

# How Visual Arts–Based Education Can Promote Clinical Excellence

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## Abstract

A growing movement to integrate the arts and humanities into health professions education is afoot. While educators may easily conceive how arts-based teaching can improve clinically relevant skills such as observation and critical thinking, they may not realize it also has the potential to

transform learners in myriad ways beyond sharpening these fundamental skills. In this article, the authors review how visual arts–based education can promote clinical excellence by enhancing communication and interpersonal skills, professionalism and humanism, diagnostic acumen and clinical reasoning,

and passion for clinical medicine. They describe the most widely studied visual arts–based education method, Visual Thinking Strategies, in detail as an exemplar of how arts-based pedagogy can help health care professionals strive for and ultimately achieve clinical excellence.

All health care professionals aspire to clinical excellence. The specific domains of clinical excellence—communication and interpersonal skills, diagnostic acumen, skillful negotiation of the health care system, taking a scholarly approach to clinical practice, professionalism and humanism, knowledge, and passion for clinical medicine—have been described previously.<sup>1</sup> Increasingly, the role of the arts and humanities, including visual arts–based education, in promoting growth among learners has been recognized by national and international organizations such as the Association of American Medical Colleges, the National Academies of Sciences, Engineering, and Medicine, and the World Health Organization.<sup>2–4</sup> Concurrently, the rationale for integrating arts and humanities content and methods into clinical education has also expanded, moving beyond the instrumental to an epistemological—or “ways of knowing”—perspective. This epistemological perspective focuses on the value and relevance of the arts and humanities in health professions education given how closely these align with and promote

clinical reasoning.<sup>5</sup> Further, a growing body of literature shows that arts and humanities–based teaching improves a range of clinical skills, such as observation, critical thinking, tolerance of ambiguity, and empathy.<sup>6–11</sup> And, importantly, time spent on these pursuits promotes reflection on the humanistic aspects of medicine.<sup>12–14</sup>

Resting within the broader context of the arts and humanities, visual art may be ideal for the development of clinical excellence, particularly when framed within a well-aligned pedagogical method. Busy clinicians, and even trainees, have limited time to devote to skill development; even brief humanities activities, such as reading reflective essays or short stories, may generally be nonstarters. Taking in works of visual art, however, requires no previous knowledge or advance preparation. Images are self-contained and immediately accessible, and the themes are universal and compelling.<sup>15,16</sup> As such, the close viewing of art has the potential to take the learner or clinician rapidly into places of deep reflection on questions fundamental to the human condition. Discussing a work of art in a group setting can be eye-opening as viewers realize that more than one “right” interpretation may exist.

Previous reviews of the use of visual arts in medical education have described a range of pedagogical methods.<sup>14,17</sup> These include various approaches to viewing, discussing, and/or writing about works of art selected to improve observational skills and/or illuminate clinically relevant themes, including mental illness, body

image, end-of-life care, the doctor–patient relationship, pandemic disease, professionalism, and empathy.<sup>9,15–20</sup> Other pedagogical approaches to including the visual arts in health professions education include creating original artwork, especially art prompted by interactions with patients,<sup>15,16</sup> and using body painting as a way to teach anatomy.<sup>21</sup> One of the most widely used and studied visual arts–based teaching methods in health professions education is Visual Thinking Strategies (VTS).<sup>22–24</sup> Using VTS as an exemplar, we review the ways that visual arts can help practitioners to become more clinically excellent across multiple domains.

In a VTS session, learners silently view and then discuss a carefully selected work of art together. They are guided by 3 basic questions central to the VTS method: (1) *What’s going on in this picture?* (2) *What do you see that makes you say that?* and (3) *What more can we find?* These questions were developed to hold the group in inquiry and to encourage participants to search for visual evidence to support their narrative inferences. VTS was originally designed to help students in kindergarten through 12th grade explore the range of thoughts and emotions they experience when looking at art; however, investigators also noticed that the skills students learned from VTS workshops carried over to other subjects.<sup>25</sup> This anecdotal observation was confirmed in a longitudinal controlled trial showing that VTS helped students build critical thinking skills that they applied to different areas of learning and life.<sup>25</sup>

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VTS is an effective method for teaching observation skills and interpreting nuance. It has been used for professional development across diverse fields, including, for example, with detectives to enhance their ability to notice and interpret details at crime scenes.<sup>26</sup> VTS has been used and studied with a variety of health professionals and learners, and results suggest that VTS helps to promote the development of a wide variety of clinical competencies—most notably, the observation and critical thinking skills essential for making accurate diagnoses.<sup>6,8,23,27</sup> While the most obvious functionality of visual arts for health care professionals relates to the improvements within these realms, including noticing emotional reactions and observing signs of disease, the benefits they offer clinicians reach far beyond diagnosis, observation, and critical thinking. In this article, we provide a glimpse of VTS in action and then describe how VTS can enhance various domains of clinical excellence.

### VTS in Action

The following imagined dialogue is representative of a typical VTS session between a facilitator and health professions learners. In this example, the group is discussing the painting *Baron de Meyer* by Florine Stettheimer (Figure 1). Participants have been told nothing about the work before the discussion. After a minute or so of silently looking at the work, the facilitator asks the standard VTS opening question of the group:

Facilitator: **What's going on in this picture?**

Jenny: He's on stage.

Facilitator: Jenny, you're thinking about the setting, and thinking this [pointing] might be a stage of some sort. There's some curiosity about where this is. You also referred to the central figure as a man. **What do you see that makes you say that this is a man?**

Jenny: He's wearing a suit and tuxedo shoes. Plus, he has short hair and other masculine features.

Facilitator: Jenny, you're saying this [pointing] looks like a suit and these [pointing] like the kind of spats you might wear with a tuxedo. You also mention the short hair [pointing], and you said "masculine features." **What do you see that makes you say that the figure has masculine features?**

Jenny: I guess I was referring to his broad, wide shoulders, but now I'm not so sure if that necessarily says that he or she is a man or a woman.

Facilitator: But it sounds like for you the broad shoulders [pointing] suggest this may be a masculine figure. **What more can we find?**

Sam: At first, I thought this was a domestic setting because of the feminine couch, the footstool with flowers on it, a regal-looking robe, the curtain on the right with birds and flowers, and the pink background.

Facilitator: So, Sam, you're drawing our attention now to some of the other details and wondering if this might be a domestic setting because of what you describe as the "feminine"-looking slipper chair [pointing], the footstool and the curtains with flowers on it [pointing], the robe that you said was somewhat regal [pointing]. **What do you see that makes you say that the robe is regal?**

Sam: It reminds me of the royal red that I've seen on kings and queens with red or purple robes lined with white fur in older paintings.

Facilitator: Okay, so you're thinking about images in other paintings that suggest royalty with similar choices of colors and fabrics [pointing]. **What more can we find?**

Kelly: He seems like a very fashionable man who is interested in different types of fabrics. I see a robe that could be made of velvet, embroidery on the curtain, and some different types of laces. He looks like he could be a *Project Runway* judge.

Facilitator: So you're wondering about who this person is and what his interests might be. And you're tying together the way he's dressed [pointing] and the different fabrics [pointing] and wondering if this person has something to do with the fashion world. He seems like a stylish figure and you're puzzling over who exactly he may be. **What more can we find?**

This sort of discussion—toggling back and forth between the questions, *What do*



**Figure 1** Painting used to practice Visual Thinking Strategies<sup>23</sup> with health professions students. Florine Stettheimer (American, 1871–1944) *Baron de Meyer*, 1923. Oil on canvas. 38 1/8 × 26 in. (96.8 × 66 cm.) Framed: 44 3/8 × 32 3/8 × 3 1/2 in. (112.7 × 81.6 cm.) The Baltimore Museum of Art: Gift of Ettie Stettheimer, BMA 1951.32. Photography By: Mitro Hood. Reproduced with permission.

*you see that makes you say that?* and *What more can we find?*—should continue for about 15 minutes. The facilitator should frame and paraphrase each response and link multiple responses together. After this time of observing, interpreting, and listening, the session ends with a process-oriented closing remark.

Facilitator: Thank you all for sharing your observations. It's fascinating how, without knowledge of what this work is about, we're able to puzzle over it together and come to our own understanding about what it might mean. This often happens when we're encountering unfamiliar situations when we might not have all the information we need. Mulling it over together has helped us rethink our initial assumptions and to consider some of the ideas suggested by others.

## Domains of Clinical Excellence

### Communication and interpersonal skills

All VTS sessions begin with silent moments of individual close looking; this time is then followed by participants sharing what they notice and think with others. As participants share, they listen to one another and consider others' points of view. Thus, the articulation of ideas or sharing of observations, as well as appreciating multiple perspectives, is an inherent part of every VTS session. In valuing both inclusivity and participation, the VTS group process upholds the practices of building on others' viewpoints, revising beliefs, seeing different sides of an issue, and validating distinct points of view. This engaged pedagogy, emphasizing mutual participation, not only allows participants to expand their own perspective but also encourages them to build ideas together through an interactive process, reinforcing that critical thinking and reasoning may be best accomplished collaboratively. The process of studying and discussing a work of art together fosters community building and teamwork. Although the transfer of these skills from the museum to clinical settings has yet to be studied, we believe the VTS process could provide a foundation for improving interprofessional care and collaboration. VTS emphasizes the reality that the experience of gaining knowledge need not be "private, individualistic, and competitive,"<sup>28</sup> which, in turn, substantiates the premise that

transformative learning relies heavily on the "cultivation of conversations, of dialogue."<sup>28</sup> VTS also has the potential to play a role in health care coaching by supporting the giving and receiving of feedback, although this application will require study.

By fostering the practice of sharing thoughts and accepting interpretations, the VTS process augments communication and interpersonal skills, which are foundational for developing an optimal bedside manner.

### Professionalism and humanism

In every VTS session, participants practice empathy. While respectfully considering the perspectives of others, VTS participants must be fully present, intellectually curious, and emotionally engaged. By viewing art with other people in this way, participants learn to respond empathically to the emotional state or feelings that are emanating not only from the figures represented in the art but also in the words expressed by others.<sup>11</sup> These stimuli may trigger emotional responses and/or raise awareness of implicit biases, which require courage to recognize and accept. For example, a participant may describe an elderly figure in a painting as "weak" and, after being asked what they see that makes them say "weak," realize that their conclusion was based on a preconceived notion rather than any visual evidence. This discovery may lead the participant to reflect on their personal biases related to aging. Approaching the unfamiliar, experiencing the unexpected, and tolerating ambiguity demand vulnerability. Through VTS, participants recognize the value of revising ideas, as they experience the evolution of their own and others' observations and interpretations. The VTS spirit of open-ended inquiry explicitly highlights that no individual has all the answers and, in fact, answers might not always exist.<sup>11</sup> By validating each individual's voice and providing a space wherein participants can be themselves and feel whole, VTS encourages learners to work with integrity and authenticity. The VTS process also regularly demonstrates that collaboration yields a better product than what could be produced by any one individual alone; this experience of gestalt explicitly helps participants appreciate teamwork and value diversity, both of which are fundamental to

medical professionalism. Although the influence of VTS on empathy and tolerance of ambiguity has been studied, more work is needed to explore its effect on improving bias awareness.<sup>11,23</sup> VTS nurtures respectful and caring behaviors and attitudes—professionalism and humanism—which are vital to the delivery of clinically excellent health care.

### Diagnostic acumen and clinical reasoning

Foundational to any VTS discussion is close looking. By encouraging participants to look at a work of art from different angles and distances to appreciate nuance, VTS builds close observation skills.<sup>23,29</sup> VTS also encourages slow looking: looking again, looking more closely, reconstructing, and developing new hypotheses. Through focused viewing, reflection, and revision, VTS provides the foundation for grounding inferences or interpretations in observations and evidence. Further, by increasing the recognition that incorporating new knowledge into one's critical thinking requires active engagement, VTS encourages speculation and hypothesis generation. This willingness to reframe one's thinking based on input from others elevates the clinically relevant concept of shared decision making. Improving diagnostic acumen involves, at its core, learning to make the right assessment by using information from multiple sources while limiting biases and errors.

Looking at art—in any setting—may be an unfamiliar activity for many clinicians and, as such, can feel somewhat disorienting or uncomfortable. An art museum may be a particularly unfamiliar and unnerving space for clinicians. Whether viewing works on display in a museum or reproduced images of art, the VTS process provides a new framework for observing and learning and thereby builds participants' experience of approaching that which is untried or alien. At the same time, by both recognizing the importance of prior knowledge and nurturing an appreciation of new ways to seek or gain knowledge, the VTS process can help participants realize that the landscape of knowledge is changing all the time. Participants see that it is appropriate and advisable to change their minds and to revise their thinking based on new evidence.



By asking participants to dive fully into a task without distraction and then engage in active reflection, the VTS process fosters metacognition: mindful thinking about thinking. VTS also demands that participants tolerate ambiguity by recognizing that sometimes there are no right answers.<sup>11</sup> This tolerance of ambiguity and full engagement together nurture an appreciation for avoiding premature closure and embracing radical openness (i.e., not being overly attached to or protective of one's own first ideas, not ruling out others' perspectives [or differential diagnoses] precipitously). Answering in sequence, *What's going on in this picture?* *What do you see that makes you say that?* and *What more can we find?*—3 questions foundational to VTS—health care professions students learn to ground inferences in evidence. This sharpening of critical thinking is the cornerstone of clinical reasoning and, thus, clinical excellence.

### Passion for clinical medicine

VTS creates opportunities to behold art and engage in open discussions. Because of the time and attention devoted to these activities, the experience of engaging in VTS has been described by many health care professionals and learners as feeling like a sanctuary that promotes the critical thinking necessary for growth.<sup>30</sup> Thus, VTS can acquaint clinicians with the transcendent power of critical thinking. By nurturing curiosity, creativity, imagination, and a search for knowledge, VTS can revitalize the enjoyment of self-awareness and self-determination (vs the obedience, conformity, and regurgitation of facts that is part of the prevailing medical culture). This active engagement in the process of independent thinking has been described as arousing.<sup>31</sup> With VTS, engaging in problem solving is fun, which may promote renewal and foster resilience among clinicians. By encouraging active, lifelong learning and the sharing of ideas, VTS nurtures an intellectual sense of meaning and purpose. While the connection between VTS and the continuous development of clinical skills deserves further study, we believe VTS helps health care professionals excel in patient care and remember the wonder of clinical medicine.

A core component of VTS is holding the group in a spirit of inquiry, an attitude

that is essential for sustaining a lifelong passion for clinical medicine and, therefore, clinical excellence.

### Conclusions

Perhaps better than any experience—except spending time with a master clinician at the bedside—viewing art through an intentional, pedagogical approach can translate into transformative professional growth toward clinical excellence. Alternatives to viewing art in a museum, such as by sharing projections or printouts of online images or by using specific educational apps,<sup>32</sup> in classroom or clinical settings can be especially useful for busy clinicians. Whether in the art museum or on the wards, visual art can prompt conversations and reflections that inspire health care professionals to strive for excellence, both as clinicians and as human beings.

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## Cover Art

### Artist's Statement: Tug of War

My clerkship year was full of firsts: My first time in a hospital setting; my first time seeing patients independently; and my first time managing patients who were acutely ill. During my surgical clerkship, I met many patients whose stories lingered in my mind long after they had left my care. Each had a unique story, but they all were stuck in the same heart-wrenching limbo between life and death.

Reflecting on this limbo inspired me to create *Tug of War*, on the cover of this issue. A tug of war pits 2 opposing forces against each other in a test of strength and will for one force to overcome the other. Like the angel reaching toward the brightest star, my patients were reaching for something beyond the physical world. The chain around the angel's ankle represents all the factors that were trying to pull a patient back toward life: their family and friends, and us, the physicians fighting to keep them alive. It was hard to tell which side would win, the force of nature pulling them toward the great beyond or the chain that anchored them down on Earth.

I cannot speak to the experiences of the patient, family, or friends, but as the medical student on the surgical team, I found waiting and hoping day-by-day



Tug of War

for small changes in clinical status to be excruciating. We had done all that we could, and all that was left to do was wait and see if our patient, our angel, would respond. In my digital painting, the angel is covered in cuts, her dress is torn, and her wing is broken to represent the battle wounds that she acquired during her fight for her life.

Every morning, we would assess if there were any signs of improvement in our patient's condition. Family and friends would wait at the bedside anxiously and hopefully, but as the days turned into weeks with minimal to no change, their

hope slowly melted to desperation. In my digital painting, I chose to reflect this loss of hope through the sky full of stars that fall and fade into a blanket of nothingness in the foreground, like a series of unfulfilled wishes.

I thought about these patients often and wondered if they had tipped in either direction. Whenever I felt disheartened about their situations, I added a bit more to the picture, and it evolved over the weeks of my surgery rotation. Pouring those emotions into art helped me come to terms with the uncertainty surrounding each prognosis and accept that our medical team provided each patient with the best care we possibly could.

This piece is my tribute to my patients' stalemate battles, their stories with indeterminate endings.

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