

DESIGNING FOR CREATIVITY, COLLABORATION, AND PROBLEM-SOLVING IN  
FAMILY ART-MAKING PROGRAMS AT ART MUSEUMS

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A thesis submitted to The University of the Arts in partial fulfillment of  
the requirements for the degree of Masters of Arts in Museum Education.  
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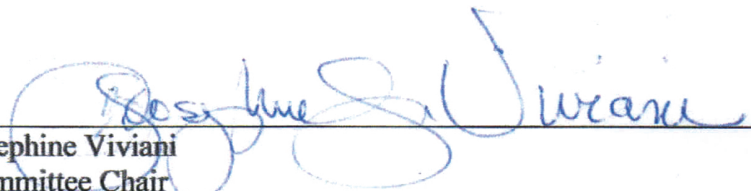
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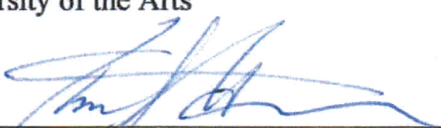
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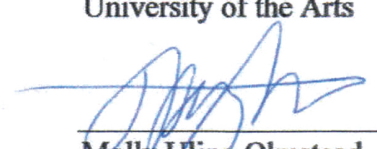
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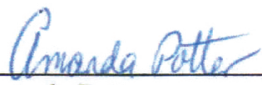
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## **Abstract**

This master's thesis examines the ways that educators design family art-making programs in art museums to encourage participant creativity, collaboration, and problem-solving as defined by the Partnership for 21st Century Learning. Over the course of three months, the researcher conducted 83 surveys and seven follow-up interviews with educators who lead family art-making programs in United States art museums. The study asked participants about the goals, content, structure, and potential connections to 21st century skills in their family programs.

Results of the study showed that art museum educators are mostly familiar with the concept of 21st century skills and can find the skills of creativity, collaboration, and problem-solving in their programs, but do not necessarily plan family programs based on the concept of 21st century skills. The surveyed educators most often indicated that their program goals included fostering participant creativity. As an informal learning environment, art museums have the opportunity to teach 21st century skills to family audiences.

## **Dedication**

To my family, who let me talk endlessly about museum stuff. Also to my parents Carrie and John Boerio, without their love and support none of this would be possible.

## **Acknowledgements**

I would like to first thank Helen M. Shannon, my advisor, and my professor Minda Borun for their invaluable help and guidance throughout the thesis process; without them I would still have many undefined ideas but no thesis. I would also like to thank my committee chair Josephine Viviani, whose observant suggestions helped clarify my research since early in the development process. Thank you to my committee members Molly Uline-Olmstead, Amanda Potter, and Paul Adorno, who have been thorough and incredibly gracious with their time. Cindy M. Foley and Olivia Edlund acted as readers for early drafts of this thesis; their insight and Cindy's own work around creativity in museums have been enormously helpful.

I would also like to thank all of the educators who contributed to the research study in this thesis for their time and willingness to share information about family art-making programs at their museums. Thanks especially to the educators who shared their time with me for phone interviews.

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## Nomenclature

For the purposes of this thesis, several terms must be defined including families, art-making, creativity, collaboration, and problem-solving.

*Families:* families as a social group are self-identified, but in the museum education context, the term family generally covers close-knit social groups of people made up of both adults and children.

*Art-making programs:* art-making programs are those educational programs which ask participants to manipulate physical materials to complete fine arts projects; these programs might include activities like drawing, contributing to a group installation, etc.

*Drop-in program:* in this thesis refers to a museum program not requiring preregistration, wherein participants can join in activities at any point during the allotted program hours.

The definitions of creativity, collaboration, and problem-solving come from the Partnership for 21st Century Skills (P21).

*Creativity:* creativity refers to a mental skill, “Demonstrating originality and inventiveness in work...being open and responsive to new and diverse perspectives.”<sup>1</sup>

*Collaboration:* in the context of 21st century skills, Collaboration “[is] demonstrating ability to work effectively with diverse teams.”<sup>2</sup>

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<sup>1</sup> Colleen Dean, Christie M. Lynch Ebert, and Susan McGreevy-Nichols, “21st Century Skills Map: The Arts” (Partnership for 21st Century Skills, July 2010), 6. [http://www.p21.org/storage/documents/P21\\_arts\\_map\\_final.pdf](http://www.p21.org/storage/documents/P21_arts_map_final.pdf).

<sup>2</sup> Ibid, 5.

*Problem-solving*: this skill is defined as “identifying and asking significant questions that clarify various points of view and lead to better solutions.”<sup>3</sup>

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<sup>3</sup> Ibid, 3.

## Chapter I: Introduction

From “Family Art Academy” at the Pennsylvania Academy of the Fine Arts to “Open Studio” programs at both the Columbus Museum of Art and New York’s Guggenheim Museum of Art to “Studio Experiences” at the Denver Art Museum, many art museums offer programs that let family audiences create with their own hands.<sup>4</sup> Family programs create a specific time and space where people of multiple ages are invited to join in art-making activities and learning. These workshops vary in the age of children in their target audience, program goals, and connection to artwork on display in the museum. While some kind of art-making experience or workshop may be common at art museums, few studies exist on how museum educators design these types of programs. Specifically, do art museum educators design family art-making programs to include certain 21st century skills?

The concept of 21st century skills originates with recent education reform in the United States; *The Glossary of Education Reform* defines them as “a broad set of knowledge, skills, work habits, and character traits that are believed—by educators, school reformers, college professors, employers, and others—to be critically important to success in today’s world, particularly in collegiate programs and contemporary careers and workplaces.”<sup>5</sup> Creativity, collaboration and problem-solving are 21st century skills that the National Art Education

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<sup>4</sup> “Family Arts Academy: PAFA,” *PAFA Museum*, March 14, 2017, <https://www.pafa.org/faa>. “Open Studio for Families,” *The Guggenheim Museum*, March 14, 2017, <https://www.guggenheim.org/event/open-studio-for-families>. “Family Activities at Columbus Museum of Art,” *Columbus Museum of Art*, March 14, 2017, <http://www.columbusmuseum.org/visiting/families-at-cma/>.

<sup>5</sup> 21st Century Skills Definition," *The Glossary of Education Reform*, August 25, 2016, , accessed May 04, 2017, <http://edglossary.org/21st-century-skills/>.

Association (NAEA) recognizes as particularly relevant to art education.<sup>6</sup> Creativity, collaboration, and problem-solving are also skills that this researcher hypothesizes align with family art-making programs specifically. Because of the variable definitions and connotations of creativity in American culture, this thesis will use 21st century skill definitions to clarify an otherwise ambiguous term. The new standards for art education in the United States school system intend to teach skills like creativity, which educators hope will transfer to other areas in students' lives. In a position statement regarding 21st century skills, NAEA claims, "The fundamental processes of imagination, investigation, construction, and reflection, which are essential in the arts... are cognitive processes by which students not only learn within an individual discipline but also transfer their knowledge, skill, and habits to other contexts and settings."<sup>7</sup>

According to Sir Kenneth Robinson, Professor Emeritus in arts education at the University of Warwick, these 21st century skills will be valuable to people trying to live and work in the current century. "If America wants to remain competitive in the global markets of the 21st century, creativity is not a luxury. America needs a workforce that is flexible, adaptable and highly creative; and it needs an education system that can develop these qualities in everyone."<sup>8</sup>

In art education, 21st century skills are generally associated with K-12 education and college

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<sup>6</sup> "Position Statement on 21st Century Skills and Visual Arts Education," National Art Education Association, February 02, 2016. <https://www.arteducators.org/advocacy/articles/117-position-statement-on-21st-century-skills-and-visual-arts-education>.

<sup>7</sup> "Conceptual Framework," *National Arts Standards*, accessed February 14, 2016, <http://www.nationalartsstandards.org/content/conceptual-framework>.

<sup>8</sup> Sir Ken Robinson, "How Creativity, Education and the Arts Shape a Modern Economy," *Education Commission of the United States*, last modified April 2005, <http://www.ecs.org/clearinghouse/60/51/6051.pdf>.

readiness. However, schools do not always have art classes, and while schools may teach current K-12 students these skills, millions of people currently outside the school system will still live and work in the 21st century. Education organizations outside of the school system may still find value in teaching 21st century skills. Art museums in particular are one alternative learning environment that potentially reaches people of many ages, cultures, and backgrounds. Museums have access to artists and art objects, what Cindy Foley, the Executive Deputy Director for Learning and Experience at the Columbus Museum of Art, calls “the byproducts of some of the most creative thinkers who have graced the planet.”<sup>9</sup> These art objects may inspire program participants, while educators and teaching artists in museums are often practicing artists themselves who provide in-person role models for creative thinking. Family programs at art museums are one specific area where learning reaches across generations, bringing the adult caregivers who are a child’s first teacher into their child’s education. The act of making art as a family offers opportunities for intergenerational collaboration.

The research question that drives this thesis is this: in what ways, if any, do art museum educators design family art-making programs to encourage the 21st century skills of creativity, collaboration, and problem solving?<sup>10</sup>

This thesis will defend the claim that art museum educators structure family art-making programs in ways that intentionally or unintentionally promote the 21st century skills of creativity, collaboration, and problem-solving.

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<sup>9</sup> Cindy Meyers Foley, “Why Creativity? Articulating and Championing a Museum’s Social Mission,” *Journal of Museum Education* 39.2 (July 1, 2014): 140.

<sup>10</sup> P21’s set of 21st century skills incorporates other skills beyond creativity, collaboration, and problem-solving, but this thesis focuses on creativity, collaboration, and problem-solving specifically.

The research conducted through 83 online surveys and seven phone interviews showed that art museum educators implicitly encourage the 21st century skills of creativity, collaboration, and problem-solving through program structure, art-making activities, facilitation, and studio environment. However art museum educators do not necessarily plan family programs using the concept of 21st century skills specifically. Educators interviewed about their knowledge of 21st century skills connect them more to school programs. Since the skills of creativity, collaboration, and problem-solving also exist completely separately from the 21st century skills movement, educators often consider these skills to be part of the family art-making programs—either as a goal or as a byproduct of making art—without connecting them specifically to the 21st century skills concept.

## Chapter II: Literature Review

Art museums across the United States offer programs for families to make art together. Museum educators design these programs with a variety of goals and for different audiences from museum to museum, but as a whole, family art-making programs allow people of all ages to make art in low-stakes, social environments. Hands-on art programs in art museums offer intergenerational audiences an opportunity to practice some of the skills outlined by the Partnership for 21st Century Learning (P21) and the National Art Education Association (NAEA) as skills especially valuable to people in the 21st century.<sup>11</sup> In what ways, if any, do art museum educators design family art-making programs to foster the 21st century skills of creativity, collaboration, and problem-solving? To answer this central research question, the researcher compiled a review of the existing literature, leading to a study conducted through online surveys of 83 art museum educators and follow-up interviews with seven survey participants.

The literature reviewed in this chapter fits into three broad categories of research about family groups in museums, their characteristics and styles of learning; research involving family art-making programs in museums, usually evaluations of specific programs at individual museums; and 21st century skills as a lens for creativity, collaboration, and problem-solving as well as some context around 21st century learning.

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<sup>11</sup> "Position Statement on 21st Century Skills and Visual Arts Education," *National Art Education Association*, accessed February 02, 2016. <https://www.arteducators.org/advocacy/articles/117-position-statement-on-21st-century-skills-and-visual-arts-education>.

## ***Family Groups in Museums***

Karen C. Gerety Folk's "Family Learning in Art Museums", in the book *From Periphery to Center: Art Museum Education in the 21st Century* looks at families at art museums from the perspective of both the visitor and the museum educator.<sup>12</sup> In this essay, Folk describes the general characteristics of family groups, introduces other studies that analyze family behavior in museums, and explains her own research, which examines how museums approach education for family groups. Her study surveyed and interviewed art museum educators in the midwestern United States. The study found that most art museums offer some kind of program specifically for families.<sup>13</sup> Folk's study supports one assumption of this thesis, that most art museums already offer some family programming, which may include family art-making programs. Additionally, "Family Learning in Museums" mentions the importance of planning for all members of a family group rather than focusing solely on children or solely on adults.<sup>14</sup> The thesis research study conducted by this researcher revealed that people of all ages are the target audience of 59% (N = 83) of surveyed family art-making programs. This suggests for this thesis that family art-making programs should be designed to engage people of all ages. Folk also provides data on what kind of programs art museums already offer. However, the article does not collect detailed information on just how those particular programs function.

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<sup>12</sup> Karen C. Gerety Folk, "Family Learning in Art Museums," in *From Periphery to Center: Art Museum Education in the 21st Century*. eds. Pat Villeneuve (Reston, Va: National Art Education Association, 2007) 110-116.

<sup>13</sup> Ibid., 110-111.

<sup>14</sup> Ibid., 112.



“The Family Museum Experience: Implications from Research” by Lynn D. Dierking also focuses on families who visit museums, though Dierking’s article explores specific characteristics of family groups that influence their behavior and learning in museum settings.<sup>15</sup> Dierking defines families as “social groups made up of at least one adult and one child.” Educators surveyed for this thesis sometimes described their family audiences more flexibly, that families could also be a group of adult siblings or a couple on a date, for example. Dierking also emphasizes that family groups generally have close social bonds and shared histories.<sup>16</sup> The research conducted by Dierking and others mentioned in the article indicates that families visit museums as both a social and educational experience.<sup>17</sup> The combination of a social and educational experience suggests opportunities for collaboration and communication among the families as hypothesized by this thesis. Like Folks in “Family Learning in Art Museums”, Dierking argues that museums must offer a variety of experiences and options to accommodate the unique needs of family groups, the individual members of which may have different learning styles and developmental stages. She also mentions that some families like to learn together while others prefer to separate and explore independently.<sup>18</sup> Dierking’s research shows the characteristics of families—such as close social bonds and differing individual learning styles—that educators should be aware of when designing family programs in museums.

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<sup>15</sup> Lynn D. Dierking, “The Family Museum Experience: Implications from Research,” *The Journal of Museum Education* 14, no. 2 (Spring 1989): 9–11.

<sup>16</sup> Ibid., 9.

<sup>17</sup> Ibid., 9–11.

<sup>18</sup> Ibid., 11.

Marcia Brumit Kropf and Inez S. Wolins' chapter, "How Families Learn: Considerations for Program Development" in *Museum Visits and Activities for Family Life and Enrichment* examines how family groups use their unique characteristics for learning in museums and how museum educators might design programs to best promote learning for family audiences.<sup>19</sup> Kropf and Wolins claim that family programs in museums should be designed, at least in part, to "help prepare them to experience the museum as a learning resource on their own."<sup>20</sup> This relates to research completed for this thesis, wherein 32% (n = 26) of surveyed educators said their family programs aimed to connect visitors to the museum and another 56% (n = 45) indicated that family programs aimed to connect participants to art in the museum galleries or special exhibitions specifically, potentially building audiences who felt comfortable exploring the museum on their own.

Creating programs for family groups at art museums presents unique challenges and opportunities as outlined by the research conducted by Kropf and Wolins, Dierking, and Folk. Programs aimed at family groups should engage all members of a family group, who may have very different ages, skill levels, and learning styles—not always an easy task. However, family groups can use their shared history and social connections to collaborate on projects, or to connect the museum activities or artifacts to shared family history to create meaningful learning experiences. The research conducted by Folk, Kropf and Wolins, and Dierking supports this

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<sup>19</sup> Marcia Brumit Kropf and Inez S. Wolins, "How Families Learn: Considerations for Program Development," in *Museum Visits and Activities for Family Life Enrichment*, ed Barbara H. Butler et. al (New York: The Haworth Press, 1989), 75-87.

<sup>20</sup> Ibid, 76.

thesis's focus on family programs in art museums, and the idea that family art-making programs in art museums can help participants practice collaboration.

### ***Art-making Programs at Art Museums***

“Approaching Art Education as an Ecology: Exploring the Role of Museums” by Karen Knutson, Kevin Crowley, Jennifer Lin-Russell, and Mary Ann Steiner as published in the journal *Studies in Art Education* in 2011, examines families and informal education with two separate studies in art museums.<sup>21</sup> The researchers highlight some of the “opportunities and challenges” of art education in the museum setting, and point out how informal education creates unique learning opportunities. One study followed families engaging in art-making activities at the Children’s Museum of Pittsburgh, conducting interviews with staff and parents, as well as observing family groups in the museum’s art studio; the second examined family conversations around different works of art at a more encyclopedic art museum.<sup>22</sup>

In the first study, researchers found that adults tended to stand back or help facilitate their child’s art-making, but “only 7% of parents spent time working on their own artworks.”<sup>23</sup> Both adult visitors and museum staff reported mixed views on parents’ role in family art-making activities—whether parents should observe without interfering, help facilitate the child’s

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<sup>21</sup> Karen Knutson, Kevin Crowley, Jennifer Lin-russell & Mary Annsteiner (2011) “Approaching Art Education as an Ecology: Exploring the Roleb of Museums”, *Studies in Art Education*, 52, no. 4, 310-322.

<sup>22</sup> Ibid, 314.

<sup>23</sup> Ibid.

experience, offer ideas and suggestions, or make art along with the child.<sup>24</sup> Neither study mentions if these views might be affected by the child-focused environment of the children's museum. At the time "Approaching Art Education as an Ecology: Exploring the Role of Museums" was written, the Children's Museum of Pittsburgh was moving towards the idea of adults as co-learners, "a model of collaborative conversation and joint activity."<sup>25</sup>

The second study conducted by Knutson and the other researchers looks at appreciation and interpretation of art during family gallery programs at an encyclopedic art museum. Researchers in that study recorded the conversations of 50 family groups of adults and children as they look at artworks in the museum galleries; they found that family discussions most often involved noticing and analyzing visual details in the artwork.<sup>26</sup> Since 48% (n = 40) of the programs surveyed for this thesis included a visit to the museum galleries and another 37% (n = 31) sometimes included a visit to the museum galleries, understanding what families commonly talk about when viewing art may help guide group discussions. Educators leading the gallery tours can start with topics or questions common to family discussion and help address those topics.

The authors conclude that viewing art education as an ecology where different learning environments with different strengths co-exist as a larger whole will help the future of art education. They claim, "Thinking about art education as an ecology implies that diverse niches

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<sup>24</sup> Ibid.

<sup>25</sup> Ibid, 315.

<sup>26</sup> Ibid, 318.

within the field are a strength for art learning.”<sup>27</sup> These diverse niches play different but important roles. The essay helps to support the argument of this thesis that art-making activities in the museum are valuable learning opportunities and that the social nature of family art education in museums may lead to families practicing communication and collaboration.

Writing for the *Journal of Museum Education*, Hollie Ecker and Sarah Mostow use their own experiences with hands-on workshops in the Guggenheim Museum to examine possible best practices for the museum studio in the article “How Might You...? Seeking Inquiry in the Museum Studio”. At the Guggenheim Museum, Ecker and Mostow led programs for children that combine a tour in the museum galleries with art-making activities. Ecker and Mostow suggest inquiry-based methods as a framework for developing creative art-making experiences in the museum. This article hypothesizes a connection between making art and appreciating art, “The pairing of gallery-studio experiences encourages children to see art objects, not as masterpieces born fully-formed, but as things created by human beings.”<sup>28</sup> Though “How Might you...?” contains no formal evaluation, the article provides a helpful conceptual framework for considering art-making experiences in a museum context.

In 2013 the Denver Museum of Art (DAM) completed research to better understand family audiences; the report, *Kids & Their Grownups: New Insights on Developing Dynamic Museum Experiences for the Whole Family* follows the museum’s evaluation of fifteen art-

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<sup>27</sup> Ibid, 320.

<sup>28</sup> Hollie Ecker and Sarah Mostow, “How Might You...? Seeking Inquiry in the Museum Studio.” *Journal of Museum Education* 40, no. 2 (July 1, 2015): 208.

making and play-based experiences for family audiences.<sup>29</sup> *Kids & Their Grownups* uses case studies of the fifteen interactive experiences, video documentation, family interviews, and online surveys.<sup>30</sup> The case studies of “Create Corners” document specific spaces in the DAM galleries designed for visitors to create art projects based on art in the collection. For the purpose of this thesis, Create Corners offers an example of art-making activities in an art museum. The DAM found that family activities in museum should take the comfort of families into consideration. This means designing spaces that fit both children and adults, though the report explains that comfort should also include making spaces welcoming to people with diverse backgrounds and needs.<sup>31</sup> For the family art-making programs covered by this thesis, art museum educators might include instruction in Spanish or other common non-English language, and recognize different cultural values present in local communities; they could also make sure that program spaces allow for strollers and wheelchairs, and provide accommodations for people with varying abilities. Another important finding from *Kids & their Grownups* is the importance of the art museum as a place for unique experiences. The DAM eventually created an educational goal recognizing the unique potential of art museums:

Our goal for every family activity is that it be grounded in the story, context, history, or creation of one-of-a-kind works of art. Whenever we’re developing a family experience we start with the object, dissecting and unpacking it for everything it can reveal, from the creative process to why it was made, who used

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<sup>29</sup> “Kids and Their Grownups: New Insights on Developing Dynamic Museum Experiences for the Whole Family,” (Museum evaluation and report, Denver Art Museum, 2013) <http://denverartmuseum.org/about/research-reports>.

<sup>30</sup> Ibid, 8.

<sup>31</sup> Ibid, 10.

it, and how it was displayed. All of those things become fodder for experiences we recreate for families.<sup>32</sup>

This researcher suggests that connecting art activities to art work in the museum collection is a possible best practice for family art-making programs at art museums. Overall, *Kids & Their Grownups: New Insights on Developing Dynamic Museum Experiences for the Whole Family* provides valuable insight into best practices for family art-making activities at art museums and the needs of families at those museums.

*Tapping into Creativity and Becoming Part of Something Bigger* documents the Denver Art Museum's push towards focusing on creativity as a museum mission, including using visitor art-making activities to support visitor creativity. The evaluation report shows case studies and evaluation data from visitor interviews and surveys during the *Spun* exhibition in 2013.<sup>33</sup> The quotes from surveyed visitors suggests the potential for art-making activities in museums to support visitor creativity and to help them forge connections with other visitors. As one visitor said, “It’s not just about looking at these pretty pictures but it taps into the collective unconscious of humanity, of culture and history, and then walking away thinking, ‘What is possible? What can I do?’”<sup>34</sup> The report suggests that including artists in programs and conversations with visitors benefitted both parties, “Artists benefitted from synergies with fellow creatives; visitors enjoyed experiencing and contributing to the creative vibe that reverberated throughout the

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<sup>32</sup> Ibid, 14.

<sup>33</sup> “Tapping into Creativity and Becoming Part of Something Bigger,” (Report, Denver Art Museum, 2014) <http://denverartmuseum.org/about/research-reports>.

<sup>34</sup> Ibid, 39.

DAM.”<sup>35</sup> *Tapping into Creativity* examines in detail the Denver Art Museum’s practices for designing for creativity, as well as visitors’ reactions to those activities. Overall, the report helps identify methods, such as focusing not just on the art product but the creative process itself and creating physical spaces where people are comfortable, already in use in the museum educator field for supporting visitor creativity and collaboration.

The *Connectors Series Report*, written by Shannon Thacker for the Columbus Museum of Art (CMA), summarizes the evaluation of audience and artist engagement with the Connector Series, a monthly public program at the CMA.<sup>36</sup> In the Connector Series, museum staff work with local artists, “defined inclusively and broadly, ranging from a barber to ghost hunters,” to create a hands-on experience for museum visitors.<sup>37</sup> The report looks at results from two surveys administered to program participants and guest artists respectively between February 2015 and November 2016. Results of the audience engagement survey found that program attendees most enjoyed the social and creative nature of the program which the report describes respectively as “‘interaction with the artists, friendly and approachable’, and ‘social aspect, doing something as a group,’” and, “‘personal accomplishment, joy in creating’ and ‘opportunity to work with unique materials or subject matter.’” These responses suggest to this researcher that museum visitors might enjoy educational programs that allow them to practice the skills of collaboration and creativity.

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<sup>35</sup> Ibid, 40.

<sup>36</sup> Shannon Thacker, *Connector Series Report*, (internal evaluation report, Columbus Museum of Art, 2016).

<sup>37</sup> Ibid, 1.



## ***21st Century Skills and Creativity, Collaboration, and Problem-Solving***

Stemming from education reform efforts in the United States, 21st century skills represent a broad range of knowledge, skills sets, and mental habits identified as essential to workers in the 21st century. These skills represent a shift away from memorization and towards skills like critical thinking and global competency. Andrew J. Rotherham, the Co-founder and Publisher of *Education Sector* and a writer for the blog Eduwonk.com, and Daniel Willingham, Professor of Psychology at the University of Virginia and the author of *Why Don't Students Like School?*, describe both the concept of 21st century skills and the challenges of implementing them in contemporary education in “21st Century Skills: The Challenges Ahead.” They explain, “the skills students need in the 21st century are not new. Critical thinking and problem solving, for example, have been components of human progress throughout history, from the development of early tools, to agricultural advancements, to the invention of vaccines, to land and sea exploration.”<sup>38</sup> However, the authors argue that the extent to which both individuals and society as a whole will rely on these skills is new to the current century.

The 21st century skills movement is spear-headed by the Partnership for 21st Century Learning (P21), a non-profit “founded in 2002 as a coalition bringing together the business community, education leaders, and policymakers to position 21st century readiness at the center of US K-12 education and to kick-start a national conversation on the importance of 21st century skills for all students.”<sup>39</sup> This organization was founded by Ken Kay and Diny Golder-Dardis

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<sup>38</sup> Andrew J. Rotherham and Daniel Willingham, “21st Century Skills: The Challenges Ahead,” *Teaching for the 21st Century* 67, no. 1 (September 2009): 16–21.

<sup>39</sup> Kristine Dorame, “Our History,” *Partnership for 21st Century Learning*, accessed May 04, 2017, <http://www.p21.org/about-us/our-history>.

with founding contributions by the United States Department of Education and a variety of corporate sponsors.<sup>40</sup> P21 created the *Framework for 21st century learning*, a document outlining and defining the actual skills involved with 21st century learning, and advocates for the importance of 21st century learning in United States educational policy and curriculum.<sup>41</sup>

The “21st Century Skills Map: The Arts” created by P21, in partnership with various art education organizations, including the National Art Education Association (NAEA), identifies specific ways in which 21st century skills can be applied to arts education.<sup>42</sup> The document makes a case for connecting 21st century skills and art education, “Collectively, the examples in this document demonstrate that the arts are among society’s most compelling and effective paths for developing 21st Century Skills in our students.”<sup>43</sup>

For this thesis, the sections in the P21 report on creativity, collaboration, and problem-solving are especially important. P21 defines the skill of creativity as “Demonstrating originality and inventiveness in work,” and, “being open and responsive to new and diverse perspectives,” while they suggest that educators focus on the connection between generating ideas with influence from a variety of sources and creating “personally meaningful products” as an outcome of creativity.<sup>44</sup> This researcher hypothesizes that creativity might show up in family art-making

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<sup>40</sup> Ibid.

<sup>41</sup> "Framework for 21st Century Learning." *Partnership for 21st Century Learning*, accessed April 12, 2017, <http://www.p21.org/our-work/p21-framework>.

<sup>42</sup> Colleen Dean, Christie M. Lynch Ebert, and Susan McGreevy-Nichols, “21st Century Skills Map: The Arts” (Partnership for 21st Century Skills, July 2010), [http://www.p21.org/storage/documents/P21\\_arts\\_map\\_final.pdf](http://www.p21.org/storage/documents/P21_arts_map_final.pdf).

<sup>43</sup> Ibid, 2.

<sup>44</sup> Ibid, 6.

programs as artwork that participants create with inspiration from both art in the museum collections and ideas from participants' own lives.

Collaboration is here defined as “demonstrating ability to work effectively with diverse teams, exercising flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal, and assuming shared responsibility for collaborative work.”<sup>45</sup>

Collaboration comes into play when families make art together, though as the art-making study in “Approaching Art Education as an Ecology: Exploring the Role of Museums” establishes with the study at the Children’s Museum of Pittsburgh, getting adults and children to assume shared responsibility for the artwork may be difficult for adults who prefer to only help facilitate their child’s art-making or to stay removed entirely from the process. However, the varying ages and ability of individuals in family groups makes collaboration especially important to art-making. For instance, family members who are skilled in idea generation can help the group come up with art project ideas or family members with better hand-eye coordination can help those who struggle with manipulating materials.

P21 combines critical thinking and problem solving into one section, though to this researcher critical thinking and problem-solving seem like related but separate skills. The definition provided that most closely relates to problem solving includes “identifying and asking significant questions that clarify various points of view and lead to better solutions,” and, “framing, analyzing and synthesizing information in order to solve problems and answer questions.”<sup>46</sup> In art education, manipulating physical materials—sometimes in ways new or

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<sup>45</sup> Ibid, 5.

<sup>46</sup> Ibid, 3.

strange to the learner—to communicate an idea or mental image requires a great deal of problem-solving. The 21st century skills definitions and examples offered by P21 provide common references to discuss with art museum educators how these skills are encouraged in family art-making programs.

A report by the Institute of Museum and Library Services (IMLS) *Museums, Libraries, and 21st Century Skills* explores the role of libraries and museums in teaching 21st century skills.<sup>47</sup> In the report's introduction, the authors claim,

Skills like critical thinking and problem solving are not only relevant for K-12 students and schools. There are millions of adult learners not in formal education programs looking to renew workplace skills. Even school-aged children spend the overwhelming majority of their waking hours in non-school settings, and increasingly they spend this time in organized out-of-school settings such as after-school, museum, and library programs. In these settings, they develop important skills—such as problem solving, collaboration, global awareness, and self-direction—not only for lifelong learning and everyday activities, but also for use back in K-12 schools and college classrooms.<sup>48</sup>

The idea that informal education settings like museums can reach intergenerational audiences, and that 21st century skills might be valuable to people of all ages helps explain their relevance to family art-making programs. *Museums, Libraries, and 21st Century Skills* includes seven case studies from different museums and libraries; for the purposes of this thesis, the case study at the Philadelphia Museum of Art (PMA) is most relevant.<sup>49</sup> The case study follows *Art Speaks*, a middle school program at the PMA, wherein middle school students practice looking, interpreting, and talking about certain works of art in the museum collection over an extended

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<sup>47</sup> Institute of Museum and Library Services, "Museums, Libraries, and 21st Century Skills," (July 1, 2009): *ERIC*, EBSCOhost (accessed April 20, 2017).

<sup>48</sup> Ibid, 4.

<sup>49</sup> Ibid, 27.

period of time. According to IMLS, *Art Speaks* helps students practice the skills of visual literacy, cross-disciplinary thinking, communication and collaboration, critical thinking, and problem solving.<sup>50</sup> Since *Art Speaks* focused on looking at and interpreting art, rather than making art, not all of these skills should be relevant to family art-making programs. However, the PMA case study and *Museums, Libraries, and 21st Century Skills* overall provide one resource for connecting 21st century skills to art museum education.

### *Creativity*

In attempting to research 21st century skills, the skill of creativity poses a unique challenge due to the varied ways people in fields from education to art to business have used the term. Diane B Jaquith, an elementary school art teacher and the co-founder of Teaching for Artistic Behavior, offers one perspective on the practical considerations of defining and incorporating creativity into art education in her 2011 article for *Art Education*, “When is Creativity? Intrinsic Motivation and Autonomy in Children's Artmaking”.<sup>51</sup> Jaquith briefly acknowledges the struggle to clearly define creativity. From that point, Jaquith provides recommendations for the conditions art teachers can create to support student creativity.

The article outlines how intrinsic and extrinsic motivation affect creativity. According to Jaquith, “Intrinsic motivation and student interest are central to creative problem finding and solving. In learning environments where self-directed learning and ambiguity are the norm,

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<sup>50</sup> Ibid.

<sup>51</sup> Diane B. Jaquith, “When Is Creativity? Intrinsic Motivation and Autonomy in Children’s Artmaking,” *Art Education* 64, no. 1 (2011): 14–19.

learners challenge themselves to take risks.”<sup>52</sup> Families usually attend museums by choice.

However, children brought to a museum family program by adults may lack intrinsic motivation to participate or feel pressure to please their caretaker by making a project that will look good to the adult. In both cases the child is unable fully practice creativity.

Extrinsic motivation has a more complicated role: “Extrinsic factors may deter creativity when learners are distracted by control factors or extraneous information.”<sup>53</sup> The article lists overly narrow assignments, inflexible deadlines, emphasis on grades, and a desire to please authority figures among the factors that inhibit creativity, though Jaquith acknowledges certain constraints are required for schools to function.<sup>54</sup> While art education in museums may already avoid many of the detrimental extrinsic motivators listed by Jaquith, other detrimental factors may be present depending on the structure of each program. The detrimental extrinsic motivators of grades and competitive atmospheres are not typical pressures in the museum environment. However, length of activity is a common pressure. The variable duration of art-making activities may be a detrimental factor for family audiences. While a shorter program might entice busy families to join in the art activities, those programs may not give sufficient time for artistic play and problem-finding, which Jaquith emphasizes as being conducive to student creativity.<sup>55</sup>

For art teachers, Jaquith recommends a variety of best practices, some of which may be useful to museum educators as well. In particular, the recommendations to “organize lessons

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<sup>52</sup> Ibid, 15.

<sup>53</sup> Ibid.

<sup>54</sup> Ibid.

<sup>55</sup> Ibid, 16.

around intrinsic motivators, including choice, play, divergent thinking, and making relevant connections,” and “Focus more on process than product and look forward to a surprise of open-ended solutions,”<sup>56</sup> may be a natural fit for family programs. Program elements that promote play, choice, and other intrinsic motivators equally satisfy participants’ desires to have fun and to learn.

### *Collaboration*

P21 defines collaboration as the ability to “work effectively with diverse teams.”<sup>57</sup> In this thesis, collaboration has been identified as one of three 21st century skills especially relevant to family art-making programs in art museums. P21’s emphasizes collaboration as one of the “4Cs”, four critical skills within the 21st century learning movement which include collaboration, creativity, communication, and critical thinking. This repeated emphasis on collaboration supports the concept of collaboration as its own educational goal.<sup>58</sup>

“Making Cooperative Learning Work” by David W. Johnson and Roger T. Johnson, both professors of education and co-directors of the Cooperative Learning Center at the University of Minnesota, identify what is and is not a cooperative learning group as well as some types of

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<sup>56</sup> Ibid, 19.

<sup>57</sup> Colleen Dean, Christie M. Lynch Ebert, and Susan McGreevy-Nichols, “21st Century Skills Map: The Arts” (Partnership for 21st Century Skills, July 2010), 6. [http://www.p21.org/storage/documents/P21\\_arts\\_map\\_final.pdf](http://www.p21.org/storage/documents/P21_arts_map_final.pdf).

<sup>58</sup> “An Educator’s Guide to the ‘Four Cs,’” *National Education Association*, accessed November 17, 2017, <http://www.nea.org/tools/52217.htm>.

cooperative learning.<sup>59</sup> Students in successful cooperative learning groups, “work together to accomplish shared goals. Students discuss material with each other, help each other understand it, and encourage each other to work hard...The result is that the group is more than the sum of its parts.”<sup>60</sup> High-performance cooperative learning groups, which the authors consider even more successful, “meet all the criteria for being a cooperative learning group and outperforms all reasonable expectations...The level of commitment members have to each other and the group’s success is beyond that of most cooperative groups.”<sup>61</sup> In this researcher’s opinion, family groups may more often fall under the category of high-performance cooperative groups in that families have long-standing social bonds and in that adult caregivers generally care about their children’s educational success.

The article also outlines a range of different kinds of cooperative learning: formal group projects, informal group learning with temporary cooperative groups, and cooperative base groups. Cooperative base groups encompass long-term cooperative learning and are “heterogeneous with stable membership”; these groups are also meant to facilitate members’ cognitive and social development.<sup>62</sup> Though formal and informal cooperative learning may be possible in family art-making programs through projects that involve the whole participant group and improvised collaboration between participants, cooperative base groups seems to best fit the interactions of families members learning together.

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<sup>59</sup> David W. Johnson and Roger T. Johnson, “Making Cooperative Learning Work,” *Theory Into Practice*, 38.2 (1999): 67-73.

<sup>60</sup> Ibid, 68.

<sup>61</sup> Ibid.

<sup>62</sup> Ibid, 69.



In *Art Education*, Neil Owen Houser, an Assistant Professor in the Department of Educational Development at the University of Delaware, wrote “A Collaborative Processing Model for Art Education” about using socialization to further student learning.<sup>63</sup> Houser’s model is based on the work of Lev Vygotsky, who believed all learning is socially mediated.<sup>64</sup> Much like Jacquith in “When is Creativity”, Houser claims that the learner’s interests and intent must be the starting point for instruction.<sup>65</sup> This researcher suggests that involving the learner in decisions like “when, to what extent, and by what means, knowledge will be acquired,” also fosters a more equal collaboration between student and teacher.<sup>66</sup>

Houser’s model relies on cycles of solo and group activities.<sup>67</sup> Students are first given a broad range of artistic materials, styles, and methods with which to experiment. Then students individually generate ideas for new artworks. Next, students share these ideas in small groups to get feedback from other students. This cycle of individual making and group reflection continues throughout the art-making process.<sup>68</sup> For the family art-making programs studied in this thesis, Houser’s model for collaboration offers both challenges and potential benefits. Many of the family programs studied take place over one hour or less, while Houser’s projects take place over

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<sup>63</sup> Neil Owen Houser, “A Collaborative Processing Model for Art Education,” *Art Education* 44, no. 2 (1991): 33–37, <https://doi.org/10.2307/3193303>.

<sup>64</sup> L. S. Vygotskiĭ et al., *Mind in society: the development of higher psychological processes* (Cambridge, MA: Harvard University Press, 1978).

<sup>65</sup> Neil Owen Houser, “A Collaborative Processing Model for Art Education,” *Art Education* 44, no. 2 (1991): 33. <https://doi.org/10.2307/3193303>.

<sup>66</sup> Ibid.

<sup>67</sup> Ibid, 35.

<sup>68</sup> Ibid, 35-36.

days or weeks. However, educators leading family art-making programs may use a shortened version of Houser’s prompts for encouraging families to discuss and reflect on their art.

### *Problem-Solving*

Making art by manipulating physical materials to express an idea involves a great deal of problem-solving. The 21st century skills definition of problem-solving earlier in this section provides a starting point for examining how problem-solving relates to art education. Rebecca Sokol Levine’s article “A Closer Look: Student Engagement in Artmaking,” further explores the topic of problem-solving in art education. “A Closer Look” follows Levine’s study of middle-school art students’ engagement with a class based on “art problems”.<sup>69</sup> Levine defines art problems as “an open-ended question or statement focused on elements of artmaking [sic.] process that challenges students to make choices and generate original ideas to craft a product that has personal meaning.”<sup>70</sup> The study follows a class of 16 eighth graders through a 10-session unit on bookmaking, wherein Levine—both the teacher and researcher in this study—measures the students’ engagement with the project. Based on this study, the author concludes that art problems are most effective when they A) “invite personal experiences and personal expression,” B) allow students to choose “new or unique materials [that] allow [them] to actively pursue experiences with various media,” and C) offer students “both open-ended solutions and aesthetic outcomes.”<sup>71</sup> For family art-making programs in art museums, Levine’s study offers a model for

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<sup>69</sup> Rebecca Sokol Levine, “A Closer Look: Student Engagement in Artmaking,” *Art Education* 62, no. 4 (July 2009): 13–17.

<sup>70</sup> Ibid, 13.

<sup>71</sup> Ibid, 16.

creating open-ended projects based on art problems. This model is valuable since surveyed educators in this thesis research study often mentioned using open-ended projects or prompts in their programs.

The existing research surveyed in this chapter related to three overall categories: family groups in museums; existing family art-making programs in art museums; and creativity, collaboration, and problem-solving as 21st century skills. In many cases, the authors recommend similar practices for best encouraging creativity, collaboration, and problem-solving in art-making activities. Researchers from the literature above generally suggest including opportunities for learners to play, to choose their own materials and ideas, and to work with open-ended projects in art-making programs. Findings from this review of existing literature inform the methodology of research study and discussion of this thesis.

### Chapter III: Methodology

For art museums that offer programs for intergenerational audiences, family programs involving art-making allow people of all ages to make art in a low-stakes, social atmosphere. The activities in family art-making programs also provide an opportunity for participants to practice the kind of skills posited to be especially valuable to people living and working in the 21st century.<sup>72</sup>

Research in this thesis started with the hypothesis that art museum educators structure family art-making programs in ways that encourage the 21st century skills of creativity, collaboration, and problem-solving. The researcher reviewed the related existing research to design a study of art museum educators working with family art-making programs. To test this hypothesis, the researcher collected data on the structure and content of family art-making programs at art museums in the United States; the process of how museum educators plan and facilitate these programs; the actual or stated goals of these programs; potential audiences of the programs; and how these programs might encourage the 21st century skills of creativity, collaboration, and problem-solving.

Between the months of July and October 2017, the researcher conducted online surveys and follow-up interviews with art museum educators. The online surveys were distributed via email and listserv to museum educators who run family art-making programs in art museums in order to achieve a sample size of 100, though this study only received 83 online surveys. The researcher consulted online listings of US art museums to find individual websites for museums

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<sup>72</sup> Andrew J. Rotherham and Daniel Willingham, “21st Century Skills: The Challenges Ahead,” *Teaching for the 21st Century* 67, no. 1 (September 2009): 16–21.

with family art-making programs.<sup>73</sup> Participants in the online survey were found through relevant contact information on each museum's website; the researcher emailed survey links to either education departments or individual staff members at each museum. Calls for participation were also distributed through the American Alliance of Museums (AAM) listserv, the Museum Education Division listserv for the National Art Education Association (NAEA), and the Museum Education listserv on museum-ed.org. Since survey participants had the option to complete the online survey anonymously, some museums may be represented more than once in this research. However, based on the those respondents who did give their contact information and based on descriptions of the family art-making programs, this researcher believes that each respondent represents a different family art-making program.

Though responses from the online survey were anonymous, one question on the survey asked participants about their willingness to complete a follow-up interview. Through random selection of survey participants who indicated they would be willing to be interviewed further, the researcher conducted follow-up phone interviews with seven art museum educators to collect qualitative data on the goals, process of creating, and potential connections to 21st century skills for these programs. The phone interviews expanded on answers given by participants of the online survey of art museum educators, allowing for more detailed descriptions of individual family art-making programs and their potential connections to the skills of creativity, collaboration, and problem-solving.

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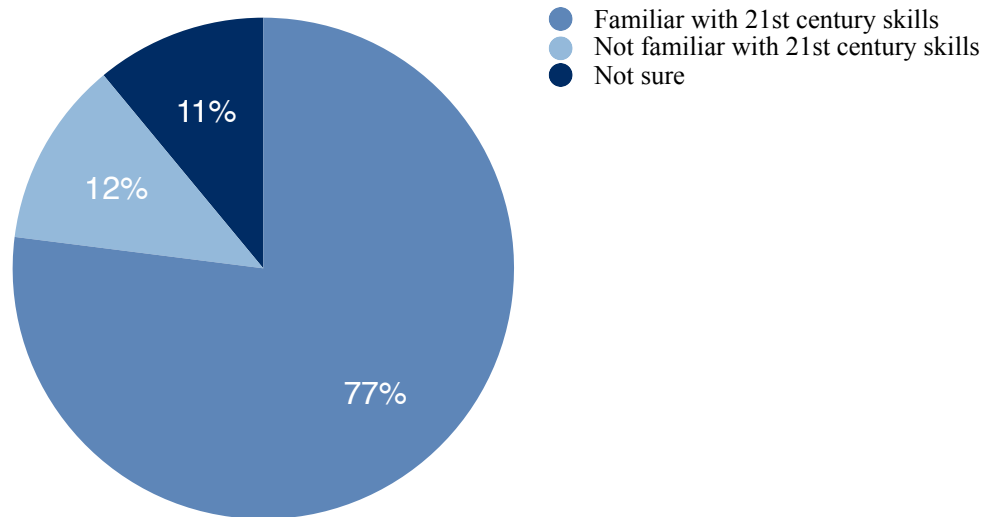
<sup>73</sup> "Art Museums in the United States," *Artcyclopedia*, accessed April 19, 2017. <http://www.artcyclopedia.com/museums-us.html>.

## **Chapter IV: Results**

Many art museums offer some kind of family program, often with a hands-on or art-making component. Family art-making programs create a specific time and place for people of multiple ages to join in art-making activities and learning. In order to determine what ways, if any, art museum educators design family art-making programs to encourage the 21st century skills of creativity, collaboration, and problem-solving, an online survey of art museum educators was conducted, followed by longer interviews with seven survey participants. Over a four-month period, 83 responses were collected from art museum educators who lead family art-making programs. Seven follow-up interviews provided more detailed information about the specific structure and goals of certain programs. The results of this study answer the primary research question of this thesis, as well as provide contextual knowledge on the structure and goals of family art-making programs at art museums in the US.

To participate in this thesis research, surveyed educators were not required to have prior knowledge of 21st century skills in order to reflect on the inclusion of creativity, collaboration, and problem-solving in family art-making programs. However, the online survey did find that 77% (n = 63) of the respondents are familiar with the concept of 21st century skills, while 11% of respondents were unsure, and 12% were not familiar with the concept of 21st century skills (see figure 1).

**Figure 1: Art museum educators' familiarity with the concept of 21st century skills**



The museum educators interviewed by phone who were familiar with the concept of 21st century skills had usually learned about 21st century skills in the context of K-12 education. During the interview, several respondents made connections between 21st century skills and their family programs, though only one of the interviewees reported using the 21st century skills specifically to design their programs. One educator from an art museum in Pheonix, Arizona discussed how family programs could fill in gaps in school art education and encourage all family members to be lifelong learners.<sup>74</sup> After reading 21st century skills definitions for creativity, collaboration, and problem-solving in the online survey, another educator at a university museum in New Jersey saw connections between 21st century skills and the family art-making program at her museum. That educator mentioned in a follow-up interview, “I read your survey and felt like there were some parallels. Focusing on creativity rather than mastery of a technique has always been important [for my program]. Thinking of artists as problem-solvers

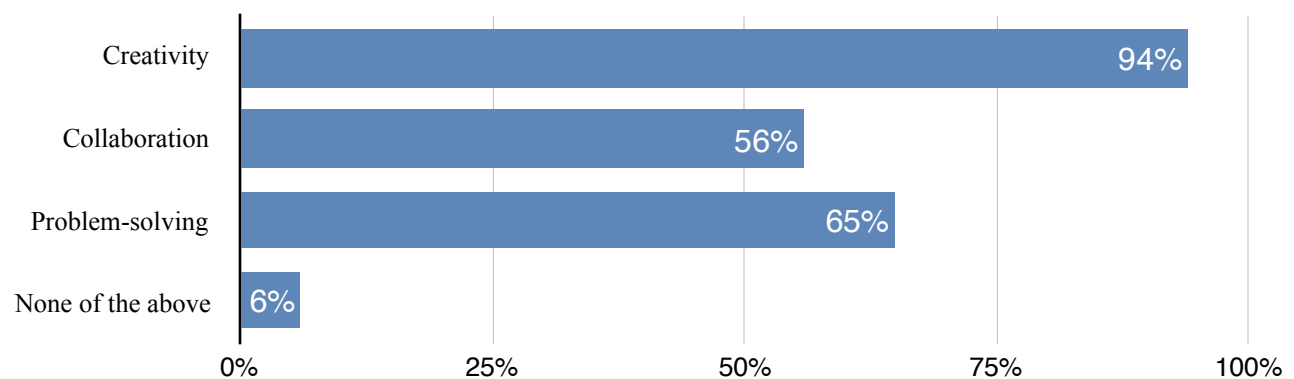
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<sup>74</sup> See Appendix 4: Follow-Up Interview Transcript 1.

is profound for me. Artists are communicators and problem-solvers as much as engineers or scientists, but the outcome is different.”<sup>75</sup>

Responses to the question, “Do your overall educational goals for this program include the skills of creativity, collaboration, and/or problem-solving...?” showed that most of the family art-making programs had goals which included some combination of creativity, collaboration, and problem-solving. Creativity was the most commonly included 21st century skill, selected by 94% (n = 76) participants. Collaboration and problem-solving were also selected by 56% and 65% survey respondents respectively as part of the program goals (see figure 2).

**Figure 2: Programs goals include creativity, collaboration, and/or problem-solving as defined by 21st century skills (N 81)**



The majority of educators surveyed found the 21st century skills of creativity, collaboration, and problem-solving to be included in the goals for family art-making programs. However, the open-ended question “What are your overall educational goals for this program?” revealed a variety of common goals from the 79 responses. Many of these responses indicated more than one theme from Table 3 below. When asked whether creativity, collaboration, or

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<sup>75</sup> See Appendix 8: Follow-Up Interview Transcript 5



problem-solving were included in their program goals, 76 and 45 educators indicated that their program goals included creativity and collaboration respectively. However, when asked to describe their program goals in a prior question, only 19 educators specifically mentioned creativity in their program goals and only 14 educators mentioned collaboration or socialization as a program goal (see table 1).

<b>Table 1: Themes in stated goals for family art-making programs (N 79)</b>	
Connect participants to museum exhibitions and artwork	45
Offer a hands-on experience in the museum	27
Engage community members and new visitors with the museum	26
Allow participants to practice creativity	19
Allow families to make art together and/or socialize	14

In follow-up interviews, educators tended to mention the goal of connecting families to the museum through giving families a fun experience at the museum or by making the museum accessible in new ways. One educator at a museum attached to a university in San Juan, Puerto Rico described ways her museum removed barriers to family attendance, “The museum offers free admission [on the day of the program], the workshops are also free... We want to make the museum accessible in every way that we can. We offer an opportunity to access art materials in a different context.”<sup>76</sup> Interviewees also mentioned viewing museums as free-choice learning environments.

In describing the ways creativity, collaboration, and problem-solving were incorporated in these programs, several trends in responses emerged for each skill set. Educators for whom

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<sup>76</sup> See Appendix 7: Follow-Up Interview Transcript 4.

creativity was an overall educational goal tended to report that they incorporated creativity in their programs through open-ended projects, through using artists and works in the museum as models for creativity, through the studio environment and choice of materials offered, or through encouraging participants to generate original ideas for their artwork. Some respondents indicated more than one method used to encourage participant creativity (see table 2).

<b>Table 2: Most common themes in methods for encouraging participant creativity in family art-making programs when creativity is an educational goal (N 75)</b>	
Open-ended projects	36
Studio environment and materials	16
Museum collection and artists as models	7
Idea generation	5

Twenty-two of the 83 survey participants found ways their programs might encourage creativity even for programs that did not explicitly include creativity as an educational goal. Those responses fell into the previously defined categories of open-ended projects or prompts, studio environments and art-making materials, generating original ideas, or expressing themselves through art. Three respondents to that question found multiple ways their programs incorporated the skill of creativity (see table 3).

<b>Table 3: Common themes in responses to how family art-making programs might encourage creativity even if creativity is not a program goal (N 22)</b>	
Open-ended projects	14
Studio environment and materials	3
Idea generation	1
Personal expression	2

Forty-five educators chose collaboration as a skill included in their program goals as shown in Table 4. Of those respondents who elaborated about how collaboration as an educational goal was incorporated in their programs, the types of collaboration described included collaboration between intergenerational family members, collaboration through group art projects, collaboration through set-up of physical space, and collaboration through guided group discussion. One educator also reported that their program used artists from the museum's collection as role models for artistic collaboration. Collaboration between intergenerational family members was most frequently reported.

<b>Table 4: Themes in methods for encouraging participant collaboration in family art-making programs when collaboration is an educational goal (N 33)</b>	
Intergenerational collaboration	16
Design of group projects	13
Group discussion	4
Set-up of program space	2
Artists as models for collaboration	1

When asked to identify ways their family art-making program might encourage participant collaboration even if collaboration was not an overall goal, 26 respondents described ways those programs might encourage collaboration (see table 5). Responses could be sorted into the categories of intergenerational collaboration, group discussion, group projects, and the arrangement of furniture and supplies in the program space. However, more respondents identified the set-up of the physical studio or classroom as encouraging collaboration than those who identified how collaboration as an educational goal was incorporated into their program.

Two respondents identified multiple ways their programs might encourage participant collaboration.

<b>Table 5: Themes in responses to how family art-making programs encourage participant collaboration when collaboration is not an educational goal (N 26)</b>	
Set-up of program space	7
Design of group projects	6
Intergenerational collaboration	6
Group discussion	5

Responses from surveyed educators also indicated that whether family members are typically asked to make art together varies widely from program to program (N 83). Forty-six percent (n = 38) of respondents indicated that whether family members are typically asked to work together or individually varies. Another 14% (n = 12) of surveyed educators wrote in a response that also indicates that whether family members make art together varies, answering that participants choose whether to work together or separately, that adult family members will sometimes help younger participants, or that participants are encouraged but not specifically asked to work together. Only one of the educators in follow-up interviews specifically asked families to socialize or make art across family groups, though all seven respondents discussed ways the environment for their program encouraged visitors to socialize—often through shared work tables or supplies. One educator at a museum in Phoenix, Arizona talked about how setting up group tables created opportunities for families to share and experience intergenerational learning.<sup>77</sup>

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<sup>77</sup> See Appendix 4: Follow-Up Interview Transcript 1.

Of the 53 educators who selected problem-solving as an educational goal for their family art-making program, 39 educators described how those programs incorporated problem-solving for participants with two respondents describing multiple ways problem-solving was incorporated (see table 6). The ways family art-making programs were reported to include problem-solving could be categorized as problem-solving through experimentation with art materials, problem-solving through the physical execution of ideas, using artists as role models for problem-solving in art, or through prompts or challenges for participants to complete. For instance, participants might be asked to create something that moves or to create with limited materials.

<b>Table 6: Most common themes in methods for encouraging participant problem-solving in family art-making programs when problem-solving is an educational goal (N 41)</b>	
Experimentation with materials	17
Execution of ideas	14
Artists as models for problem-solving	5
Prompts or challenges	4

Survey respondents also identified ways their family art-making programs might encourage participants to practice problem-solving even if problem-solving was not included in the program's educational goals. Their responses fell mainly into the categories of problem-solving through experimentation with art materials (n = 7) and problem-solving through the execution of ideas into finished art (n = 7).

When asked to describe a typical session or art activities participants might complete in the family program, the 74 responses further showed the content and structure of family art-making programs (see table 7). Most often, responses indicated that art activities in the family

programs are based on artworks in the museum galleries or special exhibitions (n = 23). A later question revealed that of the 83 programs surveyed 48% (n = 40) of the programs include a tour or visit of the museum galleries, and 37% (n = 31) sometimes include a visit or tour of the museum galleries.

<b>Table 7: Common themes in descriptions of art activities in family art-making programs (N 74)</b>	
Projects based on art in the museum galleries	23
Guided discussions	16
Program is drop-in and does not require pre-registration	12
Art activities involve material exploration	12
Each session of the program includes multiple art activities	5

## Chapter V: Discussion

Art museums often offer programs that let family audiences experiment with artistic processes and materials. Family art-making programs create a specific space where people of multiple ages are invited to join in art-making activities and learning, but they are also opportunities for families to play and socialize in the museum. However, little research exists on these programs as a whole. This thesis uses 21st century skills as a framework to examine how art museum educators design family art-making programs to foster the skills of creativity, collaboration, and problem-solving. To test the hypothesis that educators design family art-making programs in art museums to encourage creativity, collaboration, and problem-solving, the researcher conducted online surveys with 83 art museum educators across the US as well as longer follow-up interviews with seven survey participants.

### *21st Century Skills as a Concept*

The results of the online survey and phone interviews with art museum educators who work on family art-making programs show that these educators are mostly aware of 21st century skills. However, responses from the phone interviews especially suggest that art museum educators do not always connect 21st century skills to their work with family programs. In one phone interview, an educator discussed how she was familiar with 21st century skills through working on K-12 programs but considered her family art-making programs to fill potential deficits in art education in schools, teaching people to be lifelong learners.<sup>78</sup> In another phone interview one educator mentioned making a connection between 21st century skills and the

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<sup>78</sup> Berg, D. (August 1, 2017), telephone interview.

family art-making program while reading the attached descriptions of 21st century skills from the online survey; she saw a parallel focus on creativity rather than discipline-specific skills, and a focus on using artists as role models for problem-solving.<sup>79</sup>

One online survey question asked the art museum educators to indicate if any of the skills of creativity, collaboration, or problem-solving were included in their family art-making program goals. Ninety-three percent of the educators found some combination of creativity, collaboration, and problem-solving included in their program goals. Even for the five respondents who did not find creativity, collaboration, or problem-solving to be included in their program goals, these skills were considered by-products of the family art-making program by four of these respondents. One such educator working at a university art museum in New Jersey wrote,

Many of our visitors are first timers, and in a lesser scale, we have repeat participants. Instead of pushing towards evidence of creativity, collaboration, or problem-solving, the experience provides a relaxed atmosphere where participants choose how and when they actively engage in dialoguing about art and in the art-making process. The results unfold as what can be considered as evidence of one or a combination of the three (creativity, collaboration, or problem-solving skills).<sup>80</sup>

This suggests that family art-making programs can create opportunities to practice 21st century skills even in programs where community engagement or building new audiences are the stated goal.

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<sup>79</sup> Potter, A. (August 18, 2017), telephone interview.

<sup>80</sup> Online survey of art museum educators, 2017.



## *Creativity*

A question about the inclusion of 21st century skills in program goals showed that most of the family art-making programs had goals which included some combination of creativity, collaboration, and problem-solving. The surveyed art museum educators overwhelmingly chose creativity as included in their program goals. Art activities, in general, have a strong association with creativity, which might indicate why creativity appears in 94% of the surveyed program goals. Educational goals indicate the broad aims of family art-making programs; the surveyed educators also described how they incorporated creativity in their programs. Educators' responses fell into categories of incorporating creativity through open-ended projects, through using artists and works in the museum as models for creativity, through the studio environment and materials offered, and through encouraging participants to generate original ideas for their artwork. The majority of these programs usually or sometimes include a visit to the museum galleries; many respondents also described connecting participants to artwork in the museums as an educational program goal. All of the follow-up interviewees and 31% (n = 23) online survey respondents mentioned that art projects in these programs were based on artwork in the museum. Tours of museum galleries during art-making programs may encourage participant creativity by providing inspiration for later art-making, and by using artists as models for how to problem-solve with art.

Responses vary greatly for a question about how long program participants are expected to spend on art-making activities, though in the most common responses, 31% (n = 26) of surveyed educators expected families to spend one hour or less on art-making activities and another 31% of respondents expected families to spend 30 minutes or less on art-making

activities. Research suggests that allowing enough time for learners to play and experiment while making art facilitates learner creativity. Write-in responses frequently indicated that individual families chose on their own how long to engage in art-making activities. The write-in responses may indicate that many family art-making programs are drop-in, just as six of seven phone interview participants indicated that their programs followed a drop-in format. That families choose how long to participate in the program may also be a sign of free-choice learning, which research indicates is a factor for encouraging creativity.<sup>81</sup>

### ***Collaboration***

Of the educators surveyed, 56% (n = 45) selected collaboration as a skill included in their family art-making program goals. Their descriptions of how they incorporated collaboration in these programs involved collaboration between intergenerational family members, collaboration through group art projects, and collaboration through facilitated group discussions. Respondents most frequently cited collaboration between family members, though fewer indicated collaboration as included through group projects. This may show that collaboration happens through adults assisting in children's art-making activities.

In online surveys and follow-up interviews, educators also mentioned that the physical space of their programs encouraged collaboration, often through the placement of group tables and project supplies. Using large tables as group workspaces could allow participants to socialize, work on group art projects, and take ideas from other participant artwork. Placing art

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<sup>81</sup> Diane B. Jaquith, "When Is Creativity? Intrinsic Motivation and Autonomy in Children's Artmaking," *Art Education* 64, no. 1 (2011): 14–19.

supplies in communal spaces also forces participants to share supplies and interact with each other.

Whether families members work together or individually to complete art-making activities varies widely. Eleven of the twelve write-in responses for that question also indicated that family collaboration varied or was a choice for the individual program participants. While these responses indicating that families choose whether to collaborate may be another indicator of free-choice learning, they also suggest that families are not typically asked by facilitators to collaborate by completing a group art project.

### ***Problem-solving***

Thirty-eight survey respondents also selected problem-solving as part of the program goals, incorporated through experimentation with art materials, problem-solving through the physical execution of ideas, or using artists as a model for problem-solving. Many of these methods of including problem-solving in family art-making programs overlap with reported methods of encouraging creativity, and suggest that educators foster problem-solving skills through the structure of the art-making program itself. Educator responses that mention that participants must use problem-solving skills to execute their ideas or to manipulate art materials with which they might be unfamiliar indicate a connection between problem-solving and the act of making art, as previous research suggests.<sup>82</sup>

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<sup>82</sup> Lois Hetland, *Studio Thinking 2: The Real Benefits of Visual Arts Education*, Second Edition (New York: Teachers College Press, 2013).

### ***Limitations of the Research***

Both practical considerations in gathering survey data and the nature of self-identified responses limit the scope of this research. The online survey was only sent to museum educators and museum professional networks in the United States, so the conclusions of this research may not apply to art museums in other countries. A recent report from IMLS estimates the US contains 35,000 museums, with 4.5% or approximately 1,575 of those categorized as art museums.<sup>83</sup> However, no data exists on how many of those 1,575 art museums run family art-making programs. The online survey portion of this research included responses from 83 museum educators, but that sample size may not be large enough to accurately represent family art-making programs as a whole.

This research study focused on how art museum educators design family art-making programs, but that research does not fully extend to how said programs are carried out. The majority of the data was self-reported by participants in the online survey and phone interviews. The study did not cover those factors that may encourage or discourage creativity, collaboration, and problem-solving that participants did not report. Educators may have been unaware of certain factors or unable to report them through the online survey or phone interviews. Several questions in the study asked educators about program goals rather than program outcomes; the focus on goals led to data about the broad overarching aims of these programs rather than the specific actions taken to achieve those goals. However, the online survey question, “If the overall

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<sup>83</sup> Guiliana Bullard, “Government Doubles Official Estimate: There Are 35,000 Active Museums in the U.S.”(Press Release, Institute of Museum and Library Services, 2014). Accessed November 2, 2017. <https://www.imls.gov/news-events/news-releases/government-doubles-official-estimate-there-are-35000-active-museums-us>.

educational goals for this program include creativity, collaboration, or problem-solving, describe how these skills are incorporated. Please give an example of how you include each,” and the question, “Even if not explicitly stated in your program goals, are there any parts of the program that you believe would encourage creativity, collaboration, or problem-solving based on the above definitions? How so,” provide data on some of the practical steps taken to achieve program goals.

## Chapter VI: Conclusions

Many art museums already offer programs aimed at a family audience with a hands-on or art-making component. These programs vary from museum to museum in structure, frequency, and intended audience, but as a whole, they offer a place for people of all ages to make art together. Family art-making programs already have many of the characteristics needed to help participants the kinds of skills cited by education reformers to be especially important in the 21st century.<sup>84</sup>

In order to find out what ways, if any, art museum educators design family art-making programs to encourage creativity, collaboration, and problem-solving, the researcher conducted a study through an online survey of 83 educators and follow-up interviews with eight survey participants that asked art museum educators about their family programs. Based on this study, conclusions can be made about the ways in which art museum educators design family art-making programs to foster the 21st century skills of creativity, collaboration, and problem-solving.

Art museum educators are mostly familiar with the concept of 21st century skills and can find the skills of creativity, collaboration, and problem-solving in their programs, but educators do not necessarily consider the skills they are fostering as 21st century skills specifically when designing family art-making programs. In follow-up interviews all but one of the educators connected their awareness and use of 21st century skills to their school programs. This connection to K-12 education is unsurprising considering that 21st century skills originated as an

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<sup>84</sup> Andrew J. Rotherham and Daniel Willingham, “21st Century Skills: The Challenges Ahead,” *Teaching for the 21st Century* 67, no. 1 (September 2009): 16–21.

education reform movement for college and workplace readiness.<sup>85</sup> That museum educators generally only connect 21st century skills to school programs suggests that educators do not consider 21st century skills as relevant to family programs as well.

P21 offers useful definitions and research on collaboration, problem-solving, and creativity, which is especially useful in helping to clarify definitions of skills like creativity that have multiple definitions for different contexts. However, the skills of creativity, collaboration, and problem-solving defined by 21st century skills also exist separate from the educational concept of 21st century skills. Educators who could describe ways their programs would encourage creativity, collaboration, and problem-solving were included in their family art-making programs may be considering those skills separately from the concept of 21st century skills. Some responses in the online survey mentioned that those educators considered creativity, collaboration, and problem-solving to be side-effects rather than the main goal of their programs or that the educators were not consciously aware of the inclusion of those skills.

The majority of surveyed educators considered creativity included in the goals for their family art-making programs. Existing research indicates creativity as a main benefit of art education.<sup>86</sup> In teaching creativity, respondents described ways in which the structure of the program or design of the art-making activities encouraged participant creativity. Program structure, art-making activities, facilitation, and studio environment all play a role in the ways educators teach creativity, collaboration, and problem-solving in family art-making programs.

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<sup>85</sup> Kristine Dorame, "Our History," P21.org, accessed May 04, 2017, <http://www.p21.org/about-us/our-history>.

<sup>86</sup> Lois Hetland, *Studio Thinking 2: The Real Benefits of Visual Arts Education*, Second Edition (New York: Teachers College Press, 2013).

Some factors, such as limited program time to experiment or narrowly defined projects may inhibit these skills if present in family art-making programs.<sup>87</sup> Art museums, which represent free choice learning environments with access to original art objects, have the opportunity to teach 21st century skills to family audiences. They can model the importance of creativity, collaboration, and problem-solving, and create opportunities to practice those skills.

### ***Applications for the Field***

Through facilitation, program structure, studio environment, and material choice, art museum educators are already designing family art-making programs in ways that encourage the 21st century skills of creativity, collaboration, and problem-solving. Family programs at art museums allow adults and children to learn together, outside of a formal school setting, with original art objects in the galleries and without the pressure of grades. Though 21st century skills originate from K-12 education reform, the people outside the formal education system will also live and work in the 21st century; those skills highlighted by the 21st century skills movement will be useful to non-students too.<sup>88</sup>

By sharing this research through professional networks and with study participants, art museum educators will have access to information on the ways family art-making programs foster creativity, collaboration, and problem-solving. Art museums can use the inclusion of 21st century skills in these programs as positive evidence for the value of family programs. This

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<sup>87</sup> Diane B. Jaquith, “When Is Creativity? Intrinsic Motivation and Autonomy in Children’s Artmaking,” *Art Education* 64.1 (2011): 14–19.

<sup>88</sup> Institute of Museum and Library Services, *Museums, Libraries, and 21st Century Skills*, (July 1, 2009): *ERIC*, EBSCOhost (accessed April 20, 2017).



research can act as evidence for the educational value of family art-making programs for stakeholder inside and outside of the museum. Looking at family art-making programs through the lens of 21st century skills is one way for museum staff to articulate the learning that happens in these programs. Since schools do not always offer much, if any, art education, museums can fill that need in their communities and connect family programs to 21st century skills as taught in schools. The learning happening in family programs will contribute to the overall impact of the museum.

By recognizing and reflecting on the inclusion of creativity, collaboration, and problem-solving in family art making programs, museum educators have the opportunity to plan for these skills in more thorough, deliberate ways. The chart below illustrates recommendations for designing family art-making programs to foster creativity, collaboration, and problem-solving based on the research of this thesis.<sup>89</sup> Many of the key factors for fostering creativity, collaboration, and problem-solving in family art-making programs overlap between each skill. Creativity and problem-solving, in particular, share recommendations for problem-finding and experimentation with materials. Educators can use the “Factors and methods for fostering creativity, collaboration, and problem-solving in family art-making programs” chart to help design and evaluate their family programs. The chart can also serve as a guide for future research around family art-making programs (See Table 8).

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<sup>89</sup> Michelle Boerio, “Factors and Methods for Fostering Creativity, Collaboration, and Problem-Solving in Family Art-Making Programs,” (Unpublished chart, University of the Arts, 2017).

**Table 8: Factors and methods for fostering creativity, collaboration, and problem-solving in family art-making programs**

Skill	Key factors that promote skill	Looks and sounds like
<b>Creativity:</b> Demonstrating originality and inventiveness in work, and being open and responsive to new and diverse perspectives.	Intrinsic Motivation	Participants connect projects to their own lives and interests.
	Choice	Set-up of the studio space allows participants to choose between multiple visible materials.
	Time	Participants are allowed enough time to experiment with multiple ideas or thoroughly explore an idea.
	Idea Generation/Problem-finding	Projects offer open-ended “art problems” that allow participants to generate new ideas.
	Inspiration	Art and artists from the museum’s collection are used as role models for creative thinking. The program space features interesting images and objects for participants to use as inspiration for their own art.
	Play	Participants use their art projects to further imaginative play and experimentation.
<b>Collaboration:</b> Demonstrating ability to work effectively with diverse teams	Discussion	Participants discuss the project or related artwork in the museum galleries as a group. Participants share their own projects and discuss what they learned. Questions or prompts start discussions around the big ideas in the project.
	Physical environment	The program space is set-up for group work spaces or tables. Art-making supplies are set out on group tables and in ways that encourage sharing.

	Intergenerational collaboration	Adults and children work together on art projects. Family groups use shared knowledge to connect to projects. Adults model techniques like properly using scissors for children.
	Modeling collaboration	Facilitators point out artwork made through collaboration in the museums galleries.
	Design of group projects	Group projects are complex and open-ended, allowing participants to work together to find solutions.
	<b>Problem-solving:</b> Identifying and asking significant questions that clarify various points of view and lead to better solutions	Inquiry/problem-finding
		Materials
		Modeling problem-solving
		Process over product
		Participants talk out their ideas to find and define potential challenges. Projects offer open-ended “art problems” that allow participants to generate new ideas.
		Multiple and sometimes unusual materials offered for participants to experiment with.
		Facilitators point out how artists use problem-solving to create original art or art for a specific purpose.
		Participants are encouraged to make multiple iterations of their ideas.

## **Chapter VII: Recommendations for Future Research**

This thesis started with the hypothesis that art museum educators structure family art-making programs in ways that intentionally or unintentionally promote the 21st century skills of creativity, collaboration, and problem-solving. A study conducted through an online survey of 83 art museum educators and follow-up interviews with seven survey participants found that hypothesis to be largely correct. Though the majority of art educators are familiar with 21st century skills and find creativity, collaboration, and problem-solving to be encouraged by their programs, the surveyed educators don't necessarily design their programs with 21st century skills in mind. To continue the research started by this thesis, future studies should look more into the execution of family art-making programs in art museums as well as their short and long-term effects on participants.

Studies could examine the characteristics of facilitation, environment, and program structure that impact the execution of family art-making programs. Longer term observation of family art-making programs would reveal how these programs do and do not align with current best practices in teaching 21st century skills. Researchers could use the rubric of indicators for creativity, collaboration, and problem-solving from the above chapter as a tool to observe family programs.

Research in this thesis asked about both intergenerational collaboration within family groups and collaboration across different family groups during art-making programs. A future research study could specifically examine the potential differences between intergenerational collaboration and peer-to-peer collaboration in family art-making programs. That study could compare programs which focus more on intergenerational collaboration with those that focus

more on peer-to-peer collaboration to find their teach methods, activities, and participant learning styles.

Future research could also explore the experience of participants in family art-making programs. To further investigate the inclusion of 21st century skills in family art-making programs, museums could track changes in participants' perceptions of creativity, collaboration, or problem-solving as well as connected behaviors during program participation. Longer studies could track possible changes in these attitudes or behaviors over time.

Some educators from the follow-up interviews indicated that their museums conducted exit surveys of program participants to find out who attends their programs and their motivations for participating. Research related to those exit surveys could investigate how those motivations for participating relate to the ways participants' engage in family programs at art museums. More detailed understanding of participant motivations could help educators better design programs to meet the needs of family audiences.

Other studies could also test what, if anything, family participants include in their everyday lives from art-making programs—if these programs impact family activities or attitudes towards art at home. Research from that study could inform prototypes for different methods or tools for museums to help participants from family programs continue their learning outside the art museum.

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## Appendix 1: Online Survey Instrument

Hello, I am Michelle Boerio, a Master of Museum Education candidate at the University of the Arts, conducting research for the completion of a masters thesis. The thesis and this study focus on the ways art museum educators design family art-making programs. In this survey, family art-making programs are defined as educational programs with a hands-on or art-making component aimed at intergenerational audiences. For example, a drop-in studio workshop, an art-making component of a family day event, or gallery art carts for family audiences would all qualify.

If you run more than one family art-making program, you may complete the survey for the program with the most evaluation or the most frequently occurring program.

Your participation in this study is completely voluntary. There are no risks foreseen with this project, though if you feel uncomfortable answering any questions, you may withdraw from the survey at any point. All responses will be kept anonymous, no names, job titles, or museums will be associated with your responses. If you have questions at any time about the survey or methods, please contact Michelle Boerio by email at [mboerio@uarts.edu](mailto:mboerio@uarts.edu).

Thank you so much for your time and participation.

1. Who are the target audiences of your program? (Select all that apply)
  - a. Children 6 months - 4 years old and their caregivers
  - b. Children 5 - 10 years old and their caregivers
  - c. Children 11 + years old and their caregivers
  - d. All ages
2. How often does this program occur? (Select one)
  - a. More than once a week
  - b. Once a week
  - c. Two or more times a month
  - d. Once a Month
  - e. Two or more times a year
  - f. Once a year
3. Who creates and leads these programs? (Select all that apply)
  - a. Museum educator/staff
  - b. Museum educator/staff and guest teaching artist
  - c. Guest teaching artist
  - d. Museum volunteers/unpaid staff
  - e. Other \_\_\_\_\_

4. What are your overall educational goals for this program?
5. Do participants visit or tour the galleries as part of this program?
  - a. Yes
  - b. No
  - c. Sometimes
  - d. Other \_\_\_\_\_
6. Describe a typical session or activities participants might participate in the family art-making program.
7. In general, how much time are participants expected to spend on each of the art-making activities in your program?
  - a. 15 minutes or less
  - b. 30 minutes or less
  - c. 1 hour or less
  - d. 2 hours or less
  - e. Other \_\_\_\_\_
8. In your program, are family members typically asked to make art together?
  - a. Family members are typically asked to each make individual projects
  - b. Family members are typically asked to make art together
  - c. Whether family members are asked to make art together or individually varies.
  - d. Other \_\_\_\_\_
9. Are you familiar with the concept of 21st century skills?
  - a. Yes
  - b. No
  - c. Not sure
10. Do your overall educational goals for this program include the skills of creativity, collaboration, and/or problem-solving as defined below? (Select all that apply)
  - a. Creativity: demonstrating originality and inventiveness in work
  - b. Collaboration: demonstrating ability to work effectively with diverse teams
  - c. Problem-solving: framing, analyzing and synthesizing information in order to solve problems and answer questions
  - d. Program goals do not include creativity, collaboration, or problem-solving
11. If the overall educational goals for this program include creativity, collaboration, or problem solving, describe how these skills are incorporated. Please give an example of how you include each.

12. Even if not explicitly stated in your program goals, are there any parts of the program that you believe would encourage creativity, collaboration, or problem solving based on the above definitions? How so?
13. Would you be willing to participate in a 15-20 minute phone interview about your program?  
If so, please leave a name and phone number or email with which I can contact you.
14. Is there anything else you would like me to know about family art-making programs at your museum?

Thank you for participating! If you have any further questions, you may contact Michelle Boerio at [mboerio@uarts.edu](mailto:mboerio@uarts.edu).

## **Appendix 2: Follow-up Phone Interview Instrument**

Hi, this is Michelle Boerio, I'm a graduate student of museum education at the University of the Arts. You recently completed a survey on family art-making programs at your museum, and indicated you would be willing to take part in a short phone interview about this topic. Is now a good time?

1. Please tell me about your family art-making program at your museum.
2. Upon entering the program, how are participants introduced to the program and the art-making project?
3. Tell me more about how you design this program.
4. What are your goals and objectives for this program?
5. Do you explain these goals to family participants? If so, how do you explain them?
6. Let's talk about 21st century skills. How are you familiar with the concept of 21st century skills? In what ways, if any, do they impact how you think about your program?
7. Are families encouraged to make art or socialize on their own or across families in a more socially interactive manner? If across families, how are participants encouraged to make art or socialize with other families?
8. What, if any, educational theories or philosophy are important to you when designing this program?
9. Has the museum done any evaluation of this program? If so, what was evaluated and what did you find?

Thank you for your time and for participating in this research. If you have any questions for me or want to read the completed thesis, please feel free to contact me at [mboerio@uarts.edu](mailto:mboerio@uarts.edu).

#### Appendix 4: Follow-Up Interview Notes 1

Interviewee: Educator at an art museum in Phoenix, Arizona

Interview conducted August 1, 2017

1. Please tell me about your family art-making program at your museum.
  - A. The program has grown dramatically in past year and a half or so. We received a corporate grant from Discount Tire Warehouse. Every second weekend of month, on Saturday and Sunday, we offer free admission for families—families defined by visitors. For example families can be children with caregivers, couple on date, adult siblings, etc. All ages all skill levels. The program includes an entire day of arts programing with phoenix based artists, music and dance. Also, we offer the Make It program on the last Wednesday of month during free access time. We bring in different Phoenix-based artists to lead art-making activities.
2. How do visitors gain admittance to this program? For example, is the program drop-in, requiring pre-registration, or requiring pre-registration and an attendance fee separate from normal admission costs.
  - A. The program is drop-in. Typically we get 1500 participants per event day, more or less by season. We have tried different formats, but drop-in lends itself best to the event. Make It is also drop-in. It typically gets 100-200 per event.
3. Upon entering the program, how are participants introduced to the program and the art-making project?
  - A. We have a sheet—we call it a daily sheet—with the breakdown of what's happening where and when, describe each event a little, with a map on the back. It's basically a logistical rundown. We employ small group of contract educators related to early childhood education, education, or volunteers, who are trained by the education department to welcome families and introduce them to the project. Also, we have a teaching artist leading the workshop. For free family weekends, 60% of participants have not been to museum before, want families to feel welcome and properly oriented.
4. Are projects in your art-making program based on art in the museum galleries?
  - A. Yes, all art-making experiences, tactile, and drawing activities draw inspiration from museum exhibitions or space, such as the garden or a gallery. We have the activity connect visitors to a museum object. (Have object on view, project, print-out images) We have a scavenger hunt for free family weekends.
5. Tell me more about how you design this program.



- A. Negotiation between myself or the education staff and teaching artists who fit program, goals, and who we feel comfortable being voice of the program in museum and community. Each weekend has a theme—upcoming hot/warm and cool colors, landscape. We motivate them to create a project with a compelling connection to collection or to the theme. Usually there is a back and forth, 3-4 meetings before the actual event and emails. Teaching artists are hired on a per-event basis, with an in event contract. I will invite certain artists back for this and other projects.
6. What are your goals and objectives for this program?
- A. We are seeking to help the community feel welcome. We aim to provide people with safe, free-choice learning environment. We are seeking to connect them to collection and special exhibition. We want to activate museum spaces in new and interesting ways.
7. Do you explain these goals to family participants? If so, how do you explain them?
- A. Not so much to family participants. I develop curriculum for teaching artists and contract staff, including 2-3 goals for that particular weekend, giving them talking points for particular goals. (They can share these with people based on individual family interest levels) Why doing this and why here. Creating a “you had to be there” moment, had to be there in the museum, with the object, when the artist was there. Creating site specific experience.
8. Let’s talk about 21st century skills. How are you familiar with the concept of 21st century skills? In what ways, if any, do they impact how you think about your program?
- A. Heard the phrase quite a bit; it came up with K-12 programs, skills outside of schools, college and career ready. [In response to “do 21st century skills impact how you think about your program] I think so, with hands on components, filling a deficiency in school art education by exposing families to a material or technique. We consider people to be lifelong learners. [With this program] we’re thinking about what gets people to come back and think of museum as a dynamic place.
9. Are families encouraged to make art or socialize on their own or across families in a more socially interactive manner? If across families, how are participants encouraged to make art or socialize with other families?
- A. With basic logistics of set-up of tables and the room. We’re providing conditions for an exciting social learning experience. We have mini-pods [style tables] so families have to gather around, opportunities to share and for intergenerational learning. Timing with make-it programs affects demographic. Always looking for ways for that socialization to occur (across) families. Even just thinking about the set-up of the table, where in the museum; how will the space will appear when crowded helps.

10. Has the museum done any evaluation of this program? If so, what was evaluated and what did you find?

A. We do exit surveys with each program during last hour. The survey covers demographics, what people enjoyed. There's also an informal evaluation with teaching artists, how different, if what you do if did again. —60% of participants have been to museum before. Visitors are coming from all over Phoenix metro area. The activities are important and valued but people are coming to see the art.

## Appendix 5: Follow-Up Interview Notes 2

Interviewee: Educator at an art museum in Fresno, California

Interview conducted August 4, 2017

1. Please tell me about your family art-making program at your museum.
  - A. Family Days been here about 7.5 years. It's a day that the museum is free to public, with different events for the [concurrent] exhibitions. We have an Earth day celebration with big park nearby. The museum offers Earth friendly art activities on those days. It's a good way to share our audience and engage new people. During holidays, we do have Santa who comes with Mrs. Claus. At that time we have many different art projects, and a treasure hunt for children and their families. People are looking at the art and exploring the art. We have [a family art-making program] coming later this month in August, each exhibition season.
2. Where in the museum does this program occur?
  - A. Over the entire museum. We have food trucks that come, because the museum has no cafe.
3. Upon entering the program, how are participants introduced to the program and the art-making project?
  - A. They're greeted at the door, and given a program with what's happening at what time and where. [Participants] are directed to class room and get treasure hunt for adults and children. Sometimes they will come for specific entertainer. We have someone greeting them at the door.
4. Are projects in your art-making program based on art in the museum galleries?
  - A. Yes. They are often inspired by the art in some way: by some of the exhibitions or they are themed—like for Earth Day we took extra mailers and paper, set up some eight foot tables, and let people construct a city with the extra paper. Sometimes people will spend hours just making these things. That's been a really fun project, which we continue to do for people of all ages.
5. Tell me more about how you design this program.
  - A. If we have an exhibition, have to come up with something that doesn't take a lot of time, easy to teach people to do. Like origami or that a project that somehow relates, simple printmaking projects. Things that are simple and not too messy.
6. Let's talk about 21st century skills. How are you familiar with the concept of 21st century skills? In what ways, if any, do they impact how you think about your program?

- A. We have programs with Fresno office of education and school district, have background in art education. I'm familiar with them through in schools. The museum does an arts integration program [which is more involved with 21st century skills]. From the Fresno arts council and training of teaching artists. [The concept of 21st century skills] doesn't impact how I think about my program a whole lot, not for the family day programs. When we have tours at the museum with schools and homeschoolers, we get 6000 3rd graders through, then they visit with their families. The families are exposed to what's happening with their children then. The object of family day is to enjoy the museum.
7. Are families encouraged to make art or socialize on their own or across families in a more socially interactive manner? If across families, how are participants encouraged to make art or socialize with other families?
- A. Free to come in, lots of tables and chairs. We encourage parents to participate as well as children; encourage chaperones on field trips as well.
8. Has the museum done any evaluation of this program? If so, what was evaluated and what did you find?
- A. Yeah, we have done surveys to find out what people prefer, how they benefit from it. There is a comment book in the museum and through social media. We changed policies about photography lately based on feedback; we're now starting to realize that [the museum] needs to give photo permission to visitors.

### Appendix 6: Follow-Up Interview Notes 3

Interviewee: Educator at a visionary art museum in Baltimore, Maryland

Interview conducted August 30, 2017

1. Please tell me about your family art-making program at your museum.
  - A. It's a weekend walk-in program. There's no intended [age group for the] audience, mostly families with children, but we also get adults and young adults.
2. Upon entering the program, how are participants introduced to the program and the art-making project?
  - A. Have examples near the front door when they come in, sometimes we have a picture of the original art. Visitors can walk around and see what other people are doing.
3. Tell me more about how you design this program.
  - A. Wanted to offer a drop-in program for weekends. A lot of people visiting on Saturday are visiting from out of town. We wanted it to be affordable, so there is a \$5 entry fee. We want to use artwork in our museum as a theme or inspiration.
4. What are your goals and objectives for this program?
  - A. Goals are to get some more families comfortable being in the museum, learn our program, and learn what programs we offer. [Also] to provide a hands-on art-making experience for visitors who are here on the weekend. Our classroom is like a fishbowl, so people can see the program from outside. The goal is just to get families in here and have them become repeat visitors.
5. Do you explain these goals to family participants? If so, how do you explain them?
  - A. No. We give them a flyer with the dates and projects for other programs or show them examples of past projects.
6. Let's talk about 21st century skills. How are you familiar with the concept of 21st century skills? In what ways, if any, do they impact how you think about your program?
  - A. Am not [familiar]. I'm now looking at PDF attached to your survey.
7. Are families encouraged to make art or socialize on their own or across families in a more socially interactive manner? If across families, how are participants encouraged to make art or socialize with other families?
  - A. Families are encouraged to socialize with whoever is in the program, participants sitting together in big tables. We have long tables that seat 12, sometimes with a person at the end. We have three of those and set-up supplies in the middle, so participants are free to move around.

8. Has the museum done any evaluation of this program? If so, what was evaluated and what did you find?
  - A. Not yet, this program is in its second year. In a lot of our programs the museum will send out surveys afterwards. This is a very casual program.

## Appendix 7: Follow-Up Interview Notes 4

Interviewee: Educator at an art museum attached to a university in San Juan, Puerto Rico

Interview conducted on August 14, 2017

1. Please tell me about your family art-making program at your museum.
  - A. Family Sundays (in Spanish) is an initiative for people who can't come to museum during the week for school or work to come to the museum. AAM also requires extended hours. We are inside a university campus. The museum Offer free admission then; the workshops are also free, and everything that we offer, we cover the cost. We want to make the museum accessible in every way that we can. We offer an opportunity to access art materials in a context. We usually show part of a museum exhibition and then we go to the workshop area to reflect on what they saw [in the galleries], see a demonstration, and then they have the opportunity to create something. Egyptian masks for example. There's a demo or some talk, in very down-to-earth language, then inviting people to make their own funerary masks. We worked on cardboard. We already had some pre-cut shapes, so they draw their design, and we have pictures [for inspiration] or they can create their own design, then paint it with acrylics. Another example would be making a collagraph after visiting the print exhibition. They go through the creation process of something they just saw. [The program allows families] to see, to have the opportunity to ask, space to create. Sometimes this is the first time that they have worked with oil pastels, or charcoal...there are different media that we use. The program is aimed a family audience, but also open to the general public.
2. Upon entering the program, how are participants introduced to the program and the art-making project?
  - A. They sign up when the museum opens, we have list that they sign up. Once they gather attendance and greet the audience, we explain that the workshop is three hours with one part in exhibition and one part in the art-making area. We advertise it for general public, but know that a certain audience (pre-schoolers) we are not fully addressing, they have other activities in the museum. We spend around 20 minutes in the gallery, then they go to the workshop area where there are these folding tables and chairs, tables covered with butcher paper. Then we have the demonstration of how to use the tools or media, then they are invited to work on their own. Then there is about two hours of creation time. The instructor has an assistant, and spends one-on-one time with participants. [The program] is in a central patio, where we have cross-ventilation under a roof. You can hear the outside, normal sounds, which are very relaxing. Sometimes they go into the zone of the

creation, sometimes they are all talking and excited about what they're doing. Before time is up, participants are given an opportunity to talk about their work, like a show-and-tell. We also give out an evaluation form with five questions for adults, and another form for teenagers and children. Document a lot with pictures, video, and let them know that we are taking pictures and posting one or two on Facebook.

3. Tell me more about how you design this program.
  - A. We have instructors on contract, they have different specialties, more drawing and architecture, graphic design, mixed media. We have temporary exhibitions; I read about it, look at the artwork, and then send the instructors information. Then they submit a proposal for what they would like to do in the class. I send it to my director and then we communicate any concerns with the instructor or have them come up with something else. I give them the information of what the exhibition is. We have been here for several years. We know what we are looking for to help promote a peaceful and relaxing atmosphere. Once a workshop is approved we make a contract. The museum pays \$180 for instructors with masters degrees; that payment comes from the university.
4. Are families encouraged to make art or socialize on their own or across families in a more socially interactive manner? If across families, how are participants encouraged to make art or socialize with other families?
  - A. It's up to them. We provide the tables, set-up in a certain way. Usually they end-up talking to each other, kids want to be all at one table and adults at another. There is always some sort of interaction. One time, we had a group come from an elder care home, and also a group from an inner-city summer camp...the two generations. They had a blast.
5. What, if any, educational theories or philosophy are important to you when designing this program?
  - A. I would have a mixture of approaches or philosophies. One would be constructivist, people build as they go, their own knowledge. Also, multiple intelligences, people like more language to understand something, or people like more visual information. Also the kinetic part, doing something with their hands. In informal learning, people choose when and how they learn. The gallery tour will give information, then based on the audiences questions and comments, we will tailor a line of talk. We are more inclusive in that sense. We educators are the ones in the front lines, the visitor will understand that they have the tools to understand. We want to empower the visitor. Most of the time we have first-timers. It is their first time, they don't know what the museum can offer, we want them to have a pleasant experience.



6. Has the museum done any evaluation of this program? If so, what was evaluated and what did you find?
- A. The evaluation tells me the age group—demographics, (people in their 30s and children between 8-12). For adults we ask what was your biggest motivation to participate, (recreation with family, get to know a new technique, free event, to do something different and relaxing, out of curiosity, or just by chance, other), how did you find out about family Sundays (i.e. through a direct email through a friend or family member, through press). Now it's our 10th anniversary and the newspaper is still the biggest way people learn about this program...and we send press release through the university, it's up to the paper what they publish or not. Whenever the activity shows up on the paper, we get the most attendance. What benefit did you get from this experience? They can answer sharing with family, opportunity to do something creative, to learn about my own abilities, to meet other people with my same interest, to better my skills in \_\_\_\_, other. How many people were with you? The survey has a table where they can put excellent, satisfactory, eh...etc. Did the workshop meet your expectations, duration, quality of instruction, usefulness to personal or professional life. Also they get to evaluate the instructor a little bit. Did you learn something new today? What did you learn? How much would you think this type of experience would cost if you had to pay for this? (Most of the time they put other, would have to be free to make it accessible, other mark a payment and it varies.)

For the child/youth evaluation we ask: how old are you, why did you participate in this workshop? (I was interested, wanted to try something new, came with someone, other.) What did you like the most about this workshop? They can answer about the oral part in the gallery or in workshop area, sharing in the group, creative-opportunity to be creative. Did you like the workshop, was duration appropriate, was treatment appropriate, did you understand what the instructor was saying, did you learn something new, what did you learn. What did you not like about the workshop?

## Appendix 8: Follow-Up Interview Notes 5

Interviewee: Educator at an art museum connected to a university in New Brunswick, New Jersey

Interview conducted August 18, 2017

1. Please tell me about your family art-making program at your museum.
  - A. It's a program that's been running off-and-on for a good number of years. It was brought back before I started. They had been calling it Passport to Art, as a global focus to visit different parts of the museum. It was a paid registration program, and people registered for it in advance. When I started the museum was no longer doing the actual passport anymore. We used to have a pre-Columbian gallery, but that was taken down. I re-started Passport as an art-making workshop. We have instructors coming from the art-making program here at Rutgers. They were free to do whatever they wanted, not necessarily tied to the museum. When I came, I wanted to tie [the projects] to the museum galleries. Started the program in winter in 2016 and when we started a new season in fall 2016, we made it a free, drop-in program. New Brunswick is a large minority majority city, lots of undocumented population. We had a successful scholarship program, made [the program] free and drop-in, and then changed to program to tie it closely to artwork in the galleries. We would work with the teaching artists to create the project. We changed the name of the program to Art Together. We're getting 60-70 participants, participants staying about 45minutes... Here's the work we're inspired by, we always make a point to look at the work for five minutes or so; here's what we're doing and here's the materials.
2. Upon entering the program, how are participants introduced to the program and the art-making project?
  - A. From 1:00pm-3:00pm, the vast majority of people arrive in the 1-1:30 window. Always the teaching artist is there, along with someone from my department, and an undergrad volunteer or staff person. We alternate taking people into the galleries as they come in. Sometimes they come back to the classroom first. We like to have a materials table near the entrance and some examples to show them. For one project, we went down looked at the prints of this exhibition, the technique and the feminist qualities, and went back up to the classroom with all these different textures and could make an abstract composition. A Sam Gileum painting is up right now, we did one [project] that was about manipulating paint by folding or manipulating the [paper] surface.
3. Tell me more about how you design this program.

- A. It does vary depending on the student (teaching artist) Last year we had the students as teaching artists and they alternated months. My directive was to have them look around the museum and find something that interested them. Myself and my assistant don't have a studio background, so the [students] come up with something I wouldn't have. Sometimes they need a little more guidance. They need to try to make it a little more simple, use materials already in the museum. The project has to be fairly contained and resource thoughtful. I'm trying to be a little more precise about (timing) this year, asking the teaching artists to give us a little more notice. If they have an idea, they might need a little more help refining it for this context. Most of the students we work with so far have a had good knack for it.
4. What are your goals and objectives for this program?
- A. My goals are that A) that families leave with a positive experience with this museum, that they learn something that they didn't know before. B) That they work together or collaboratively. I love too when they work side-by-side. C) That they understand a little bit the choices artist made to get to this point—either technically or conceptually to get to this point.
5. Do you explain these goals to family participants? If so, how do you explain them?
- A. I don't actually. We don't have a huge marketing program here. We usually advertise this as a family art-making program, but don't openly discuss those [goals].
6. Let's talk about 21st century skills. How are you familiar with the concept of 21st century skills? In what ways, if any, do they impact how you think about your program?
- A. I would say I have a decent familiarity with them, I know that folks at the CMA were all about them, and Tracie and folks at the Wexner [Center for the Arts] did some work with them as well. I read some articles and feel like I have a decent understanding. Read your survey and felt like there were some parallels. The focus on creativity rather than mastery of a technique has always been a focus for me. Also, thinking as artists as problem-solvers has always been a profound thing for me. Artists are communicators and problem-solvers as much as engineers or scientists, but the outcome is different. What can we make come alive about that process? That's always been important to me as well.
7. Are families encouraged to make art or socialize on their own or across families in a more socially interactive manner? If across families, how are participants encouraged to make art or socialize with other families?
- A. There was one project on the day that I wasn't there where the idea was that they would create a more collaborative piece. The artist had these different brightly colored canvases she had put together. I'm not sure how far (the teaching artist) actually pushed that.

Interestingly, the program has attracted some girl-scout troops who bring their families and work together.

8. What, if any, educational theories or philosophy are important to you when designing this program?

A. I don't have any formal education training. All of my educational experience has just been picked up on the job, so I don't have a strong theoretical framework.

9. Has the museum done any evaluation of this program? If so, what was evaluated and what did you find?

A. Not that I'm aware of, certainly not in my time here. I don't believe there's been any. I would like to do some evaluation. I'm interested to see what having full staff and permanent director brings, what her goals are, etc. Anecdotally, we have a lot of positive feedback, but no formal evaluation.

## Appendix 9: Follow-Up Interview Notes 6

Interviewee: Educator at an art museum in Eugene, Oregon

Interview conducted August 30, 2017

1. Please tell me about your family art-making program at your museum.
  - A. Our museum has a family day twice a year, we open the museum for three hours on a Saturday, we have things happening for all three hours. We have a big conference room and a large art studio that could accommodate about 30 students, also we have gallery tours. We will have performance art in one of the big conference rooms, and then in second conference room will have 3-4 drop-in art stations with a more intensive art project going on in the same time in the studio. We might have an outside artist come in teach the studio project. We have an exhibition about to open of tapestries from Italy, we have a studio educator who may have a project related to textiles. Tour and tactile experience.
2. Upon entering the program, how are participants introduced to the program and the art-making project?
  - A. With the studio, there's an artist in there for the three hours, who will take people as they come in. We will have a lead artist and others making sure people are set-up and have materials. With one recent program, we had a watercolor artist who was not comfortable with the drop-in part, so we experimented with having a new session every half-hour. It didn't really work the way we wanted. The program was still well attended, but not as well attended as we hoped. In the other room, [with the shorter art stations] we have long tables; those tables have an examples of what projects could look like but not any one way they should look like. Showed a couple of ways you could do [a particular project] also with board with bulleted instructions. People could still read and get the instructions. People are allowed to come in to make a project and then stay as long as they want. We want people to have the freedom to experience however they want.
3. Are projects in your art-making program based on art in the museum galleries?
  - A. Yes, our upcoming Winter Family Day. We will be partnering with a Latino organization, they have some artists who will help develop projects as well. We have these Italian tapestries and have new curator of Latin American art. Plus, at end of December we do a Dia de Los Muertos week. I like to be able to pair some of the offerings and the activities with whats going on in the exhibitions.
4. Tell me more about how you design this program.

- A. I've been doing this program for awhile. We have some community organizations contact me to make sure they can be involved in 2018. There's a ballet program; we have kids and adults doing ballet. With the community organizations we can tell them what the theme is and they will compose a piece based on the theme. We have a children's librarian who will also offer a story time, will pick related books. We will have musicians come in as well. When picking our theme, we look at what the curation staff has planned. I will set up a meeting with all of the people involved in our facility (the different departments, docents, student volunteers, et. al.)
5. What are your goals and objectives for this program?
- A. Outreach, especially outreach for children and families. We constantly have people come in to the museum who have never been. Our themes, in this case working with the Latino community organization, we're working with Latino community to let them know this is a safe place to come and enjoy. Free. Want people to know the museum is welcoming to them.
6. Do you explain these goals to family participants? If so, how do you explain them?
- A. Through marketing materials.
7. Let's talk about 21st century skills. How are you familiar with the concept of 21st century skills? In what ways, if any, do they impact how you think about your program?
- A. Sounds familiar, but not clear with me. We are a Visual Thinking Strategies museum. So when you talk about critical thinking and problem-solving we serve about four to five thousand K-12 students who come through museum, and we taught all of our docent staff to use VTS. We want to students have a collaborative experience. [VTS is] part of our Family Day programs as well; not only will families be going up into the galleries to look at art, they'll be experiencing Visual Thinking Strategies and expanding their art literacy as a family. There's a project we're involved in with the University of Oregon called the Stellar Project where we're bringing VTS into rural schools as well. Those skills have been a big part of how we do outreach. We've talked to math and science teachers [involved in the Stellar Program] and they begin using VTS in math and science classes as well. There's been some amazing problem-solving. VTS sort of informs our culture here, in family programs as well. We use VTS on their tours as well.
8. Are families encouraged to make art or socialize on their own or across families in a more socially interactive manner? If across families, how are participants encouraged to make art or socialize with other families?
- A. I don't think that they are really directed in any one way. All of the activities are made for families to do together. We don't separate [activities] out by age. I think our structure is

so loose that it adds that aspect of families working together as well and socializing.

People talk to each other a lot in this community, it's very free in that way.

9. Has the museum done any evaluation of this program? If so, what was evaluated and what did you find?

A. We do museum surveys during and after large new exhibitions and twice a year. Don't have data specifically for family day. We do have someone who counts attendees and meeting afterwards to see what worked and what didn't.

## Appendix 10: Follow-Up Interview Notes 7

Interviewee: Educator at an art museum attached to a college in Massachusetts

Interview conducted on September 11, 2017

1. Please tell me about your family art-making program at your museum.
  - A. Work with schools and family programs as well. I have an outward community facing role. 1) Free second Friday, happens every month in conjunction with Arts Night Out in city. The museum is free to public that night art-making program happens with that, recently extended from 4:00-7:00 pm to give working families and people more time to work. 2) Drop-in program inspired by art on view, with projects meant to be accessible for anyone who wants to participate, so intergenerational—families with children, college students, people on dates, art teachers, adults...we have refreshments. It's about being in the museum and being part of the community. 3) Community Day once a year. It's a full day program, we have events happening throughout the day, each Community Day is inspired by a special exhibit.
2. Upon entering the program, how are participants introduced to the program and the art-making project?
  - A. We have a space called the atrium, big open area that connects the art building with the museum. It's used as a study space during the week, and gets transformed into a pop-up art studio. [For the program] there's a table facing outward towards the city tour. We have museum volunteers who greet people when they come in, help people in the galleries to get inspiration, or get started [with art-making activities]. The room is set-up with an L-shaped table with materials, and rows of six tables behind that. We're using art in the museum galleries as starting point.
3. Tell me more about how you design this program.
  - a. Constraints that we're thinking of: what's on view, what's going on. Usually ideas for projects come while I'm walking or in the shower. We want to be accessible to multiple ages, but appealing to students also. Materials that are high quality that people wouldn't have at home or wouldn't think to put together, play with materials. I try not to use a lot of paint. The program is drop-in so not [a project that would require] multiple parts [over time]. I'm thinking about tools that parents might have concerns about, tools that are safe for all ages. Also, thinking about process and experience of making rather than project, sitting down at a shared table space and making together rather. Creative expression is important, thinking about the works of art, shared ideas or values, and different types of projects that we've done. We have done projects that are collaborative, we've made



models of the Coliseum together. We get support from our students who have an architecture background. People value the relationship with the [volunteering] college students.

4. What are your goals and objectives for this program?
  - a. Connecting people with our local communities to the museum. Getting them through the doors, building up comfort with the space. I want to provide opportunity for students, some of whom are interested in museum education or art education. Sort of model for them how to do this work. We provide professional development experience for them. We connect families to the works of art.
5. Do you explain these goals to family participants? If so, how do you explain them?
  - a. Yeah, definitely. Definitely to the students who are working with us, and through conversations with families.
6. Let's talk about 21st century skills. How are you familiar with the concept of 21st century skills? In what ways, if any, do they impact how you think about your program?
  - a. Yes, they are part of framework for how we're thinking about these skills...processes. We use creative thinking and critical thinking in the galleries as well. [21st century skills] sort of flow throughout the education department's work.
7. Are families encouraged to make art or socialize on their own or across families in a more socially interactive manner? If across families, how are participants encouraged to make art or socialize with other families?
  - a. Some ways and times more explicit than others. Use the way we set up the program, so people have to sit with other people and facing towards each other. Or we set the tables up like family style at a restaurant. [The program helps to] craft familial relationships. We have some families who come repeatedly. We have a lab school on campus, so some families will come for that way of socializing with other lab school families. Always room for that [socialization across families] to happen more. Some families interact more than others. I try to encourage it through set up of space.
8. Has the museum done any evaluation of this program? If so, what was evaluated and what did you find?
  - a. Not formally in any way. When we were moving towards staying open an extra hour, the museum did surveys of families. People were coming because the [free admission night events] were free, something to do, something to with their families.