriptive, although description is an important starting point for those who are learning to see. Students must also be awakened to the centrality of mindful interpretation, the comprehensive, attentive attitude that, drawing on the literature of theology and virtue ethics, we call "seeing rightly." We use this term to indicate a preformed interpretation that filters out nuanced, even contradictory, observations such that they do not critically inform the final interpretation.[36] Citing Roberto Gerhard, Marilyn Chandler McEntyre[37] affirms, "Attention—deep, sustained, undeviating—is in itself an experience of a very high order," and as such, seeing rightly has value in the teaching of patient-centered medicine.

Seeing rightly, however, is an ideal embedded in an oxymoron—it pits open-endedness against a moral imperative. The dialectical processing of this contradiction provokes a self-consciousness that is perhaps crucial to the development of a professional identity.[38,39] All observation is filtered through a particular lens, even the mindful kind that Sullivan[29] celebrates when describing her mother's gaze as so focused on marine foraging that she does not notice when her finger bleeds from a cut. The medical humanities, in

fact, encourage trying on different lenses to bring out the contradictory nature of human motivations and actions.[40,41]

Thus, it should not be surprising if the arts also have the ability to instruct trainees about the meaning of seeing itself.[42,43] A telling exercise is to compare the poems by W.H. Auden[44] and William Carlos Williams[45] interpreting the painting *Landscape With the Fall of Icarus* (ca. 1555) attributed to Pieter Breughel. Auden writes from the vantage point of privilege, ascribing the capacity for true connection with miraculous birth and death to elite men, the "masters." Williams, on the other hand, sides with the working man, who has every right to enjoy the splendid spring. So in these works the "rightness" of seeing is filtered through the observer's values. Seeing is adaptive at best; it is tied to the particular situation and based on the multiple and nuanced cues previously discussed. More important, seeing rightly may also prevent constructive improvement, in that it asserts its own moral certainty. The tuned and affirmational regard it implies excludes true awareness of dissonance—for example, the dissonances inherent in the so-called hidden curriculum.[46] Only a gaze open to disturbance will challenge the values and precepts of the prevailing medical culture, extending the line of sight beyond the demands of nonjudgmental and even empathic witnessing when these unexamined standards clash with actual experience.

Reflective writing has been used to capture these dissonances and may be an important part of arts observation pedagogy.[47] During an in-class assignment in the arts observation selective that one of us (C.W.) offers to first-year students at Georgetown University School of Medicine, participants were instructed to write about an experience in which they had either occupied the role of witness or were witnessed by others. The students' responses were striking in their focus on dissonance: They wrote more about the painful and silencing aspects of witnessing than about its healing potential. One student described the discomfort of feeling overly scrutinized in a testing setting. Another wrote about a host of trainees crowding voyeuristically into a birthing room. A third student described being witness to a drowning and its aftermath:

> I couldn't write about the crying friends…. I couldn't write about the crying "house mom," I couldn't write about the wailing of the parents on the phone…. I couldn't write about my own feelings as I watched a boy my age. I couldn't write. So I didn't.

In each of these examples, the students wrote about a sort of failed witnessing. Yet in their writing, they transformed those witnessing experiences into something that they were observing, and in doing so, they acted as witnesses to their witnessing.

This sort of exercise allows the act of observation itself to come under scrutiny, opening up possibilities for self-development but also recognizing that observation can be cruel, voyeuristic, traumatic, and raw. Observation demands ongoing processing. "Seeing rightly" thus best describes a self-corrective process which, to draw on the language of mindfulness, welcomes everything and shuns nothing. In weighing multiple perspectives, observation becomes a reflective practice, introducing the possibility of choosing a witnessing platform that is consonant with the viewer's values and his or her idea of professional identity.

Observation as Resistance

In calling out the limits of seeing rightly, we have introduced a nidus of resistance into this discourse: We imply that observational skills can and should be tuned to comment on and critique the medical culture.[48] In a genuinely integrated medical education system, scrutiny of the supporting organization and its affiliated institutions should be the constant activity of vigilant minds. Yet, we submit that institutional self-criticism is the least exercised of all analyses.[22] Consider the political power structures inherent in medical training. Arguably, the prerogative to "notice" is held by the "elite"—the clinical teachers who conduct rounds and dictate the style of patient care. In the traditional apprenticeship structure of medical education, clinical teachers who are trying to instill in their students an aesthetically sensitized perception can actually produce a desensitizing effect if they leave the privileged origins of their gaze unexamined. Teaching observation in such a way as to alert trainees to the need for changes in the culture in which one participates could go a long way in exploring the power of resistance as a pathway to a more humane approach to patient care.

In an arts observation exercise within the selective previously described, students were sent out in pairs into the medical built environment and asked to observe the sights and sounds of hospital life. Ambulances, cries for help, ventilators, waiting patients, and physician and patient attire are all part of a largely unnoticed environment, much like the elements of Haskell's unseen forest but without the beauty. The built environment invisibly shapes behavior: A computer's placement defines where we sit, curtains limit privacy, and small rooms foster crowding. Decades of research demonstrate that architectural and interior design have significant but often overlooked impacts on health care, particularly on the clinical status and recovery times of hospitalized patients.[49–52] A recent article on the disruptive effects of patient alarms reveals not only how noxious sounds are taken for granted but also how unthinkingly alarms are turned off—sometimes with serious consequences to the patient—when the sounds finally reach a nuisance threshold.[53] Architectural and interior design can reinforce—and also alleviate—a host of environmental and cultural disturbances; for hospitalized patients, these disturbances include the nighttime interruptions, the ubiquitous alarms, the unnecessary blood draws, the endlessly repeated questions, the standard-issue gowns, and the rounding teams towering over their beds.[54] These routine phenomena, embedded in the medical culture and reinforced by hospital design, can have disruptive and even traumatic effects on patients, and they create behavioral grooves that render the walk and talk of patient care invisible to the untrained eye.

Not only do the arts have the potential to expose what is wrong—as do, for example, Robert Pope's painting depicting the patient's loneliness among a throng of visitors or Charles Sanderson's representation of Sheriff Joe Arpaio in a patient gown and pink underwear depicting the sheriff's forcing mentally ill and other inmates to wear pink underwear[55]—but they also contribute actively to problem solving. An intriguing example of design focused on human

interactions can be found in the "Jack-and-Jill" rooms constructed for outpatient care at the Mayo Clinic.[56] These rooms separate the examination space from that of the consultation, designating distinct but adjoining rooms for physical examinations and for discussions about patients' diagnostic findings, treatment options, prognosis, and other counseling activities. This approach recognizes that the emotional content of the doctor–patient interaction thrives in its own space and that these interactions should not be conducted in the exam room, with the patient perched on a table and the physician rolling about on a stool. This design is intended to facilitate meaningful conversations; the designers found that the physical exam constitutes only 10% to 15% of most encounters,[56] whereas the remainder of the encounter is conversation.

Conclusion: From Observation to Action

In a recent *New York Times* article,[57] the president of Wesleyan University lambasted the intellectually self-serving attitudes of students bandying about clever ideas in the classroom, and argued that a positive, constructive interventionist approach should replace deconstructive (e.g., critical) thinking. Teaching observational skills via an arts observation curriculum may offer a satisfying solution to an educational quandary that pits critical analysis against a focus on improvement. Students must first learn what it is to see with an open mind. Next, they must practice the act of describing what they see to help them develop the communication skills needed to articulate what is ailing and what improvements are feasible. Finally, they must develop the ability to craft this speech with others—sometimes called public narrative—which can lead to interventions that have positive impacts on themselves, their colleagues, and patients.[58] Arts observation curricula offer many opportunities in realizing the pedagogical potential inherent in this sequential approach.

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