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Introduction to Teaching Art History with New Technology: Reflections and Case Studies

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INTRODUCTION

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This book documents some of the changes that have occurred in the teaching of art history in the last decade. It provides both a history and an analysis of the increasing number of computer-based tools now at the disposal of art historians. It was prompted by the dearth not only of readily accessible information about teaching art history with new technologies,[1] but of pedagogical literature for art history in general.[2] Currently, there are few places where art historians can go for help in navigating the journey between traditional and computer-mediated practices in teaching. Thus a fair amount of trial-and-error experimentation is being replicated over and over again at colleges and universities. For faculty to succeed with the new applications and approaches, they must be able to draw on the experience of others who have developed expertise with these new tools. This book presents a series of reflections and case-studies by such early adopters who have not just replaced older materials with new, but who have advanced the discipline's pedagogy in doing so. It illustrates how new technologies are changing the way art history is taught, summarizes lessons learned, and identifies challenges that remain. Given the transitional state of the field, with faculty ranging from the computer-phobic to the computer-savvy, these case studies represent a broad spectrum, from those that focus on the thoughtful integration of new technologies into traditional teaching

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[1] Art History has always been taught with technology: see the essay by C. Witcombe, where he defines new technologies (p. 16) "as referring to any mechanical or electronic device that is made for and used as a means of reproducing and communicating images and information." Simply put, this means the use of computers and the internet. Although some of us prefer the term new media to new technologies to emphasize the vehicles we use for content and communication rather than the static physical infrastructure of the computer per se, the latter is more common and is used by the authors in this volume.

[2] See our survey of the scholarly literature in the section on Scholarship of Teaching, below.

to others that look beyond the familiar art history lecture or seminar format. They aim to provide both practical suggestions and theoretical models for historians of art and visual culture interested in what computer-mediated applications have been successful in art history teaching and where such new approaches may be leading us.

It is worth noting that most of these case studies are for introductory-level courses, where almost all of the conversation has occurred so far. This is due, in part, to the well-known problems associated with lower-level classes, which include large lectures covering too much material often attended by apathetic and passive learners, who frequently have no experience with art and yet are expected to be inspired and prepared for advanced study at the end of the term. Not only do these and other problems—challenges that are less acute in upper-division courses—lead us to look for new pedagogical methods, but they also represent common ground, because so many of us in the field have to teach them. We see several other reasons for this concentration of pedagogical research at the introductory level. First, they are taught nearly every term and hence provide frequent opportunities to experiment with, assess, and refine the use of technology in a given course. Second, these classes frequently function as general education courses, teaching basic skills and broad concepts to a large student population that typically has a low level of engagement compared to art history majors. Technological vehicles for course content and skill-acquisition tasks can provide opportunities to increase the engagement of these "gen-ed" students. Third, investments of time, infrastructure, and intellectual capital in an introductory course will affect a much larger population than will such investments at the upper division level. Colleges and universities are consequently more willing to provide funding for course development of freshman and sophomore courses. Fourth, in some ways, technology is already so well integrated into upper division instruction in the form of research tools that students use to teach themselves (e.g., ArtIndex), that it has disappeared into the background. At the same time, however, faculty are less willing to experiment with new technologies for the advanced courses, not trusting learning objects and other computer-mediated pedagogical tools for these courses in which the faculty members are more intellectually and professionally invested. Additionally, developing new tools and pedagogies takes time away from research and publication. In the current tenure climate in the United States, professors who devote substantial time to this endeavor may risk their own status at the university.

There are doubtless further developments to be made at the upper division level, perhaps most effectively if deployed in cross-disciplinary

contexts. But, the limited availability of institutional funding, small student populations, pre-existing high (or at least higher) level of student engagement, and relative infrequency with which these courses are taught constitute significant barriers to the investment of time, money, and expertise that such experimentation would require. Furthermore, faculty have developed a broad array of pedagogical approaches for advanced courses that have proven their effectiveness. Lacking a reliable corpus of scholarship demonstrating the value of computer-mediated pedagogy at the upper level, faculty are reticent to change tried and true methods in face-to-face undergraduate and graduate courses. As we reflect more regularly on program goals and learning outcomes, the benefits of interdisciplinarity and collaboration, and skill-building (rather than merely knowledge-giving), the integration of technological tools into our pedagogy holds great promise at every level.

Why Integrate New Technology Into Art History Teaching?

Art history involves more than looking. It asks students to think about what they observe. This is where technology-based activities become useful, especially those that go beyond the presentation of images to explore why images are structured the way they are, and what meaning that structure holds. Today, teaching in the history of art is being shaped by new technologies, technologies that—as has always been the case—were not developed for art historians, but which must be adapted for their needs.

The reasons for integrating new technologies are threefold. First and foremost, new technologies allow teachers and students to engage in new activities, and thus create new opportunities for teaching and learning. Second, research on cognition stresses the need for students to take control of their learning, something the interactive technologies can facilitate. Third, the integration of new technological tools and active learning techniques recognizes and responds to a cultural shift that has already occurred with our students and much of the society at large. As the shift from a print-based culture to an image-based one intensifies, the lessons art history teaches—that images are complex and one must learn how to read them—become increasingly important and necessary.

Essential Principles

New technologies for art historical instruction are here to stay. But many important corollaries to their use have yet to be discussed, such as understanding the social impact of the shift from analog to digital image,[3] parsing the level of investment required (financial and otherwise),[4] deciding who should control rights to computer-mediated teaching products (such as online courses and learning objects), recognizing the importance of scholarship of teaching, and enunciating guidelines for effective applications. The editors of this volume firmly believe these last should include the following.

- New technologies must be used intelligently and judiciously, not simply because they are available. Faculty should reflect critically on the pedagogical value of computer-mediated tools, embracing (and investing in) those that offer something that more traditional approaches do not. New technologies are extremely expensive and should only be deployed if they can accomplish something that paper and pen cannot. Resources are too scarce to jump at every new toy.

- Instructors should consider their pedagogical needs and goals before adopting a specific technology to their teaching. While the potential field of action presented by a technology can spark useful reflection, in the end, technology should serve the pedagogy, not the other way around.

- New technologies, either in support of face-to-face classes or used in online teaching, must be intrinsically and transparently linked to course and program learning outcomes, and their effectiveness should be rigorously assessed using empirical methods. Formative and summative assessments document the benefits of the learning technologies and their usefulness in art history instruction. Failure to integrate the new

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[3] See the essay by Harris and Zucker in this volume on the culling of digital images as a solitary activity and the need to reclaim the social forum of the slide library.

[4] These vary widely as demonstrated in the essays here: from the largest public provider of online education in the U.S., the University of Maryland University College, which invests $25,000 on average in every online course (Allen p. 102) to the University of North Texas which offers grants of $10-20,000 for online course development (Donahue-Wallace p. 112). At the University of Massachusetts, La Follette and her colleagues developed eight learning objects with outside funding: these would cost between $12-15,000 apiece today. The latter could be disseminated nationally, while the online courses are proprietary to the institutions for which they were developed (though as Donahue-Wallace notes, UNT unusually allowed her to share the rights, p.112).

technologies with learning outcomes and assessment plans makes them little more than "add-ons" or "bells and whistles" rather than serious tools for learning.

- Instructors should not promote the technological system to the level of course content—if so, it becomes a distraction at best, another barrier to learning in art history at worst.

- Any experiments in pedagogy will yield some unexpected processes, side-effects, and results. Instructors (and those who evaluate them) should be open to these surprises, examining them for their usefulness instead of concluding prematurely that such unforeseen events represent failures.

- Instructors must establish a community of practice for sharing information about pedagogy and technology. Groups such as Art Historians Interested in Pedagogy and Technology in the United States and the Computers and the History of Art in the United Kingdom provide the opportunity to discuss innovations and their merits for art history teaching. Involvement in these or like groups helps faculty to avoid needless re-invention of technologies and methods. At the same time, larger organizations, such as the College Art Association and the Association of Art Historians, must embrace these and other societies as central to their missions to promote the study and teaching of art history.

By showcasing a variety of models, we hope this book will serve to advance discussion in these areas as well.

Computers in Art History Teaching

The use of computers in art historical instruction may be considered under three rubrics: first, the digitization of images; second, the development of computer-mediated interactive exercises using digital images; and third, the emergence of courses taught exclusively online.

The first, teaching with digital images instead of 35 mm slides is not a central focus of this volume, but it is nevertheless fundamental to the other two.[5] The teaching of art history has always relied on reproductions, and its nature has changed with each new method of reproduction. Replacing analog slides with digital images has several far-reaching repercussions, most notably increasing access to the reproduction outside of the

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[5] Harris and Zucker consider the issue of slides versus digital images in their essay about the slide library, as does Witcombe, who traces the use of various technologies used in the teaching of art history over time.

classroom by students for review and study purposes. Professor Dana Leibsohn of Smith College (Read 2003) noted that her students became more adept at reading images closely and using visual evidence to support their arguments after they were given access to digital image banks. Before digital images, students typically saw the projected slide only in the lecture hall; to review images required going to their textbooks (where the reproduction was not always large or in color), or to a specific physical location on campus where hard copy reproductions were mounted temporarily for review. Digital images on a website now allow students to review images more easily, conveniently and often, thus encouraging greater familiarity with the works and more careful study.

In class, faculty employ PowerPoint or other presentation programs filled with digital images in the same manner as they did analog slides, projecting them singly or in static pairs. The ease with which textual information may be added alongside the projected image has offered instructors a slight advantage over the "write-on" slides of yesteryear.[6] The development of presentation software adds new functions including panning, zooming, selecting, and rotating. These tools surpass the static visual reproduction of the object to simulate in part the usual physical engagement the viewer has with a work of art: moving around it, approaching, and receding. With high quality images, some of the tools allow the viewer to see more than would be possible for the visitor standing in front of the object, as magnified images may reveal more than what is visible to the unassisted eye (Rhyne 1997).

Our second rubric, the development of interactive exercises known in computer-mediated instruction as learning objects has had as its goal the user's engagement with the object, concept, or question. The key repercussion here has been the adoption of active learning, a more student-centered and skills-based approach.[7] Art historical learning objects first

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[6] Carlucci, Haubold and Stynes address the building of campus-wide digital image collections as successors to the departmentally-funded and based slide library.

[7] Two widely cited definitions of such active learning are John D. Bransford, Ann L. Brown and Rodney Cocking , eds. *How People Learn: Brain, Mind, Experience and School*, National Research Council. Washington, DC: National Academy Press, 1999: "New developments in the science of learning emphasize the importance of helping people take control of their own learning." and Chickering and Gamson, "Seven principles for good practice in undergraduate education", *AAHE Bulletin* (March 1987): "Learning is not a spectator sport. Students do not learn much just sitting in classes listening to teachers, memorizing pre-packaged assignments and spitting out answers..." For more on this concept, see the glossary on the American Historians' Visual Knowledge Project site (http://crossroads.georgetown.edu/vkp/resources/)

appeared in museum kiosks and websites, before spreading to schools. CD-Roms provided by textbook publishers and commercial vendors likewise promoted interaction. Using Macromedia's Flash or another interactive program, museum educators, publishers, and instructors have created animated activities, requiring users to drag and drop architectural elements, to click selected hotspots on a digital image for more information, or even to choose their own adventure in game-like situations. Used in art historical instruction, these tools have placed students in direct engagement with the reproduced work of art, allowing them to work more closely with images, empowering them as participants, and encouraging them to take an more active role in their learning in a way that is uncommon in the traditional lecture model.

The third rubric, the online course, is the most recent manifestation of computers in art history instruction. In the past five years, the number of colleges and universities offering online art history instruction has exploded, particularly at the first- or second-year level and most commonly at junior colleges and public, commuter universities. Many of these courses replace the face-to-face lecture with online materials. Some instructors rely on the textbook for course content, asking students to read the relevant chapter, and answer questions submitted electronically; many also require virtual visits to outside websites, including museum sites, to supplement the textbook. Other faculty substitute commercial videotapes for face-to-face lectures or move beyond the textbook content with additional instructor-authored html text. Many online courses use message boards, forums, chat rooms, and video conferencing for asynchronous and synchronous, seminar-style discussions. Blended or hybrid courses combine in-class experiences with small group, online, or other activities. Most instructors who author these courses do so based on their own intuition and experiences, or their colleagues', rather than on studied and proven methods from art history or other disciplines. In fact, the literature on online or hybrid art history courses and learning objects is woefully thin. The best practices emerging for online instruction differ from the traditional, lecture-driven instruction model, drawing upon the active learning and student-driven inquiry models described in our second rubric.

Looking Back: Strengths of the Traditional Slide Lecture

No statistics have been collected about the number of faculty who still use slides versus those who have gone digital, but clearly the traditional art history slide lecture is becoming less frequent across the country. It is important, however, to recognize its strengths, and to consider how to

maintain them as we move to technologically-driven ways of delivering curriculum. Generations of art historians have found their calling in darkened classrooms illuminated by the glow of projected slides. They have been enthralled by the professor at the lectern whose vast knowledge of the artists, objects, and monuments discussed in lecture seemed much more than could possibly be acquired in a single lifetime. Striding about the stage, the professor pointed to areas of the projected slide, revealing to the captivated audience hitherto unseen mysteries. Standing before pairs of projected images, the professor explained the visible differences or similarities, leading the students through a complex and edifying survey of artistic, historical, philosophical, religious, and social factors. These explanations frequently involved the professor's own research and personal tales of experiences in the archive, the museum, or the distant archeological site. Posing open-ended questions to the audience, the professor challenged the students to see the complexity inherent in studying works of art and architecture. Such performances inspired many undergraduates to pursue a career in art history, in part from a desire to emulate the professor and possess his/her knowledge, but also from the aspiration to add to collective art historical knowledge, and to make the discoveries that future art history students would learn about in their own darkened classrooms.

Looking Ahead: Problems and Challenges

This romantic tale of intellectual inspiration still plays out in some college classes, but the academic landscape is also changing for art historians. Although some faculty had begun experimenting with computer and digital technologies for teaching well before 2004, when Eastman Kodak decided to end production of slide projectors, that decision forced the majority of art historians into a largely unfamiliar digital realm. Those more comfortable with these new technologies see their potential to offer a more dynamic way of learning than static slide projection, but often lack the technical knowledge and financial resources to pursue such new approaches. At the same time, institutions seeking cost-effective and revenue-generating classes view online and blended or hybrid learning as the answer. They likewise strive to improve learning outcomes and turn to technology-mediated instruction as a promising solution. The instructors at these schools, however, have little experience with the technologies or the literatures that would help them to transform their teaching. Students, on the other hand, are increasingly technologically-savvy: they judge electronic tools used in class as they would commercially marketed

products and they expect courses to engage them in ways that art history's traditional "art in the dark" lecture format cannot. With their laptop computers open to take notes, many of these multi-tasking students now simultaneously use the university's wireless connection to surf the Internet, chat with their friends, and otherwise disengage from the learning environment, in traditional-style lecture classes.

So how can art history's slide-based courses and their emphasis on visual literacy, analysis, and research be translated into technology-mediated formats in a manner that preserves the discipline's best pedagogical practices while simultaneously adding fruitful new approaches to teaching? What should instructors adopt from other fields and what can they additionally develop for art history's specific needs? And finally, how can instructors today inspire the next generation to pursue the discipline as they had been led to do by their own teachers?

Scholarship of Teaching[8]

Part of the challenge for developing pedagogically sound and constructive learning objects and technology-mediated courses, and in publishing the practices and analyses of these tools, is the dearth of published information about pedagogy and assessment in the discipline of art history. Art history is an academic discipline largely lacking a body of pedagogical literature or a venue for publishing new scholarship in this area. The discipline's emphasis on object-oriented research and theoretical reflection has ignored pedagogy. Rich in historiographies of its research and writing practices and keenly aware of its modes of scholarly inquiry, art history has yet to examine its teaching seriously. The College Art Association's *CAANews* September 2005 issue admitted the lacuna in the article "Building the Literature of Art Pedagogy" in which author Robert Bersson lamented the lack of literature on teaching in our discipline.

With a handful of exceptions, such as Robert Nelson's (2000) thoughtful consideration of the slide lecture, the most developed area of art historical pedagogical literature addresses how art history has selected the works taught in its classes, particularly the large survey courses. Articles published in the College Art Association's *Art Journal* in 1995

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[8] The editors of this book follow Lee S. Shulman's definition of this term: "A scholarship of teaching will entail a public account of some or all of the full act of teaching—vision, design, enactment, outcomes and analysis—in a manner susceptible to critical review by the teacher's professional peers and amenable to productive employment in future work by members of that same community" (Hutchings 1998, 6).

considered how the art historical canon presented in survey courses was developed and how a handful of higher education institutions were abandoning the notion of a single, Western canon dominated by dead, white, male artists.[9] Other articles addressed teaching and assessment strategies such as incorporating writing and abandoning the hallowed "darkness at noon" lecture format. In 2005, the *Art Journal* again looked at art history teaching, addressing how the art history survey is and might be taught. Non-traditional pedagogies, assessment issues, and learning styles also received some attention in this published roundtable discussion. The College Art Association's *CAANews* briefly considered the potential of problem-based learning in art history (Lindner 2005).

Scholarship on computers in art history instruction is similarly limited. While digitization and digital projects have received some attention, the scholarship on teaching with digital images is minuscule.[10] In 1997 the College Art Association's *Art Bulletin* dedicated part of one issue to digital images in art and art history; several of these short essays addressed teaching. Marilyn Aronberg Lavin offered the most radical reinvention of art history teaching, whereby the slide-based lecture is replaced by student-generated searches of digital images and texts. The abstracts and proceedings of the annual conference of the British society Computers and the History of Art (CHArt) do regularly consider teaching with digital images (Costache 1998, Bailey and Graham 1999, Greenhalgh 2001), but when compared to the scholarship on art historical research, these pedagogical publications are few and far between. The scholarship on learning objects in art history is equally small, with only a handful of articles (Cason 1998, Hamilton 1999, Donahue-Wallace and Chanda 2005) considering their role and effect in art historical instruction. The most sustained considerations of learning objects appear in the CHArt publications (Cock 1997, Levy 1997, Hamilton 1999, Clancy 2001, Gordenker 2002, Pollini 2005). Finally, of the three areas of computer-mediated art history we consider here, online pedagogy has received the least attention in scholarly publications (Briggs 1997, Maddox 1997, Schmidt et al.1999, Lahav 2001, Kwastek 2003). What is particularly lacking are qualitative or quantitative studies of the effect of the online

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[9] See for example Bradford R. Collins, "Rethinking the introductory art history survey," *Art Journal* 54 (1995): 23-89.

[10] One might compare in the field of American studies, for example, the review by David Jaffee of electronic materials for the teaching of American history: "Scholars will soon be instructed through the eye: e-supplements and the teaching of U.S. history," *Journal of American History* (90.1) 2003, 1463-82, available online at http://www.indiana.edu/~jah/textbooks/2003/jaffee.shtml

environment on art history learning or pedagogical strategies for teaching in this new arena.

Art History cannot progress in developing a body of scholarship treating the pedagogical issues specific to the discipline until we also recognize that pedagogy is an academic field of its own, and that the scholarship of teaching in art history is just as interdisciplinary and rigorous as traditional intersections with other areas such as literature. This particularly impacts younger practitioners in art history who are finally beginning to receive some formal training in pedagogy in graduate school, and who will thus be well-equipped to advance the field in this way. As their senior colleagues, we should be prepared to consider valuing such publications towards tenure the same way we weigh traditional object-oriented or theoretical research.

Overview of the Contents

The essays in this volume amplify dramatically the available literature on computer-assisted art history teaching. The first section of the book examines broad questions on the state of technology-mediated instruction and assessment in art history. The first essay, written by Christopher L. C. E. Witcombe, a pioneer in digital resources for art historians, addresses technology-mediated instruction broadly. It combines practical issues, philosophical reflection, and guidance for those entering this arena. The second, by Stephen Carroll, sketches the dangers, for both teachers and students, of thoughtless and uncritical implementation of new technologies and recommends a careful application of computer technology where this supports teaching and learning. The third, by Beth Harris and Steve Zucker, reflects on the slide itself, and asks how the community of the old slide library can be extended into the digital realm.

The second section presents an array of computer-assisted learning objects and other activities that augment the face-to-face class. In order to help readers replicate the models presented, these essays and those in the following section, address the identification of a need, funding, design and development, pedagogy, assessment, implementation, and results. Laetitia La Follette looks at the benefits of adaptation rather than radical change and the impact of interactive learning objects developed as homework to help students acquire skills needed for the art history survey course. Robert Carlucci, Alexander Haubold, and Jeremy Stynes consider the creation of interactive learning objects in support of art history courses at Columbia University, tracking the changes in the use of technology over several years, and reflecting on the changing role of the visual resources

curator. Stephen Carroll, Dolores laGuardia, and Andrea Pappas examine a team-taught approach to teaching art history and composition with the assistance of a course-management system. Eva R. Hoffman and Christine Cavalier end this section with a close examination of computer-assisted concept maps that allow students to make cross-cultural connections in art history survey courses.

The final essays in the book address online courses. Eva J. Allen narrates the development and implementation of an online art history survey course, explaining how she reconciles art history's traditional pedagogy with the potential of the computer-based course management system. Kelly Donahue-Wallace compares two models of online courses, comparing the relative merits of redesigning the art history survey course using problem-based learning to the advantages of a more instructor-directed approach. Geoffrey Simmins examines strategies for engaging online students, offering instructive narratives from his own experiences encouraging distributed learning students to participate in course discussions. Allen and Donahue-Wallace bring this section to a close with a co-authored chapter reflecting upon the state and future of online courses.

Teaching Art History with New Technologies. Reflections and Case Studies holds up a mirror to the discipline's diverse applications of computer-mediated pedagogies and offers art historians and others the opportunity to learn from the successes and failures of early pioneers and to benefit from their experience. The authors' practices and specific technologies differ; their institutional support and individual paths into the technology arena vary as well. Uniting all of the essays, however, is a recognition that the discipline's use of computer applications, Internet resources, and other technological tools must be driven by thoughtful reflection on art history's needs and be implemented in concert with strong pedagogy.