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Creativity-Integrated Art History: A Pedagogical Framework

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Art history courses provide college students with the opportunity to encounter creative works of art and architecture that use artistic and scientific knowledge and engineering feats. Despite the amount of sophisticated knowledge involved in and the time-consuming nature of the actual creative processes used in making a work of art, little pedagogical emphasis is placed on the creative process in classes. Instead, depth of knowledge about the creative process is sacrificed for breadth of factual knowledge through rote memorization. This article argues that the field of art history has historically focused on Big-C, or eminent creativity, in a way that prioritizes the art product or object and the biography of the creator or patron.¹ Big-C creativity emphasizes the art object but sometimes neglects the complex art process and therefore does not highlight the everyday creativity of the artist and the way in which this might result in student creativity.² Increasing attention is being given to assignments that ask art history students to demonstrate personal creativity, mini-c, in the classroom using pedagogical theories such as active learning, yet this practice is still developing.³ At a time when the field of art history is beginning to ask itself what it really wants students to gain from their classes, the complexities of the actual creative process should enter the discussion.⁴ Currently, students may find it difficult to connect to the historical aspects of creativity and apply what they are learning to their own creative identity and professional careers. Thus, we propose that current art history pedagogy must seek to bridge the gap between Big-C and mini-c creativity by using the creative process to provide emulative examples that students can use in their everyday and professional lives.

Art history classes should provide examples of the creative process through which artwork is made to the next generation of innovative designers and thinkers. Art history instructors can use this approach in higher education art history classes to help students understand the relationship between historic examples and the artistic process of generating and developing new forms of knowledge and art.⁵ This process will involve a change in the paradigm through which art history explains products of creative achievement. The suggestions in this article take advantage of

¹ Dean K. Simonton, "Creativity in Highly Eminent Individuals," in *The Cambridge Handbook of Creativity*, ed. James C Kaufman and Robert J Sternberg (Cambridge: University Printing House, 2010), 174-188.

² Aaron Kozbelt, Ronald A. Beghetto, and Mark A. Runco, "Theories of Creativity," in *The Cambridge Handbook of Creativity*, ed. by James C Kaufman and Robert J Sternberg (Cambridge: University Printing House, 2010), 20-47.

³ Marie Gasper-Hulvat, "Active Learning in Art History: A Review of Formal Literature," *Art History Pedagogy & Practice* 2, no. 1 (2018): 1-32.

⁴ Joshua Adam Yavelberg, "Discovering the Pedagogical Paradigm Inherent in Art History Survey Courses: A Delphi Study." PhD diss. (George Mason University, 2016); Virginia Spivey, Andy Schulz, and James Hopfensperger, *Measuring College Learning in Art History*. Learning in Higher Ed, Unpublished report (2018). <http://highered.ssrc.org/wp-content/uploads/2018.02-MCL-in-Art-History-Report-for-CAA.pdf>

⁵ Graeme Sullivan, ed., *Art Practice as Research: Inquiry in Visual Arts*, 2nd ed. edition (Thousand Oaks Calif.: Sage Publications, 2009).

strengths that are already present in the field of art history. For example, creativity in the arts is sometimes judged based on the qualities of self-expression and personal meaning-making through multi-media that make the final work of art unique.⁶ These are some mini-c creativity attributes that art history courses already promote.

Many university classes that profess to teach creativity and innovation have turned to the theory of design thinking.⁷ The fast-growing field of design thinking spotlights not only the process of innovation, but also the mindsets of creativity.⁸ Design thinking can provide students with methods and lessons for encouraging successful problem finding and creative thinking.⁹ These are skills that could be useful to art history majors as they learn to develop problem statements, research, and write. Additionally, the design process can teach students the iterative divergent and convergent thinking that is becoming increasingly synonymous with everyday, mini-c, creativity.¹⁰ These are skills that would apply to art history majors and non-majors alike. The principles of creativity espoused in design thinking may not be new, as they have been used by innovators of the past without necessarily being described as “design thinking.” However, these creativity principles are often new to students.

This paper presents a pedagogical framework that bridges creativity principles of the past with applied creativity in the present. We will discuss the mindsets and strategies of creativity and the design thinking process that can help art history students engage in complex creative thinking and problem solving while learning about artistic examples. We will propose a pedagogical framework called the Cr-IAH (Creativity-Integrated Art History) pedagogy to illustrate how art history classes can showcase these assets in both active and lecture-based learning environments and we will propose a sample lesson. The affordances and challenges of utilizing this pedagogical framework will be considered.

Need for Creative Thinking and Problem Solving in Higher Education

Art history courses can help satisfy the burgeoning interest in promoting creative thinking and problem solving in students in higher education. A frequent topic of the Scholarship of Teaching and Learning in Art History (SoTL-AH) literature is developing a means to make the art history

⁶ Robert Keith Sawyer, *Explaining Creativity: The Science of Human Innovation*, Second edition (New York: Oxford University Press, 2012).

⁷ R. Anderson, “Implications of the Information and Knowledge Society for Education,” in *International Handbook of Information Technology in Primary and Secondary Education*, ed. J. Voogt and G. Knezek (New York: Springer, 2008), 5–22; Natalie Wright and Rebekah Davis, “Educating the Creative Citizen. Design Education Programs in the Knowledge Economy,” *Techne Series - Research in Sloyd Education and Craft Science A* 21, no. 2 (2014), 24–61 <https://journals.hioa.no/index.php/techneA/article/view/1267>.

⁸ Tim Brown, *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation* (New York, NY: Harper Collins, 2009).

⁹ Bryan Lawson, *How Designers Think: The Design Process Demystified* (London: Routledge, Taylor & Francis Group, 2006); Brad Hokanson, “By Measure: Creativity in Design,” *Industry and Higher Education* 21, no. 5 (October 1, 2007): 353–59.; Harold G. Nelson and Erik Stolterman, *The Design Way: Intentional Change in an Unpredictable World*, Second edition (Cambridge, Massachusetts; London, England: The MIT Press, 2012).

¹⁰ James C. Kaufman, Jonathan A. Plucker, and John Baer. *Essentials of Creativity Assessment*. Vol. 53. (John Wiley & Sons, 2008).

survey course engaging and useful to the needs of art and design majors.¹¹ For example, several international studies document how design majors were successfully asked to create visual, studio works as class assignments.¹² However, few studies have researched making art history classes more useful to the non-arts major students who take art history as a requirement or elective. Art history pedagogy researchers argue that modifying the learning outcomes of art history classes to reflect higher-order, critical thinking skills and using problem-based assignments may be the key to making art history more significant across different schools and curriculums.¹³

These efforts in art history reflect a trend across higher education to create curriculum that better serves the professional needs of college students.¹⁴ The expansion and redefinition of what it means to be a professional in the context of a modern global industry has moved away from labor-intensive focus and towards a focus on ideas and knowledge.¹⁵ Contemporary educational aims focus on employability and active citizenship, as well as improving underachievement and eliminating social exclusion.¹⁶

In the traditional model of education, students are taught how to use a specific formula to solve a given problem. Unfortunately, this type of education produces graduates who are unable to apply skills or knowledge in real world contexts.¹⁷ An alternate model is design-based learning, sometimes called project-based learning, which allows the participants to immerse themselves in a challenge and eventually synthesize what they absorbed for their own self-edification.¹⁸ This design-based learning aims to promote creativity and innovation.¹⁹ Despite this emergent

¹¹ Liora Bresler, ed., *International Handbook of Research in Arts Education*, Springer International Handbooks of Education, v. 16 (Dordrecht, The Netherlands: Springer, 2007).

¹² Jenny Rintoul and David James, “‘That Tricky Subject’: The Integration of Contextual Studies in Pre-Degree Art and Design Education,” *International Journal of Art & Design Education* 36, no. 2 (June 2017): 215–225; Jari Martikainen, “Making Pictures as a Method of Teaching Art History,” *International Journal of Education & the Arts* 18, no. Number 19 (April 29, 2017), <http://www.ijea.org/v18n19/index.html>.

¹³ Tracie E. Costantino, “Problem-Based Learning: A Concrete Approach to Teaching Aesthetics,” *Studies in Art Education; Reston* 43, no. 3 (Spring 2002): 219–31 and Julia Sienkewicz, “Against the ‘Coverage’ Mentality: Rethinking Learning Outcomes and the Core Curriculum,” *Art History Pedagogy & Practice* 1, no. 1 (December 16, 2016): 1-16, <http://academicworks.cuny.edu/ahpp/vol1/iss1/5>.

¹⁴ Stephanie Elizabeth Wilson and Lisa Zamberlan, “Design Pedagogy for an Unknown Future: A View from the Expanding Field of Design Scholarship and Professional Practice,” *International Journal of Art & Design Education* 36, no. 1 (February 1, 2017): 106–17.

¹⁵ Anderson, 5-22 and Wright & Davis, 42-61.

¹⁶ Tom Bentley and Howard Gardner, *Learning Beyond the Classroom: Education for a Changing World* (London: Taylor and Francis, 1998): 42-61.

¹⁷ Rim Razzouk and Valerie Shute, “What Is Design Thinking and Why Is It Important?,” *Review of Educational Research* 82, no. 3 (September 1, 2012): 330–48.

¹⁸ David F. Noble, *Digital Diploma Mills: The Automation of Higher Education* (New York: Monthly Review Press, 2002): 1.

¹⁹ Andrew J. Rotherham and Daniel Willingham, “21st Century Skills: The Challenges Ahead,” *Educational Leadership* 67, no. 1 (September 2009): 16–21; Valerie Shute and R. Torres, “Where Streams Converge: Using Evidence-Centered Design to Assess Quest to Learn,” in *Technology-Based Assessments for 21st Century Skills*, ed. Michael C. Mayrath, J. Clarke-Midura, and D. H. Robinson, “Current Perspectives on Cognition, Learning, and Instruction” (Charlotte, N.C.: Information Age Publishing, 2011).

educational trend, the *status quo* in American education still promotes traditional training over design or project-based learning.²⁰

Traditional teaching strategies do not expose students to the psychology of solving complex problems. A complex problem describes a challenge where the problem is not obvious or defined. Students, once graduated, may face a situation where only the symptoms of a problem are visible. Those students will not see an easy place to start solving the problem and the formulas that they learned in traditional education may not apply. A complex problem will involve a lot of stakeholders with potentially conflicting values, and the outcome of any proposed solution to this problem will be uncertain.²¹ It is unsurprising that recent graduates, accustomed to being given all pieces of a puzzle during traditional schooling, may lack the creativity and innovation to flourish in the professional environment. Complex problems are an everyday reality for innovators of products or services in many fields, including but not limited to artists. Design thinking and the design thinking process were developed as a way to teach creative, complex problem solving.

The Genesis of the Conception of Big-C Creativity in the Arts

Big-C creativity refers to the creative accomplishments of eminent individuals who are recognized for their exceptional artistic or scientific mastery that propel a field forward in new ways.²² Greek historical conceptions of creativity point towards multiple fields, such as poetry, dance, history, and astronomy as requiring Muses to inspire creative geniuses, but the visual arts was not one of them.²³ Plato, for example, pondered about the departure from specific forms of poetry as creative derivatives, but he did not discuss art as a noted form of creativity. It was not until the nineteenth-century that creativity scholars seemed to begin to include the visual arts as an important domain of creativity. Francis Galton examined individual painters and Catherine Cox focused on both painters and sculptors.²⁴ Alfred Kroeber also noted sculpture and painting as artistic domains in major world civilizations.²⁵

Collectively, these conceptualizations of Big-C creativity have implications for the field of art history. It is important to draw attention to fact that creative achievements are culturally situated in their political times and, thus, reflect western art norms and standards with little attention to cultural accomplishments of women and individuals who may not have been privileged in their respective societies. Secondly, the types of art inducted into western canonical forms may not be considered as creative in other non-western cultures. For example, Japanese culture has valued

²⁰ Noble, 1-2.

²¹ Richard Buchanan, "Wicked Problems in Design Thinking," *Design Issues* 8, no. 2 (1992): 5–21 and Nicholas Clegorne and Jason Mastrogiovanni, "Designing Alternatives: Design Thinking as a Mediating Learning Strategy to Bridge Science and the Humanities for Leadership Learning," *The Journal of Leadership Education* 14, no. 4 (December 1, 2015): 46–54.

²² Simonton, 174-188.

²³ *Ibid.*

²⁴ Francis Galton, *Hereditary Genius: An Inquiry into Its Laws and Consequences* (London: Macmillan and Co., 1892) and Catharine M. Cox, *The Early Mental Traits of Three Hundred Geniuses*, Vol. 2. (Stanford University Press, 1926).

²⁵ Alfred Louis Kroeber, *Configurations of Culture Growth*, (University of California Press, 1944).

clay and ceramics over painting. Therefore, artistic media have acquired a certain cache. That is, each art form had a certain kind of social and cultural ranking. In western civilization, “high” art became associated with non-utilitarian creativity, such as painting, and later sculpture. “Low” art became associated with utilitarian creativity such as objects derived from clay, cloth, wood, or steel that served utilitarian functions. Individuals who worked in these “high” art forms were considered highly creative by creativity researchers, while other types of medium were not featured.

Big-C Creativity in Art History: A Bias towards Western, White, and Male Individualism

Movements in art history have pushed for more inclusion of non-western cultures and non-male artists and have embraced certain artists and works that question the concept of traditional, “high” art.²⁶ However, challenges with these movements in art history will persist as long as the artists and artworks continue to be subjected to the framework of biases towards Big-C, western, white, male individuals. For example, the very understanding of Big-C creativity differs in certain non-western cultures. With regards to creative art media, the utilitarian art form of ceramics was highly valued in Japanese culture, unlike western cultures that value painting. Calligraphy, which derives in part from the utilitarian motivation of communication, was greatly esteemed in Chinese society.²⁷ In some African cultures they do not conceptualize creativity as an individual skill but a communal, collaborative effort.²⁸ Taoism and Buddhism stress mimicry as a form of creativity as opposed to introducing novelty.²⁹ Finally, some personality characteristics associated with creativity are strongly discouraged in certain cultures.³⁰ Therefore, it is important to remember that Big-C creativity in the arts is relative to the culture and civilization and not to impose a western conception of Big-C in art history.

Nevertheless, Big-C creativity was conceived primarily as a white, male right in the context of Western European history and art history. During the Middle Ages and the Renaissance, for example, very few women artists were recognized.³¹ Most women were required to fulfill domestic duties such as bearing and raising children, making clothes, and laboring in fields. Wealthier women could escape these duties to pursue additional areas of expertise such as painting. But laws in craft guilds in the 1300s, for example, forbade women from holding official

²⁶ The fields of Material/Visual culture and revisionist art history textbooks seek to do just that. Julia A. Sienkewicz, “Critical Perception: An Exploration of the Cognitive Gains of Material Culture Pedagogy,” *Winterthur Portfolio* 47, no. 2/3 (2013): 117–38 and Angela L. Miller et al., *American Encounters* (Upper Saddle River, NJ: Pearson, 2007).

²⁷ Jin Li, “Creativity in Horizontal and Vertical Domains,” *Creativity Research Journal* 10, no. 2–3 (1997): 107–32.

²⁸ For example, the !Kung San tribe living in the Kalihari desert. Marjorie Shostak, “The Creative Individual in the World of the !Kung San,” in *Creativity/Anthropology*, ed. Renato Rosaldo, Smadar Lavie, and Kirin Narayan (Ithaca, NY: Cornell University Press, 1993), 54–69.

²⁹ Mark A Runco, and Robert S. Albert, “Creativity Research: A Historical View,” in *The Cambridge Handbook of Creativity*, ed. James C. Kaufman and Robert J Sternberg (Cambridge: University Printing House, 2010), 3-19.

³⁰ Teachers in Hong Kong expressed that creativity characteristics such as nonconformity, expressiveness, and assertiveness were negatively perceived. David W. Chan and Lai-Kwan Chan, “Implicit Theories of Creativity: Teachers’ Perception of Student Characteristics in Hong Kong,” *Creativity Research Journal* 12, no. 3 (1999): 185–95.

³¹ Linnea Dietrich and Diane Smith-Hurd, “Feminist Approaches to the Survey,” *Art Journal* 54, no. 3 (1995): 44–47.

positions.³² Disparities of gender representation continue today. A 2017 study found that artwork created by women sell for 46% less than their male counterparts.³³ These and other factors influenced how eminent, Big-C Creativity continues to be recognized as sharing predominantly white, male and Western European characteristics. Thus, when teaching students about the creative achievements of individuals from the past it is important to stress that eminent creativity is not the only kind of creativity, that there were certainly plenty of creative individuals from history who were never recognized as such. For this reason and others, creativity researchers determined that there should be different categories of creativity that can honor professional, everyday, and personal creative achievement.

Pro-C Creativity and Design Thinking

Pro-C creativity is also known as “professional creativity.”³⁴ Compared to Big-C creativity, Pro-C recognizes the effort and learning process that goes into being a professional creative individual. As such, the lessons of Pro-C creativity have potential to inspire professional success in a diverse range of educational fields. Big-C creativity is not seen as teachable, but educators can place an emphasis on Pro-C by describing the qualities of successful, innovative individuals and the creative process. The fact that Pro-C is discipline-fluid and transferrable is important because teachers cannot know what careers students will aspire to in the future. Pro-C provides a framework for educators to teach creative potential because Pro-C can lead to Big-C.

Big-C and Pro-C success can be achieved through the cultivation of mini-c creativity. Mini-c creativity is also known as “personal creativity.”³⁵ It is a category of everyday creativity that honors an individual’s personal growth, effort, and confidence to attempt creative thinking and problem solving. Mini-c creativity growth is demonstrated by an increase in self-actualized creativity. Students who have high levels of mini-c creativity believe in their ability to use a creative process to create a product, design, or expressive artwork.³⁶ That creative work is judged in relation to the student’s prior work and experience (i.e. “The best thing *I* have made”).

Design thinking education is a pedagogical approach that cultivates mini-c creativity in the classroom. In design thinking classes, students are taught about creativity and are given opportunities to foster everyday creative skills and practices. Theoretically, students gain mini-c creative competence that can eventually lead to Pro-C success and perhaps eminent, Big-C recognition.

In order to define the concept of design thinking, one must first recognize the history of the field of design. In the first half of the twentieth century, the term “design” referred to the effort that came after invention: once the invention of an item such as a new type of car was completed,

³² Ibid.

³³ Renee B. Adams et al., “Is Gender in the Eye of the Beholder? Identifying Cultural Attitudes with Art Auction Prices,” SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, December 6, 2017), 1-60.

³⁴ Kozbelt, Beghetto, and Runco, 24.

³⁵ Ronald A. Beghetto and James C. Kaufman, “Toward a Broader Conception of Creativity: A Case for ‘Mini-c’ Creativity,” *Psychology of Aesthetics, Creativity, and the Arts* 1, no. 2 (May 2007): 73–79.

³⁶ Ruth Richards, “Everyday Creativity,” in *The Cambridge Handbook of Creativity*, ed. James C Kaufman and Robert J Sternberg (Cambridge: University Printing House, 2010), 193.

designers were brought in to “put a beautiful wrapper around the idea.”³⁷ Design was seen as distinct from invention, engineering, and art. However, in the second half of the twentieth century, as designers became integrated in all stages of invention from research through production, the field of “design” grew and the definition of “design” began to expand.³⁸ This method of integrative design began producing intuitive, original, user-friendly, and lucrative results. Design practitioners and educators created a methodology called design thinking.

Fatima Cassim notes that, “at present, design is increasingly viewed as an activity or process which facilitates the creation of preferred and/or appropriate conditions, artifacts, and environments for a specific intent and purpose.”³⁹ Under the umbrella of this definition, a designer may be any person or group attempting to improve or invent a product, service, or process such as a phone, an artwork, or a company. In short, giving students the necessary skills to be designers in whatever field they have chosen is one way to prepare them for the current workforce. Schools representing a variety of disciplines have utilized design thinking to turn their student population from highly specialized, single-field laborers to competitive, flexible, and creative designers.⁴⁰

Design thinking

The literature on design thinking is occasionally confusing because the term is often applied either to the characteristics of a designer, or the steps by which a designer solves challenges. Therefore, it is important to disambiguate the following term: design thinking is a group of mindsets or guiding principles which inform the design process and is an adaptable, iterative set of actionable stages.⁴¹

There are many publications with variations on design thinking characteristics and mindsets. However, the Hasso-Plattner Institute-Stanford Design Thinking Research Program has done a lot of research into the pedagogy of the design thinking process and the link between design thinking and creativity. Therefore, we propose to use their list of mindsets:

- 1) Human-centered: this encourages the ability to employ empathy, because a designer may not be creating for oneself.
- 2) Experimental: this is a playful approach to prototyping and testing that allows one to navigate the messy design processes with flexibility.
- 3) Collaborative: this is a belief that working collaboratively is better than the lone genius for problem solving and transformative innovation.

³⁷ Brown, 86.

³⁸ Fatima Cassim, “Hands On, Hearts On, Minds On: Design Thinking within an Education Context,” *International Journal of Art & Design Education* 32, no. 2 (June 2013): 191.

³⁹ *Ibid.*, 191.

⁴⁰ Natalie W. Nixon, ed. *Strategic Design Thinking: Innovation in Products, Services, Experiences and Beyond* (New York: Fairchild Books, 2016).

⁴¹ Shelley Goldman, Maureen Carroll, Zandile Kabayadondo, Leticia Britos Cavagnaro, Adam Royalty, Bernard Roth, Swee Hong Kwek, and Jain Kim, “Assessing d.learning: Capturing the Journey of Becoming a Design Thinker,” in *Design Thinking Research*, ed. Hasso Plattner, Christoph Meinel, and Larry Leifer, “Understanding Innovation” (New York: Springer, 2012), 13–34.

- 4) Metacognitive: this is an awareness of where one is in the design process and an ability to develop strategies for a continuously changing problem.⁴²

Various models of the design process also exist. For consistency's sake we use the Hasso-Plattner Program's model. This model features the phases,

- 1) Understand/Empathize
- 2) Observe
- 3) Synthesis/Define
- 4) Ideate
- 5) Prototype
- 6) Test

According to Fatima Cassim, "design is not normal problem solving where the problem and solution are seen as separate entities that are bridged by a linear process."⁴³ Thus, design thinking models will typically show the phases as overlapping and with a multitude of arrows to illustrate the iterative nature.⁴⁴

Generally, the process begins with understanding the parameters of the challenge and empathizing with its stakeholders, then making observations and performing research, synthesizing that research and redefining the challenge, coming up with possible solutions, creating prototypes, and getting feedback on those prototypes. If a designer has an experimental mindset, then these last two steps in the model will be repeated early and often. Teaching design thinking together with the design process provides "each learner with a relevant, socially situated, complex problem-solving environment in which to generate solutions."⁴⁵

Experimental studies of participants in design thinking courses have noted that students show increases in mini-c creativity skills such as fluency, resistance to closure, experimentalism, and executive function when compared to a controlled experimental group.⁴⁶ Design process and design thinking are means of practicing and growing mini-c skills in order to achieve professional creative success (Pro-C) and potentially eminent creativity (Big-C) recognition. Design process skills are inherently transversal, multidimensional, and discipline-fluid as the model provides a framework for complex problem solving while encouraging skills such as

⁴² Ibid.

⁴³ Cassim, 192.

⁴⁴ Christine Noweski et al., "Towards a Paradigm Shift in Education Practice: Developing Twenty-First Century Skills with Design Thinking," in *Design Thinking Research* "Understanding Innovation" (Berlin and Heidelberg: Springer, 2012), 71–94.

⁴⁵ Goldman, et al., 18.

⁴⁶ Janelle Bouchard, "Design Thinking: Exploring Creativity in Higher Education" (East Lansing, MI: Michigan State University, 2013); Grace Hawthorne et al., "Impact and Sustainability of Creative Capacity Building: The Cognitive, Behavioral, and Neural Correlates of Increasing Creative Capacity," in *Design Thinking Research (Understanding Innovation)* (Basel, Switzerland: Springer Nature, 2014), 65–77; Hokanson, 353–59; Jan Parker, "Disciplinarity vs. Creativity? Of Design Thinking and 'the Metacognitive Mind,'" *Arts and Humanities in Higher Education* 13, no. 4 (October 1, 2014), 329–32; Manish Saggar et al., "Changes in Brain Activation Associated with Spontaneous Improvisation and Figural Creativity After Design-Thinking-Based Training: A Longitudinal fMRI Study," *Cerebral Cortex* (June 15, 2016): 65–77.

critical thinking, communication, collaboration, creativity, and innovation.⁴⁷ Courses that teach design process as a way of handling complex problem solving typically utilize design-based or project-based learning techniques. Students may be given a complex problem as a prompt and asked to come up with solution proposals using the design process. Although design thinking and the design process have been adopted by many fields outside of design, there are several challenges to incorporating the pedagogy and practice of mini-c design skills in an art history classroom.

Challenges to Teaching Mini-c Design Skills in Art History

One potential challenge to incorporating a Design Thinking, Cr-IAH approach to pedagogy in art history comes from differing paradigms and definitions across the fields of art and design. As discussed above, Big-C creativity is continuously reified as more important than Pro-C creativity in the history of art. There is a heavy emphasis on Big-C creative artists, whose creativity has been validated by mass recognition from historians.⁴⁸ Artists fulfil the Big-C requirements by making innovative advancements in their fields and demonstrating unique skill, behaviors, or characteristics. This highlights one of the largest challenges to Cr-IAH, which involves taking a Pro-C approach when teaching art history and encouraging mini-c creativity in students. Art history also uses this Big-C paradigm to distinguish itself from the field of design, which some art history scholars views as more interested in utility, pragmatism, and mass-production. Certain scholars see a “barrier” between the definition of art and design because of an opinion that, although design may use the formal theories of art, it employs a labor-intensive methodology.⁴⁹ However, close inspection of the history of design and art studies reveals that this “barrier” is actually quite vague. For example, there are art works that are meant to be mass produced, design works that are praised for being highly innovative works of genius, and there are notable examples of artists/designers that alternate between fields. However, the distinction of nomenclature between art and design largely persists, potentially leading to a bias against design thinking in the field of art because of its name.⁵⁰ Perhaps this is why, at a time when design thinking has been co-opted by diverse disciplines such as business, education, leadership, and engineering, among others, it has not yet become common pedagogical practice in the fields of art or art history.⁵¹

Another possible reason that art history has not adopted design thinking into the classroom may be because of a reticence to expand beyond the Big-C approach to the subject. Teaching mini-c design skills in art history (Cr-IAH) will require a reevaluation of the paradigmatic approach to pedagogy that has dominated the traditional art history classroom. It will require a shift from the focus on artistic object towards spotlighting artistic process and skills. Teaching mini-c design skills (Cr-IAH) in a classroom may of how artists from history find a problem, research the

⁴⁷ Wright and Davis, 42-61.

⁴⁸ Sawyer, 297-318.

⁴⁹ Delane Ingalls Vanada, “Practically Creative: The Role of Design Thinking as an Improved Paradigm for 21st Century Art Education,” *Techne Series - Research in Sloyd Education and Craft Science A* 21, no. 2 (2014): 29.

⁵⁰ Charles Owen, “Design Thinking: Notes on Its Nature and Use,” *Design Research Quarterly* 2, no. 1 (January 2007): 18.

⁵¹ Some exceptions exist such as Vanada, who has written about how including design thinking in the studio art classroom can lead to balanced, self-guided learning, 21-33.

problem, theorize a solution, and implement it, then students can try it for themselves. The Cr-IAH framework encourages an approach to teaching art examples from history with a Pro-C perspective that highlights the design process, and Cr-IAH encourages pedagogies that get students engaged with mini-c, design thinking activities.

Some have suggested that, because of the broad scope of the content and the introductory nature of art history survey courses there is not always time during a class to explain multiple perspectives or engage in higher order thinking skills.⁵² This practice is often reserved for upper-level, seminar-style courses. Many art history classrooms becomes a setting in which students are drawn into an established canon of Big-C works and artists. In this system of learning “more responsibility is placed on teaching than learning. The learner’s self-development is secondary.”⁵³ Art history teachers inform students of existing art history doctrine primarily using the lecturing technique.⁵⁴

As an alternative, project-based pedagogy offers students a complex problem or prompt in which they are asked to propose their own solution. The problem should be complex enough that there is not one obvious or easy answer. Instead, students are encouraged to research the problem, come up with a range of possibilities, evaluate which one to pursue, and communicate their proposal. Much has been written on the benefits of active learning practices and how they are already being applied in art history education.⁵⁵ While these practices are growing, many of the proposed pedagogies attempt to engage students with domain-specific art history skills. The following framework encourages domain-general, mini-c creativity.

Cr-IAH (Creativity-Integrated Art History) Pedagogical Framework

In this section, we wish to propose a framework to integrate creativity into the pedagogy of art history. The following table contains a sample Cr-IAH framework for teaching an object from art history in a way that challenges the Big-C approach while explaining the Pro-C process of art making, and encouraging student mini-c growth.

The first column indicates the theme around creativity. The second column provides a brief rationale explaining why this is an important theme to be addressed. The third column contains the historical lesson that embodies the theme. Lastly, the fourth column suggests a pedagogical activity that engages students in the lesson and theme. For the purpose of this paper, the authors have submitted a table with sample lessons and pedagogies. A blank table can be found in Appendix A.

Table 1

⁵² Peter Scott Brown and Jace Hargis, “Undergraduate Research in Art History Using Project Based Learning,” *The Journal of Faculty Development* 22, no. 2 (May 1, 2008): 153.; Aditi Chandra et al., “Looking Beyond the Canon: Localized and Globalized Perspectives in Art History Pedagogy,” *Art History Pedagogy & Practice* 1, no. 1 (December 16, 2016): 1, <https://academicworks.cuny.edu/ahpp/vol1/iss1/2>., and Sienkewicz, 2016, 4.

⁵³ Clegorn and Mastrogiovanni, 49, as adapted from Davis, (2004).

⁵⁴ Peggy Phelan et al., “Art History Survey: A Round-Table Discussion,” *Art Journal* 64, no. 2 (June 1, 2005): 32–51.

⁵⁵ Gasper-Hulvat, 1.

Creativity-Integrated Art History: Sample Lessons and Pedagogies

Creativity theme	Rationale	Lesson	Pedagogy/activity
Explaining Big-C creativity	Asking student to critically evaluate and question why certain works make their way into the “canon” engages critical thinking skills and lays foundations for further student inquiry.	<i>The Dome over the Santa Maria del Fiore is an example of a Big-C creativity product because it represents innovations made to a specific field or discipline.</i>	<i>Class discussion: Ask students to think about architectural precedents that may have factored into Brunelleschi's dome design. Follow up with a discussion of the technological advancements that the dome made possible for future architecture.</i>
Questioning the primacy of Big-C	Current art historians are countering some of the ethical dilemmas put forth by the primacy of Big-C creativity. Some examples include an emphasis on western perspectives, neglecting female artists and artists of color, and how to teach monuments created by forced labor.	<i>The ethical consideration of Renaissance architecture construction is still being studied. A good alternative to discussing the issue of labor is to focus on international perspectives. The 14th century was a period of flourishing arts and culture in many geographical locations.</i>	<i>Student group assignment: research an example of 14th century art/architecture from outside of Europe. Explain how the artwork represents significant contributions to its field. Compare and contrast the historical context of the civilization to 14th century Italy.</i>
Shifting from a Big-C to Pro-C approach	Big-C creativity emphasizes the artist as an individual genius, however, many works were acts of collaboration. Collaboration is a 21 st century skill as well as an important element in Pro-C creativity.	<i>Known contributors and collaborators with Brunelleschi's project were the Medici family. The project depended on availability of resources, the political situation, war, etc.</i>	<i>In class activity and discussion: list and diagram involved stakeholders, taking comments from the class. Ask students to research some of those stakeholders to get a better understanding of how they influenced the project.</i>
Teaching Pro-C creativity skills	Teaching how the artists or team tackled small problem-solving challenges along the	<i>Brunelleschi and others completed many activities that can be interpreted as part of</i>	<i>Discussion: Brunelleschi went to Rome to research ancient architecture.</i>

	way to complete the large monument can help students relate to the situation and perhaps even increase the students' creative self-confidence.	<i>the design process, such as conducting research into a problem, making human-centered design decisions, experimenting with prototyping, experiencing failure, and practicing an iterative process.</i>	<i>Ask students to thinking about Roman architecture that Brunelleschi would have seen. Discuss examples of prototypes that failed and ideas that were not pursued.</i>
	Another Pro-C approach can highlight ways in which the artist overcame personal or professional failures.	<i>Brunelleschi applied for the commission of the bronze doors for the Florence Baptistery in 1404, but was rejected. If Brunelleschi had not eventually received the commission for the dome, he may not have been recognized for Big-C creativity.</i>	<i>In class think and share: have students think about a time when they confronted a personal, academic, or professional failure. How did they handle that failure? How did the failure affect the trajectory of their life? How could they have met this failure with a growth mindset.</i>
Mini-c activity	Incorporating active learning such as design and problem-based projects engage students' mini-c creativity. The historical object can serve as the context for a complex problem-based assignment.	<i>The city of Florence built the cathedral of Santa Maria del Fiore in 1296 before the technology existed to create the covering over the altar. By 1418, finding a way to place a vault over their basilica, which had stood exposed for 120 years, seemed impossible to the contemporary citizens of Florence.</i>	<i>In class activity: creative problem solving design thinking activity using the example of the Brunelleschi's dome. (see appendix B for a full sample project)</i>

Considerations

This is a small sample of creativity lessons that can be derived from art history and are meant to provide a start the Cr-IAH conversation. Some of the above suggestions may be familiar or even common practices to certain readers of this journal, however we believe it is important that they be explained in relation to their creativity perspectives in order to add to the growing body of work that is rationalizing the critical re-evaluation of art history.

Some of the activities in the sample framework may seem like a pedagogical departure for teachers of art history who wish to give primacy to the art object over the process. The rationales and pedagogies in the framework are not designed to teach traditional, art history skills. Additionally, the mini-c creative activity (Appendix B) may seem to leave the pedagogy of the humanities and enter the world of studio art and design. However, we maintain that creative problem solving and design thinking skills are not domain-specific. They are relevant to students of any major, including but not limited to art history.

Redesigning a pedagogical program is time consuming for the instructor. In some of the studies involving course redesign and active learning classroom conversion, schools have set aside monetary compensation for faculty.⁵⁶ Additionally it would be helpful if researchers could identify other good examples of complex problem solving and the creative process from either inside or outside the current canon of art history. There are likely many examples of complex problems that would serve as opportunities to get students to explore and interact with their art history.

Conclusion

This paper aims to put forward a theoretical, pedagogical framework of using design thinking and active learning to encourage students to explore the creative process using historic art and architecture. We call this pedagogical framework Creativity-Integrated Art History (Cr-IAH). The theoretical constructs suggest that Cr-IAH pedagogical approach and classroom project-based learning will engage students in mini-c creativity, which can lead to Pro-C and even eminent (Big-C) creativity. This article suggests that the use of Cr-IAH as a pedagogical method for teaching art history can first help students make the connection that learning about art of the past can support creativity growth and innovation. Students learn these creativity principles by seeing examples of the creative process in art history and practicing mini-c creativity assignment in class. By doing so students can build transferrable, 21st-century skills from an art history class. Using Cr-IAH as a theoretical framework for exploring art from the past can help students to see links between the artworks to be learned in the classroom and the real-life context of their intended professions. Future empirical studies can conduct longitudinal exploratory or experimental research in order to better assess whether this model is successful.

⁵⁶ Kelly Donahue-Wallace and Denise Baxter, "Case Study: Redesigning Art History Survey II," in *Next Generation Course Redesign*, ed. Philip M. Turner and Ronald S. Carriveau, First edition (New York: Peter Lang Inc., International Academic Publishers, 2010), 89–101.

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Appendix A

Table 2

Creativity-Integrated Art History: blank framework

Creativity theme	Rationale	Lesson	Pedagogy/activity
Explaining Big-C creativity	Asking student to critically evaluate and question why certain works make their way into the “canon” engages critical thinking skills and lays foundations for further student inquiry.		
Questioning the primacy of Big-C	Current art historians are countering some of the ethical dilemmas put forth by the primacy of Big-C creativity. Some examples include an emphasis on western perspectives, neglecting female artists and artists of color, and how to teach monuments created by forced labor.		
Shifting from a Big-C to Pro-C approach	Big-C creativity emphasizes the artist as an individual genius, however, many works were acts of collaboration. Collaboration is a 21 st century skill as well as an important element in Pro-C creativity.		
Teaching Pro-C creativity skills	Teaching how the artists or team tackled small problem-solving challenges along the		

	<p>way to complete the large monument can help students relate to the situation and perhaps even increase the students' creative self-confidence.</p>		
	<p>Another Pro-C approach can highlight ways in which the artist overcame personal or professional failures.</p>		
<p>Mini-c activity</p>	<p>Incorporating active learning such as design and problem-based projects engage students' mini-c creativity. The historical object will serve as the context for a complex problem-based assignment.</p>		

Appendix B

Mini-c activity: Practicing mini-c creativity in the art history classroom using active learning and design thinking.

The purpose of the following section is to provide an example of teaching Cr-IAH that incorporates design and project-based learning. The suggestion is that Cr-IAH pedagogy will embrace and encourage critical thinking, creativity, and innovation for students interested in diverse disciplines.

Big Ideas and skills

- Critical thinking
- Creativity
- Innovation skills
- Design thinking
- Historical research

Pedagogical theory and literature

- Students learn effectively when they actively engage and construct knowledge for themselves while reinforcing that knowledge through social interaction and relating the knowledge to previously known information and lived experiences.⁵⁷
- In lieu of rote memorization of facts, students can be invited to interact with content and create new meanings and information.
- Some pedagogical studies have evaluated the effect of limiting the content scope of in-class lecture to favor student-guided learning.⁵⁸
- Providing students with an opportunity for mini-c creative expression to encourage their creative confidence and demonstrate the creative problem-solving skills present in the artistic and creative process.

Learning outcomes and experiences

- Students practice collaboration as part of a design team.
- Students demonstrate human-centered empathy (design thinking mindset) by creating a proposal that reflects a consideration of the potential impact on the historic stakeholders.
- Students create a prototype that effectively communicates their design solution proposal.
- Students practice the iterative process of receiving and incorporating feedback.

In class activity: Present the example as a design thinking project.

Establish the problem

While the traditional approach to art history favors discussion of the product or solution, Cr-IAH pedagogy focuses on the challenge that Brunelleschi faced when deciding how to vault the Santa Maria del Fiore. Prompt the students with a complex problem experienced by Brunelleschi and his team and ask them to collaborate on a solution. Students will spend class time interacting with a hands-on learning projects according to active learning principles.

⁵⁷ As cited by National Research Council, *How Students Learn: History, Mathematics, and Science in the Classroom*, 2005, 592.

⁵⁸ Donahue-Wallace and Baxter, 89–101.

Examples of possible prompts

- Group 1: in charge of creating the dome
- Group 2: have to think about how to pay for it
- Group 3: in charge of ensuring workers' safety
- Group 4: a divergent group that can be asked "does it have to be a dome?"
- Group 5: have to think about lifting materials for the building process

Instructions for students

- Understand the problem through inquiry, by researching the historic details of their challenge.
- Ideate a wide range of possible solutions.
- Brainstorming divergent ideas and utilize convergent decision making.
- Build a prototype communicating the solution proposal.
- Iteratively test the proposal and make changes.

Consideration

When piloting this assignment the instructor can decide whether to encourage students to stay true to historic details or to use the history that they research as a starting point but not be constrained to it necessarily. This will encourage a level of self-guided learning while creating room for aspects of divergent thinking.