Connected Learning

Hang@MFAH is based on the principles of connected learning, an approach that addresses inequity in education by extending access to a learning system that is “socially embedded, interest-driven, and oriented toward educational, economic, or political opportunity” (Ito et al., 2013, p. 4). It is based on evidence that the most resilient, adaptive, and effective learning involves individual interest as well as social support. Connected learning values production-centered programs that foster a sense of a shared purpose for participants. Working within a peer-to-peer culture promotes an openly networked community that connects out-of-school learning to both the teens’ academic careers and also their homes and communities.

In 2012, the Museum of Fine Arts, Houston, received a grant from the Institute of Museum and Library Services with special funds provided by the John D. and Catherine T. MacArthur Foundation to examine out-of-school learning environments for teens. As a new audience for the Museum, teens provide a unique set of challenges as museum visitors. Houston is a city with little access to public transportation, limiting the mobility of teens to visit the Museum on their own. Teens are incredibly busy with school and other out-of-school activities, challenging the Museum to find a way to become a relevant source of learning among many choices. As a result of focus groups, surveys, and interviews, the MFAH collaborated with a group of teens to form hang@MFAH. Inspired by the momentum of DIY (do-it-yourself) culture and the connected-learning approach, hang@MFAH teens explore the intersection of technology, critical thinking, and art. Through the role of mentors and peer-to-peer learning techniques, this museum-based learning site provides teens with the guidance and resources to help them succeed in today’s digitally enhanced world.

Art museums have a long history of engaging in meaning-making through dialogue that encourages an intuitive investigation of culture through works of art, conversations, problem-solving, and creating. The galleries represent the creative manifestation of sociological, societal, and cultural evolutions including the impact of new technologies on human expression. This planning grant provided the MFAH the opportunity to research and implement best practices for teen audiences engaging with the Museum while informing a new framework for learning in art museums that allows for participants to take control of their own learning processes.

About hang@MFAH (Houston.Art.New.Generation at the Museum of Fine Arts, Houston)

Connected Learning Research Network and Digital Media & Learning Research Hub
http://connectedlearning.tv/infographic
To encourage an environment of connected learning, beginning in 2009, this grant provided twenty-four research sites with the funding to develop HOMAGO (Hanging Out, Messing Around, and Geeking Out). In the HOMAGO framework, young people, with the support of adult mentors, can build on their own interests and use their curiosity as a guide to experiment, create, and discover their talents. In each stage of HOMAGO, teens are driven by their individual skill levels as well as their personal interests. They are encouraged to experiment and tinker with ideas and projects as a group to ultimately level themselves up on both skill level and critical-thinking skill level. Rheingold (2014) comments on the nature of social learning within the framework of connected learning:

Social learning is a uniquely human power; learning is not just about accumulating knowledge or even understanding, but also about developing a set of thinking skills; working from what is already known to new knowledge by manipulating concrete objects is a powerful route to deep learning that includes acquiring knowledge, understanding, and new ways to think. (p. 1)

In a social learning context, peers, mentors, and staff help guide learners as they become creators and makers of ideas and content. Hang@MFAH is built on the success of the digital and social learning previously examined by a number of institutions such as YOUmedia Chicago; the Hirshhorn Museum, Washington D.C.; the Miami Dade Public Library; and DreamYard, Bronx, New York City. As a result of these early adopter sites, twenty-four museums and libraries joined forces to become a national network of research institutions, referred to as the YOUmedia Learning Labs network. These sites promote youth learning through participation that fosters engagement through informal “messing around” with provided resources (Larson & Ito, 2013, p. 4). As a result, YOUmedia Network Site, equipped with digital media tools, engages young people deeply and helps them express, create, and connect to their interests in ways they might not elsewhere.

Through this planning grant, the project team was afforded time to consider the interconnectedness between in-school and out-of-school learning in order to remain relevant in current learning communities. “We know that kids spend only 14% of their time in school. And we understand that learning doesn’t start and stop at the school door” (Bork, 2002, p. 31). Museums can harness the culture of social feedback and access to create positive atmospheres for collaboration and teamwork. This type of social learning, along with shared expertise, contributes to the groups’ greater knowledge and understanding. Mentors are a crucial component to facilitate this process. They provide opportunities to explore shared interests and goals, for personal, academic, and professional growth. Connected learning environments perform best when the responsibility of learning is shared in school, home, community, and the individual. When these learning ecosystems are purposely connected and accessed, they serve to strengthen and enhance lifelong learning.

**Connected Learning at the MFAH**

Hang@MFAH members are guided through the framework of connected learning by a practicing artist-mentor who understands the role of the museum within the landscape of learning. Membership consists of high-school-aged teens who are interested in everything from the visual arts to computer programming. Some members are experienced art viewers while others have little experience with art or the art museum. Throughout the year, members spend time with the mentor and their peers in the galleries to discuss works of art and explore concepts through analog and digital tools. Meetups are designed for participants to learn more about art in an atmosphere that encourages dialogue and asking questions. Hang@MFAH members organize teen-focused events, produce new ways for their peers to see the Museum’s collections, and explore careers, such as conservation, curation, and education, in museums through specialized opportunities in the form of one-on-one time with Museum staff members.
Hang@MFAH links experiences from different disciplines through the Museum’s collections and addresses how investigating works of art can affect the way a teen learns. This type of engagement relies on developing close observation skills, strengthening problem solving, and making informed interpretations (Ritchhart, Church & Morrison, 2011, p. 11). To be fruitful future contributors to society, teens must become flexible problem solvers with the propensity to fail intelligently (Pink, 2005, p. 138). One example of this type of engagement is found in opportunities for the teens to regularly investigate specific works of art from the collection and hold discussions that are not limited to how works of art connect to the history of art, but, more so, how they relate to society as a whole. Often, teens resultantly lead their peers through similar, in-depth conversations in the galleries that demonstrate their understanding and comprehension of complex ideas and theories through the works of art.

Beyond providing opportunities for teens to think critically about works of art, the art museum is the perfect place to contextualize the larger role of technology within art and society. More specifically, hang@MFAH investigates technology, the medium of the 21st century through New Media art. New Media art is the practice of exploring technologies, including digital art, computer graphics, computer animation, virtual art, Internet art, interactive art, video games, computer robotics, and art as biotechnology. Hang@MFAH teens situate their work within the New Media practice and apply the same skills in the studio. This investigation parallels the same set of bottom-up engineering values of the DIY movement. For instance, the thinking process necessary to understanding a painting is the same method necessary to compose 8-bit chiptune music on a Game Boy. The 8-bit music chiptunes are analog or emulated sounds produced from (computer) chips of vintage computers and video game consoles. Teens explore how to make music on a Game Boy in the same manner as they do in exploring a work of art: they become comfortable with the object, tinker with modifying the sounds, and, ultimately, compose a score using video game music. The same process happens in the galleries when teens examine a work of art, gather visual observations, and use those observations to make an informed interpretation. The processes of exploration, synthesizing ideas, and applying skills are embedded in the pedagogy of this program.

Hang@MFAH uses the DIY lens to redefine how an arts education is imperative to developing sophisticated thinkers through constructing knowledge from the learner’s point of view to build experiences. The DIY movement democratizes access to information by decentralizing the singular authoritative voice of knowledge. Instead it advocates for building knowledge as an individual or a community of peers without relying on experts. Museums have the potential to be places of DIY experiences because they curate collections and exhibitions for visitors to begin to create their own interpretations and meanings through text, audio tours, guided tours, programs, etc. Museums understand that visitors construct meaning through their own experiences and knowledge bases (Barrett, 2002, and Hein, 1998). This allows them to have personalized experiences in the galleries.

Just as the DIY movement focuses on reframing the individual’s role in consumerism, the museum can empower teens to understand their own process of meaning making. This type of engaged learning and communal knowledge acts as a powerful agent of change within society and at the art museum. DIY culture within education should function as a means to reposition individuals as stakeholders in their own learning ecosystems. Education in America needs to be more networked as learning communities, both formal and informal, if we want to prepare youth to meet the challenges of today’s global economy. Hang@MFAH does just that.

Grant Design

The MFAH implemented a three-part project. 1. A Discovery Phase allowed the project team to assess community needs, interests, and national best practices; 2. A Think Tank Phase brought together community decision-makers and national experts to determine goals and a plan of action for hang@MFAH; 3. A Launch Phase allowed the MFAH project team to create and assess hang@MFAH prototype experiences for teens.

During the Discovery and Think Tank phases, the MFAH project team visited multiple cities to bring together best practices in art museum education and analyze existing digital media labs and learning spaces for young people at applicable universities, museums, and libraries across the YouMEDIA network. These meetings allowed the team time and space to critically think through how to execute this type of program for the specific needs of the MFAH. Project staff, together with Dr. Marianna Adams of Audience Focus, Inc., led several think tank sessions with community partners and school administrators to explore and better understand how young people, parents, and other visitors perceive the MFAH as a social...
space for learning and learn about respondents' general perceptions of art. Additionally, the project team sent a series of surveys to teens, parents of teens, and middle- and high-school teachers to determine what kinds of technologies teachers and youth utilize, their reasons for doing so, and how often they access technology. The survey also included questions about museum attitudes and behaviors to determine if respondents felt welcomed at the MFAH and if they were familiar with what to do on a visit and what opportunities and programs were available for them.

Responding to the surveys and focus groups of teens and parents coupled with several events designed for teens, an informal group of hang@MFAH youth developed. The initial group of teens met weekly with their mentor, a local artist, to work on a teen-initiated writing project. After this initial period, a different mentor, also a local artist, provided a new lens for the program and the teens began to have conversations in the galleries and focus on experimenting with technology as art.

During the Launch Phase, to increase young people’s comfort levels and familiarity with the MFAH, the Museum offered complimentary Museum membership cards to participants, of which 1,200 have been issued to date. The Museum also experimented with a physical badging system, where participants earned buttons for each new skill acquired. Hang@MFAH teens held three open studios to share their projects and accomplishments with the public. The teens chose the space, the date, and time; made flyers; and determined the layout and content of the day’s events. The open studio included completed projects and projects still in process. This allows other teens and the general public to understand the environment created in hang@MFAH, which emphasizes concept and process over product. Three day-long summer hackathons were also held to focus on creating for longer, uninterrupted periods and included in-depth conversations in the galleries. A focus group of teens determined that hang@MFAH should collaborate with new partners and departments throughout the Museum. Resulting from this conversation, Marian Luntz, curator of film and video at the Museum, worked with the teens to offer a public presentation of the film 8 BIT. During the presentation, Marcin Ramocki, the film’s director, Skyped with hang@MFAH participants for an interactive discussion. This collaboration both extended the mentor relationship to the film curator, as well as began an ongoing relationship with the film department. This experimentation has led to a biannual film offering, with a discussion led by the teens.

Throughout this research period, the project team made an exciting, unexpected discovery in utilizing university and college students as junior mentors who bring a different, valuable perspective to the group. Only a few years older than many of the teens, junior mentors provide an important connection to higher-education learning opportunities and experiences. Some of the special qualities junior mentors bring to the program include high energy and flexibility; an interest in learning a wide variety of skills; comfort with and knowledge of technology; problem solving and listening skills; and a genuine interest in art, art history, and museum education. The Museum plans to continue recruiting and training junior mentors from area universities for the program.

While the teens’ experience was the focus of the grant research, another research agenda quickly rose to the surface: the need for ongoing professional development for the mentors, including a connection to a national network of practitioners. The YOUmedia Network provides a foundational group of practitioners and a hub of professional development through online resources, seminars, and national conferences.

As a result of these experimentation and pilots, hang@MFAH members today work throughout the Museum to collaborate and create opportunities at the MFAH for their peers. Through the course of the grant, the makeup and the direction of hang@MFAH have consistently shifted as the program responds to the needs and interests of the teens. As more teens became aware of the program and staff members observed an increase in skills for current members, it was decided that the teen group would shift to a teen leadership group. The teen leadership group model provides members with more opportunities for leadership within the Museum. Potential members now are asked to submit an application and a letter of recommendation from an educator. They are also interviewed by the group before they are invited to become a member of hang@MFAH. The interview process allows the current hang@MFAH members to observe the social dynamic of new members and to determine how those individuals would play different roles within the group. It has also become much more part of the teens’ academic careers. They discuss the program in college applications and to their peers at school and have asked the mentor and staff to write letters of recommendations for their college applications.
Furthermore, while the group started out targeting teens aged 13+, the project team realized that the social dynamic varied when younger teens were included with older teens. The program is now targeted to high-school students, ages 15–18. The team also experimented with drop-in hours over the course of a few days versus one dedicated night of programming. With teens’ busy schedules, it was difficult for them to commit to multiple days at the Museum; however, with a set day of the week and time, teens are able to plan around hang@MFAH and are more likely to attend more meetups than during drop-in hours.

Furthermore, while other sites within the network created a dedicated space for their YOUmedia sites, the MFAH project team ultimately decided that the program site should be flexible. The planning and design phase of the grant enabled the Museum to fully explore the variety of viable spaces available at the MFAH. The Glassell Junior School was ideal for group work, but its location—a number of blocks away from the main Museum campus—resulted in hang@MFAH participants feeling too far removed from the art. A conference room in the main Museum building provided ample space for creative projects, but felt too formal. The group currently uses a flexible education space that is physically close to the galleries and can accommodate a range of activities. Through the use of iPads, laptops, and flexible tools, teens are best able to use the art in the galleries as inspiration at a moment’s notice.

**Evaluation**

Throughout the grant period, the project team collaborated with Dr. Marianna Adams, president of Audience Focus, Inc., who conducted research on the attitudes and perceptions of young people, parents, teens, and other community stakeholders on their expectations of the MFAH as a place for social learning and digital exploration. Feedback was obtained through focus group meetings, interviews with MFAH staff and administration, personal conversations with program participants and parents, and written evaluation surveys distributed at hang@MFAH sessions and events. Dr. Scott Sayre and Kris Wetterlund, Sandbox Studios, also served as technical consultants for the hang@MFAH program, providing the MFAH project team with insights into trends and best practices in digital learning that informed the content framework for the program.

The focus of this research was to determine the degree to which teen participation in hang@MFAH fostered personal creative growth, social collaborative engagement, and connections to community. Teens were asked to rate a set of statements on an eight-point scale with eight being the most important goal for their MFAH experience. Creativity that was fueled by their own experimentation was rated highest, followed by the opportunity to actively create. They identified many benefits of their personal and creative growth as a result of participating in hang@MFAH, such as the ability to tap into their creativity and the opportunity to learn interesting things. The following quote illustrates these benefits:

All of the technology [is the best part], having a teacher that understands it. It’s not very often that we have stuff like this and a teacher who can explain it to students. Some teachers just mumble it. Mike is very expressive. And allowing us the freedom to use all this technology the way we want and with a person who understands it is great. (Student response, August, 2013)

By using the principles of connected learning, the team created an environment of trust and learning that is built on social, peer, and mentor interaction. Through the practice of experimenting and tinkering, learners are actively engaged with the physical objects, which makes learning tangible. More specifically, hang@MFAH outcomes have been assessed in terms of learning and social/situational goals:

- Participants looked at art more carefully and thoughtfully.
- Participants forged new connections with existing knowledge.
- Participants increased curiosity about art and digital media.
- Participants clearly see the Museum as a place to learn and have fun.
- Participants share their ideas and experiences with mentors and peers.
- Participants gained confidence in their own ideas and abilities.

These outcomes were supported through many aspects of the program. Many of the teens would not have previously considered themselves artists. Yet, once they began to vocalize and conceptually understand that art is an imaginative response to the world around them, they embraced their inventiveness and creativity. Teens identified many benefits in personal and creative growth as a result of participating in hang@MFAH. The ability to tap into their creative side was most often mentioned, followed...
by the opportunity to learn interesting things. Teens are hungry to connect to adults and teens from other schools, and the social structure of a museum is a perfect place for this. The environment lends itself to neutralizing what can often be stressful social situations. When new teens join hang@MFAH, the others naturally introduce themselves, give an orientation of the program, and encourage the newcomers to immediately get involved. The project team has seen substantial bonding between the teens, their mentors, junior mentors, and the Museum.

Another significant change has been the confidence level hang@MFAH participants displayed in developing their own projects. The willingness to self-teach new skills has grown ten-fold. The teens all demonstrated a significant fear of failure and trepidation for trying new projects at the beginning of the program. Hang@MFAH participants now initiate complex projects and collaborations, and while they look to mentors for guidance, they want to develop the projects themselves. The teens are at a point where they determine with whom to collaborate, how to make the collaborations work, which projects to undertake, when to go into the galleries, which films to screen, and so on. The environment created within hang@MFAH fosters individualism, but also cultivates social skills and acceptance through the many forms of approval received from peers and mentors. It is not about a grade; it is about being included.

Furthermore, the research shows that teens felt very comfortable at the MFAH, considering it “their” place. This sense of ownership of the Museum helps the teens to build meaningful and lasting relationships and prepares them to continue this same type of relationship with other cultural institutions in the future.

Lessons Learned

The planning and development phases for hang@MFAH, as outlined in the original grant application, have been incredibly successful. The results, outcomes, and impact of the program far surpassed the project team’s expectations. As a result of the connected learning approach, the MFAH determined that hang@MFAH serves the Houston community on multiple levels. It helps teens to become progressive, productive, and creative forces in society by encouraging them to explore and nurture their talents, interests, and aspirations. This program provides teens the opportunity to develop the skills needed to succeed in their academic and professional lives. A parent of two hang@MFAH members describes the impact of the program as:

They were learning that they could take creative risks, and that when those risks paid off, it was really awesome. This process began to show in other areas of their lives, at home, and at school. I knew that they would be doing something creative when they started attending hang@MFAH, but never expected that they would begin to see the world a little differently. I am so excited that they know they can use their creative, artistic, engineering, technology lenses in everyday situations, and I credit their experiences at hang@MFAH for developing that reality.

Support from the Institute of Museum and Library Services has enabled the MFAH to continue its mission to serve as a place for all people by providing relevant, meaningful learning opportunities to a broad new audience. By offering programs that combine the use of traditional visual arts formats with 21st-century digital tools and New Media art, the MFAH is better able to respond to the interests and needs of the Museum’s diverse community. The outcomes and lessons learned from planning and implementing hang@MFAH will guide the MFAH far beyond the grant period. As the program developed, the project team reflected on the successes, lessons learned, and how they impact the 21st-century museum. At the crux of this approach is the mentor/teen/staff relationship. The following proved to be the most successful qualities of mentors, teens, and Museum staff that together foster an encouraging environment for a successful collaboration:

Mentor:

• Possesses flexibility and the ability to collaborate
• Has a vast knowledge of art history and studio practices
• Has an active studio practice
• Demonstrates how an artist successfully functions within society
• Demonstrates the artist’s role in making
• Understands technology as a 21st-century teaching tool
• Is self-reflective
• Possesses a natural curiosity
• Has extensive experience teaching at a college level
• Demonstrates a level of respect for teens
• Understands a mentor relationship vs. student-teacher dynamic
• Interested in creating relationships
• Develops curriculum
• Possesses leadership capacity
• Practices object-based learning pedagogy

Teens:
• Are high-school-aged students
• Are self-selected
• Demonstrate a significant amount of independence
• Want to collaborate with others
• Possess a natural curiosity
• Possess a willingness to experiment
• Demonstrate an ability to seek inclusion among their peers
• May or may not be interested in STEM
• May or may not be interested in the arts

Staff Members:
• Possess respect for teens
• Are able to collaborate with a mentor for a long-term period
• Advocate within their institutions for the teen voice
• Provide autonomy to the mentor
• Understand the crucial role between the mentor and teens
• Possess a natural curiosity
• Advocate on behalf of the mentor for ongoing professional development and inclusion and access to a community of practitioners

This research demonstrates that hang@MFAH successfully equips teens with the tools to communicate ideas, discover new boundaries in artistic expression, and think critically about the impact of art and technology on their daily lives. hang@MFAH is an investment in the future. The diverse resources embodied at the MFAH provide access for all young people, build confidence, and position the Museum as a place for lifelong learning.

Project Team
Jennifer Beradino, Object-based Learning Manager
Mike Beradino, Mentor Artist
Clare Hulfish, Mentor Artist
Natalie Svacina, Object-based Learning Specialist
Marianna Adams, President, Audience Focus Inc.
Dr. Scott Sayre, Sandbox Studios
Kris Wetterlund, Sandbox Studios

Acknowledgements
Hang@MFAH would not be possible without the leadership of Gary Tinterow, director of the Museum of Fine Arts, Houston, and Caroline Goeser, Ph.D., W. T. and Louise J. Moran Chair of the Department of Learning and Interpretation. The entire Museum staff has been enormously supportive of this research and program. Our colleagues in the Curatorial, Development, Membership and Guest Services, Information Technology, Marketing and Communications, and Learning and Interpretation departments provided invaluable contributions. Special thanks to Marian Luntz, curator of Film and Video; Yasufumi Nakamori, associate curator, Photography; Lisa Powell, senior development officer, Foundation and Government Grants; Dorie Shellenberger, senior writer, Foundation and Government Grants; Jennifer Garza, chief administrator, Membership and Guest Services; Marianna Adams, Audience Focus Inc.; Scott Sayre and Kris Wetterlund, Sandbox Studios; and Samantha Calvetti, junior mentor.

Our YOUmedia Network colleagues have provided invaluable support and expertise, in particular, Elyse Eidman-Aadahl, National Writing Project; Tene Gray, Digital Youth Network; Amy Eshleman, Urban Libraries Council; Korie Twiggs, Association of Science-Technology Centers; Christina Cantril, National Writing Project; and K-Fai Steele, National Writing Project.

Funding
Hang@MFAH receives generous support from the Cameron International Corporation, Texas Commission on the Arts, and Air Liquide USA LLC.

All Learning and Interpretation programs at the Museum of Fine Arts, Houston, receive endowment income from funds provided by the Louise Jarrett Moran Bequest; Caroline Wiess Law; the William Randolph Hearst Foundation; The National Endowment for the Humanities; the Fondren Foundation; BMC Software, Inc.; the Wallace Foundation; the Neaf Myers and Ken Black Children’s Art Fund; the Favrot Fund; and Gifts in honor of Beth Schneider.
Bibliography


