Exhibition development is an incredible process of creativity, artistry, and pedagogy. Above all, it is an act of collaboration and adaptation. Every potential topic is bottomless, and hundreds to thousands of decisions are required of every exhibition team—that wonderfully motley assortment of writers, artists, educators, production specialists, content experts, and collection managers. At their best, exhibitions are transformative experiences for visitors. And as such, their creation is a great responsibility.

But for a process that is inherently hands-on and requires intimate collaboration, can the art and discipline of exhibition development be taught in an asynchronous, online environment? And what are the best practices for teaching these skills within this setting? Online education presents a suite of challenges considerably different than those found within traditional classroom settings. Most noticeably, the online classroom does not afford the opportunity for students to physically interact within a space. But this limitation doesn’t make online instruction of this topic inherently impractical. Exhibition design and development at its core is an exercise in decision making within the context of a team. Similar to a traditional course, online instruction can guide students through the concept phase, unpacking the process and offering a sound grounding in best practices. But online instruction isn’t just about offering theory; it can also have students develop and apply this theory to practice within a digital setting.

A Course and its Content
We will use Exhibition Strategies, a 13-week core course within the online Museum Studies Graduate Program at Johns Hopkins University (JHU), as a case study in order to explore the advantages and limitations of teaching and learning exhibition development in a digital classroom. The course focuses on visitor-centered interpretive design that is applicable to a wide range of institutions—aquaria, zoos, science centers, and traditional museums of art, history, and natural history—to introduce the diverse strategies and approaches used in exhibition planning, development, and implementation. It asks students to think critically about exhibitions and the interface between objects, concept, and experience.

Upon completion of the course, students are expected to have reached the following measurable learning outcomes (cognitive, affective, and behavioral):

- Examination and discussion of current trends in exhibition design;
- Evaluation of exhibitions and the application of that knowledge to improve visitor engagement;
- Discussion of the theoretical and practical concerns of exhibition design;
- Engagement with and implementation of strategies in practical design, content development, and management, including the development of exhibition concepts, incorporating visitor evaluation into
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the design process, writing and editing label copy, and integrating diverse technologies and media into interactive exhibition elements;

- The application of exhibition strategies in the production of a comprehensive exhibition plan, as a member of an exhibition team.

Exhibition Strategies opens with a brief historical and theoretical background to exhibition planning, followed by a more rigorous section of group-based student work. Within assigned teams, students walk through the practical steps of exhibition development and design based on a topic provided by the instructor. The assigned topics are intentionally general—such as dress or hands—to permit exploration from the perspective of any discipline, from art history to science. Each group is also assigned to an existing institution and gallery space in which to work virtually.

With topic in hand, students identify a target audience and begin with the development of a Big Idea, exhibition learning and experience goals, and a bubble diagram. These are informed by discussions of visitor learning and evaluation, and by their institution’s mission and existing collection. As the semester progresses, students carry their plan forward through design considerations, an outline of at least two interactive elements, sample label copy, and—ultimately—a narrative walkthrough of the exhibition. For the end of the course, teams are expected to produce a comprehensive exhibition planning document, and the semester culminates in an online meeting of all students, with each group presenting their exhibition plan and its many components.

Online Collaborative Learning
We suggest that, by using a team-centered approach to exhibition design and development, online courses can successfully offer a structured collaborative learning experience, rooted in theory and providing practical application. Among the very first topics addressed within Exhibition Strategies is the importance of collaboration and the various roles found in an exhibition team. Student team selection is based on student-completed surveys and capitalizes on the diversity of student experience. The flexibility of online courses attracts students that are often employed, volunteering, or interning in museums. They come from a suite of institutional backgrounds and positions with varying degrees of practice in exhibition development, ranging from no experience at all to significant roles as curators, project managers, fabricators, and exhibition technicians. Guided by the instructor, this rich variety leads to a collaborative environment of student learning and teaching, rather than traditional instructor-led, top-down instruction.

The survey also offers instructors a sense of each student, enabling a much closer relationship between instructor and student than one might expect to find within an online environment. It warrants noting that student participation and interaction does not automatically result in collaborative learning. Recent research in online learning has outlined the importance of carefully designed and coordinated group work (Coll, Rochera
The team model also extends to student evaluation. Exhibitions manifest an accumulation of effort. For the course, this translates into a collective assessment of all team-based deliverables; all students within the group share a single grade for each assignment. A series of three team assessments is also scheduled throughout the semester, enabling team members to reflect individually on the collaborative process and evaluate both their classmates’ and their own performance. Because face-to-face contact is limited in this type of experience, it is important that the social
dimension of the task not be overlooked, and periodic group and self-assessment offers instructors further access into this aspect of the shared activity.

As is often the case with group projects, students are at first hesitant about both working together and the course’s collective assessment: “I was VERY skeptical about how this course would incorporate group work…” (personal communication).

While the online nature of the course does contribute to this initial skepticism, the core of this hesitancy stems primarily from the fundamental aspect of course-driven teamwork—an initial concern of ownership and other students’ direct influence on a student’s final grade. Despite the scheduling challenges that might arise due to students’ employment and their placement across time zones, the tools of the online environment can enable successful collaborative learning. These tools include forums and blogs, in addition to intentional design and instructor engagement. It is among the primary responsibilities of the course’s instructor, then, to ensure early within the course that students are familiar and comfortable with the technology required for the collective assignment.

Upon reflection at the end of the semester, students are often pleasantly surprised by the productiveness and intimacy of the experience:

This is an incredible course… The exhibition process can be difficult and stressful when trying to compromise between opinions. This course helps everyone to understand what it takes to accomplish a successful exhibit... (personal communication).

These reactions are consistent from semester to semester and across instructors; this evolution stresses the challenges, required adaptation, and ultimate satisfaction of team-based environments—online or not.

To facilitate meaningful interaction among and between students and the instructor, an online content management system (CMS) can provide a suite of collaborative group tools that includes asynchronous discussion forums, blogs, wikis, and file exchanges. In addition to the tools provided within a CMS, there exist a number of online instruments that students may find within their existing skill set, including Goggle Hangouts, Google drive, PB Works, Skype, and online collaborative meeting spaces. Students in Exhibition Strategies are provided access to an outside meeting site that they are able to use throughout the semester to facilitate synchronous collaboration, which is encouraged though not required.

Asynchronous online discussions in particular advance learning outcomes and construct group knowledge, encouraging interaction between students on a given issue (Baker, 2011). This has proven especially fruitful in Exhibition Strategies, as the range of experiences and expertise coalesces into valuable resources as well as immediately actionable and long-term considerations for the students. Discussions help students unpack and apply best practices to inform the decision and development process of each deliverable within their group. They also serve as a way to encourage further application of the relevant course readings and the practicality of approaches. Students are encouraged to

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draw on personal experience to illustrate applicability, and they are able to make direct connections to their daily work and to each other, using concepts and theory to inform their own practice.

It is also critical that instructors remain connected to all collaborative tools—whether inside or outside of the CMS—in order to continue as both a facilitator and teacher, offering not only a cognitive but also social presence (Coll, Rochera, & Gispert 2014, p. 54). With these tools, a course may foster communication and team development skills, encouraging problem solving, and collaboration.

**Online Instruction: The Good, the Bad, and the Beautiful**

Admittedly, there are several disadvantages to approaching exhibition design and development online. While a well designed and executed course can lead to collaborative online learning, the most obvious drawback for this subject is the lack of hands-on opportunities. These extend to the student’s physical presence within an exhibition space, the potential for prototyping various exhibition elements and exploring the

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A second sample Big Idea and bubble diagram produced by a student group inspired by general theme of “origin” to develop an exhibition plan on gaming. Courtesy of Nicole Bach, Juliane Dowell, Catheleen Campbell, Thomas Close, and Rebecca Hagen.
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iterative process, and the ultimate physical realization—mounting an exhibition with actual objects. Also, due to the length of the semester and emphasis on process, students are not expected to consider budget constraints while developing their exhibition plan.

Despite the disadvantages, students are able to explore the digital experience of practice. Each phase of development is informed by theory, best practices, discussion, decision and development, followed by formative feedback from the instructor that both verifies and elaborates (Coll, Rochera, & Gispert 2014, p. 55). As each element builds upon the next—the big idea, goals, look and feel, interactives, labels, narrative walkthrough—it is important that an asynchronous online course is structured in such as way as to provide well-timed feedback that offers the opportunity for projects to “evolve”—revise and improve. Asynchronous online delivery is flexible and accommodating to a diverse student body. And though it does preclude direct physical interaction, an online course does not preclude interactivity (Pelz 2010) or collaborative learning—the most obvious manifestation of this, in the case of Exhibition Strategies, being the semester-long group project.

But a productive online collaborative learning experience will expose students to best practices; by making use of a variety of online and digital tools, students can apply that knowledge to inform the collaborative development of the various components of the concept phase of exhibition design and development. An online course cannot substitute for the experience of working within an actual physical gallery, but by understanding the nature of online learning experiences, best practices in online pedagogy, and working with—not against—the medium, online courses can offer a useful and productive way to introduce and engage students in the process of exhibition design and development.

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References: