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Museum-School Partnerships: From Creative Discourse to Resource Development

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Museum-School Partnerships:
From Creative Discourse to Resource Development

Keywords: education, partnerships, collaboration, discourse, resources, curriculum
development, museum studies

by
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Capstone project submitted in partial fulfillment of the requirements for the Degree of
Master of Arts in Museum Studies

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December 14, 2018

Abstract

This paper aims to explore museum-school **partnerships** and best **educational** practices within each entity's efforts to **collaborate**. The project surveys museum education and explores programmatic and **curriculum development** that help to serve as enrichment for students. These partnerships are important to the **museum studies** field as it fulfills a fiduciary responsibility that museums hold – to educate the public. By fulfilling the needs of both entities (museums and schools), creative **discourse** ensues, creating solutions for students to enrich their learning. I end with a project to propose the development of an exhibition **resource** guide that would combine the knowledge and needs of both teachers and museum educators.

Acknowledgements

I would like to extend my gratitude to Stephanie Brown for her attentive guidance and mentorship throughout the semester, and to Marjorie Schwarzer for sharing learned advice and an unwavering positive attitude.

I would also like to offer special thanks to Fraidy Aber who served as my second reader and educational advisor during the writing of this paper.

I am appreciative of the encouragement and counsel of Charlotte Jones, and to all of the past and present staff at the Museum of Craft and Design for the wonderful opportunity to work alongside them throughout this venture.

I would also like to thank the Education Team at the California Academy of Sciences, the staff at San Francisco Heritage/Haas Lillenthal House, and staff at Chabot Space and Science Center for sparking my curiosity and passion for museum-school partnerships and increasing community presence.

I would also like to thank Róisín Altreuter for her kindness, insight, and for sharing her passion for museum education with me.

I am especially grateful to my parents Patti and Steven Doctors, and to all of my family members for their unconditional love, support, and laughter that they have offered me throughout my time in the program.

I would also like to acknowledge the entire Museum Studies class of 2018 for their continual friendship, levity, and motivation. It has been a pleasure working with all of you.

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Chapter 1 | Introduction

This project addresses the research and analysis of a topic that I am passionate about, and proposes an actionable project or step that museums can use to implement my research in a real world example. I created an exhibition resource guide to provide enrichment during tours, fieldtrips, and workshops that are held at the Museum of Craft and Design (MCD). This museum is located in the Dogpatch Historic Neighborhood of San Francisco. MCD is interested in further developing their school programs for students and their educators within the Bay Area, and it is my hope that by developing this program, it can be implemented in collaboration by classroom teachers, museum educators, and their students. These museum-school partnerships that are mentioned showcase how successful programs were able to balance the needs of the museum, schools, and students involved.

This topic matters to me as it is in the realm of museum education and highlights collaboration between educators who strive for the common goal of creating an inviting, enriching, and positive learning environment for students. In my paper I address the positive outcomes of partnerships between museums and schools, and what those partnerships offer to students to enrich their education. This project is important to the field of museum education as it fulfills a fiduciary duty that the museum possesses – to educate the public – and speaks to how both informal and formal educators can collaborate together towards a common goal. My research and project proposal is also important to the Museum of Craft and Design as it is a way to implement a program that

fulfills a goal of the Education and Programs Manager for the Student Tours + Workshop program at the museum.

This capstone addresses museum studies best practices as it combines consultation from educators, research on museum-school partnerships in collaboration, and includes a proposed Exhibition Resource Guide and development strategy in order to provide an enriching service to both museum and classroom educators and their students. This paper supports the commitment to social justice in that it discusses the implementation of a free program that will bring together teachers, educators, and their students and grow the educational community with visions of access, equality, and commitment. My hope is that this project continues the creative discourse between educators and their students.

Key sources that have informed my paper include John Cotton Dana, Howard Gardner, the Exploratorium, San Francisco Heritage, Museum of Craft and Design, as well as contemporary educators in the Bay Area such as Fraidy Aber, Charlotte Jones, and Róisín Magee Altreuter. The first key point that is made in this paper is that museum-school partnerships are beneficial for both entities, and are within the fiduciary duties of museums to educate the public, including students who visit for outside classroom enrichment. Another key point that is discussed in this paper are best practices for educators when it comes to creating a learning environment for students. Another key aspect of the paper is my proposition for an actionable project to help fulfill a goal of the Museum of Craft and Design, and to enrich what they have already laid out for their educational options at the museum.

Readers can expect to find various structures of successful museum-school partnerships and their programmatic development, as well as a proposed timeline and Gantt Chart of my project proposal within the Museum of Craft and Design. This is in consultation for the Museum of Craft and Design's *Raw Design* exhibition. It will bolster the museum's school tours and workshop program, while also attempting to increase communication and collaboration with classroom educators and those in the community. A reader can also expect to find next steps that would take place if more time and resources were allowed, such as meeting with classroom teachers, providing professional development and training in the program, and presentation to the MCD's Board.

This first chapter will serve as an introduction and grounding for my project. In Chapter 2: Literature Review and Issue Background, I note the key sources that I used during my research, and how they relate to and inform my topic. Chapter 3: Proposal contains an Exhibition Resource Guide to be used as enrichment to museum educational tours within the Museum of Craft and Design, as well as workshops and lessons taught by teachers to their students. In Chapter 4: Summary and Conclusions, I speak about next steps that I would take if I had further resources, time, and access. This chapter takes my proposal to the next level by describing its implementation, as well as what further research I would do to complete the project.

Following these chapters, I have my appendices. Appendix A includes my Annotated Bibliography, and Appendix B contains a Gantt Chart in which I lay out and schedule milestones in the planning and implementation of my project proposal.

Appendix C contains my Exhibition Resource Guide, and Appendix D contains the educational standards and guidelines that correspond to activities in the Guide.

It is my hope through this project that I continue to learn about museum education, and the collaborative efforts of educators in the field as they, along with formal educators, bridge the gap in creative discourse and resource development. I learned a lot about project management, and about crafting a project out of passion that could be implemented in a useful way. Many thanks to the Museum of Craft and Design for the inspiration to use their *Raw Design* exhibition as a foothold of the project.

Chapter 2 | Literature Review and Issue Background

Introduction

A partnership allows for creative discourse between two or more entities. I will speak on the collaboration between museums and schools, and the enrichment that these partnerships offer to students and the wider community. These partnerships can bridge the gap between formal and informal education, and in this chapter, I examine how these collaborations let students flourish. I begin by discussing education theory, then move to museum education, putting research into practice, and end with a few relevant case studies that will assist in developing my project proposal.

Museum-school partnerships are important to both the larger community and museum field as they focus on a main fiduciary responsibility that both entities hold – to educate – and look at this responsibility from the perspective of the community and educators beyond the classroom. By keeping open communication between traditional learning spaces (such as classrooms), and informal learning spaces (such as libraries and museums), this partnership can strengthen understanding between educators and bolster learning in students.

Historically, museums were places that primarily wealthy people could afford to visit. Museum audiences have since expanded to include students and their classes, allowing them to find their footing in a new learning environment. As Zolberg describes in her article “*An Elite Experience For Everyone*”: *Art Museums, the Public, and Cultural Literacy*, found within the book *Museum Culture*, edited by Sherman and

Rogroff: “Speaking of the museum public and the museum’s public mission has little meaning unless we look at how the public is defined in relation to the museum and the museum’s commitment to educational practice” (Sherman and Rogroff, 50). For museums that are fortunate enough to be able to offer free programming and tours, it widens the audience even more, and allows for people of all geographic backgrounds to have access to pre- or post-school enrichment.

Key opportunities for museums and schools to embark on this endeavor include further learning opportunities for their students outside of the classroom, such as customizable classes, workshops, and tours of their exhibits. In turn, museums get more exposure from students and educators in the community and are able to support an immersive experience. From on-site field trips, to off-site outreach or enrichment into classrooms, this structure of collaboration between these two entities has been a positive opportunity for both sides. I will use the case studies in my paper to look at the different functions of museum-school partnerships, and how they enrich students’ experience of learning through opportunities and experiences they may not be able to have inside the classroom.

Education Theory & Making Meaning

In John Dewey’s *Art as Experience*, written in 1934, he speaks to the idea that the highest attainment of knowledge and context comes from making meaning and developing understanding (Dewey, 151). In order to fully absorb a new piece of knowledge, exploration and curiosity can speed up the process. All of this helps to craft a deeper level of knowledge (Dewey, 300).

Continuing on in the same vein as Dewey, Kuhlthau, Maniotes and Capsari describe in their book *Guided Inquiry: Learning in the 21st Century*, a learning theory called by the same name. Guided inquiry is a strategic way to introduce a topic to students using a framework that allows for an accessible entry-point. This framework includes steps to effectively support the learners in understanding new knowledge. The steps are called the *Guided Inquiry Design Process Framework*, and include: *Open, Immerse, Explore, Identify, Gather, Create, Share, and Evaluate* (Kuhlthau et al., 2-5). Instead of “teaching to the test”, which is a common teaching method which consists of teaching students information that will only be found on state mandated tests. This method provides knowledge for the end goal of passing a test, unlike guided inquiry, which sets students up for success by allowing them to ask questions they would like to ask in order to get to their answers, rather than having someone else dictate which questions to ask, and which steps to take to get to an answer.

According to Howard Gardner in *Intelligence Reframed: Multiple Intelligences for the 21st Century*, written in 1999, people were labeled intelligent or not, based on the types of intelligences they possessed (Gardner, Section 1). Gardner’s *Multiple Intelligences* are as follows: naturalistic, musical, logical-mathematical, intrapersonal, interpersonal, bodily-kinesthetic, linguistic, and visual-spatial. For example, having mathematical-logical intelligence, or having strengths in the left part of the brain, were considered of higher caliber than those whose strengths lied in the right side of the brain, or had visual-spatial intelligence (Gardner, Section 4). This categorization of intelligences occurred often in schooling. This school of thought perpetuated the compartmentalization of classes, such as math class, art class, and history class – with no

discussion or context as to the subjects' overlap, such as USF's *Philosophy of Physics* class, which wonderfully pairs two subjects together in a way that is accessible to students outside of philosophy or physics, as its curriculum is breached from multiple angles to bridge the gap between fields of study. This persisted with the idea of labeling students early on in their education as a "math person," "art person," or "history person." This could negate a student's confidence in their learning by making them think they only fit into one category or possessed only one type of intelligence. The best educators foster their students' unique intelligences and thus help them thrive.

Uncommon Learning: Creating Schools That Work for Kids, written in 2016 by Eric C. Sheninger, describes a theory called uncommon learning - a way for educators to tailor students' learning through thoughtful activities and assignments. With this practice, students are able to branch out and be creative in their quest for knowledge, rather than being provided with the exact same activity for every student. This practice is very similar to the Montessori school of thought, which adapts teaching practices to fit the needs or intelligences of the child (Sheninger, 14-16). I hope that this practice continues to grow and becomes an opportunity for all students to be successful and confident in their learning, as these experiences early on in childhood pave the way for how we perceive our intelligences and unique attributes throughout our life.

Museum Education & Learning Practices

George E. Hein's *Learning in the Museum*, written in 1998, discusses historical theories of museum education, and how they can support learning in an informal setting. He provides an overview from a historical perspective, and discusses topics such as visitor engagement, and learning in informal spaces. His volume describes the effect that experiential learning has on a student, such as Dewey believed (Hein, 6-7). Dewey believed anyone has the ability to learn from any experience that they have – no lesson goes unnoticed (Hein, 13). This can have a profound effect on one's learning due to the experiential attributes museums possess, like live animals, informative text panels, and engaging exhibits and objects from collections.

In *Progressive Museum Practice: John Dewey and Democracy*, written in 2012, Hein again touches upon Dewey's education theories. Hein talks about Dewey's life and research, and what he has provided for the educational community. To Dewey, being progressive meant putting research into practice, and breaking the mold of educational practices. To be progressive is to be ahead of the curve - always evolving. I believe that a reason why Dewey is so well known for his passionate work is because he took risks with his theories, and made a name for himself in the educational field. This book further speaks to educational trailblazers as they pushed the boundaries of educational practice, creating new and unique educational experiences for learners just like guided inquiry, (see Kuhlthau, et al. under *Education Theory & Making Meaning*) uncommon learning, (see Sheninger under *Education Theory & Making Meaning*), and the Montessori (which I will describe in the next section of my paper) frameworks have.

In De Caro's *Molding the Museum Medium: Explorations on Embodied and Multisensory Experience in Contemporary Museum Environments*, written in 2015 as a part of ICOFOM Study Series, he explains the importance of exploration in learning, and that *how* and *what* we learn depend on not only the content, but the environmental factors in the learning space as well. Making meaning arises from the context gained from information itself, as well as from being able to process what we learned through our environment. The way that a museum is set up allows for an exploratory experience, as it is multisensory and stimulating to support new knowledge attainment. Between museum exhibitions, docents, and educational objects, students have a multisensory playground at their disposal to enrich their learning. Making meaning using exploration is a thought shared with guided inquiry users, such as in Kuhlthau, Maniotes and Capsari's *Guided Inquiry: Learning in the 21st Century*, written in 2015.

In Leinhardt, Crowley, and Knutson's *Learning Conversations in Museums*, written in 2002, the authors argue that learning occurs during conversation and interaction, and is not a one-way experience. A question that is also discussed in the book is "*What do people learn from visiting museums and how do they learn it?*" (Leinhardt et al., Preface) The exchange of knowledge is what deepens our understanding of what we have just learned, and helps us to retain what we have added to our knowledge bank. Leinhardt discusses the *Museum Learning Collaborative*, a project that was created to support research for museum learning. I will now end my paper with a few relevant case studies to bookend my research.

Case Studies, Creative Solutions &
Research to Practice

Montessori: The Science Behind the Genius, written in 2017 by Angeline Stoll

Lillard, discusses the importance of the Montessori practice, which was founded by Dr. Maria Montessori, a behaviorist and educator who studied how children learned, and made observations through their play and behavior in their environments (Lillard, 114-115). Lillard describes Dr. Montessori as someone who broke the mold of traditional education to fill a need, and that she was inspired by her own students. She provided a unique experience for them based on their particular learning needs. In this learning style, as mentioned earlier in my paper, students can craft their own educational experience through the help of their educators. It is focused around the particular person, rather than standards, or “teaching to the test.” As Lillard argues, best practice would be to combine attributes of both traditional learning and informal learning styles, such as combining Montessori with guided inquiry, to have a comprehensive education.

Lillard also speaks to cognitive development - that “the best learning is active,” and that it is important for children to participate in as they’re developing and being exposed to the outside world. In Montessori schools, student knowledge attainment outcomes are based around the child’s growth and progression, rather than facts or figures. The Montessori theory is less about using test scores as evidence, and rather is based more around observation. These studies are important to my paper because museum-school partnerships are about using experience, observation, communication, and curiosity to provide a fruitful exchange of knowledge. This exchange and experience is so important because provides context for a culminating principle throughout my research – that the

sum of all of these parts of an active learning environment, including the aspects above, altogether provide an effective learning space for all types of learners.

Lisa Quay's *Leveraging Mindset Science to Design Educational Environments that Nurture People's Natural Drive to Learn*, written in 2018 with Mindset Scholars Network, aligns with Gardner in describing that all people learn differently, and argues that providing them with the richest learning opportunity creates intrinsic motivation. Intrinsic motivation, for example, is when one is motivated to make a choice simply because of their own values, rather than being influenced to make a choice because of an external opinion. Similarly to what some of the previous authors and journals have mentioned, it is one's environment and how one learns that can have a great effect on the whole person. Quay asserts that motivation is one of the root factors in interest to learn. This motivation and interest in a subject can have a domino effect and "change the mindset" of the learner to be more engaged and enthralled in the content of which they are learning. This is similar to the research of Leinhardt and the Exploratorium, in mentioning that interactions and atmosphere are crucial factors to one's learning experience and knowledge absorption.

In *Assessment Tools in Informal Science* journal, written in 2017 with the PEAR institute, authors Hussar, Schwartz, Boiselle, and Noam, and Habil discuss ways in which informal science activities and lessons can be assessed using observations of students and their interactions during lessons and post-lesson content attainment. This observation method, similar to the Montessori method, provides a structure for teachers and educators to translate science activities and state-adopted standards into an informal education setting. In this way, it is supporting educators in their pursuits of science, all while

researching the effects in the informal space. I will use this site as a resource, alongside Next Generation Science Standards (NGSS), when I go about creating the curriculum for my project proposal. I will speak more to the NGSS in the following paragraph.

In 1985, Harrison and Naef wrote in *Toward a Partnership: Developing the Museum-School Relationship* about the role of field trips, educator communication, and professional development in museum-school partnerships. Their work postulates that traditional learning was thought to only take place inside of a classroom, until informal learning spaces like libraries, community centers, and museums became popular spaces for enriching one's knowledge. This study argues that there needs to be further planning, communication, and development of context around why these partnerships are so important. I hope to further explore this during the development of my project proposal. According to the Next Generation Science Standards website, the standards (NGSS) were written in 2010 with the partnership of *Achieve* and other organizations such as the National Research Council, the National Science Teachers Association, and the American Association for the Advancement of Science. It was formally adopted in 2013, and is currently adopted by 19 states, according to the National Science Teachers Association (The National Science Teachers Association, *About NGSS*). The standards provide students and educators with attainable educational goals with regards to content and lessons. This case study, or lesson called *3-LS3-1 Heredity: Inheritance and Variation of Traits* combines both science and art through the deciphering of patterns and color and nature. This lesson will serve as a concrete framework and example of the crossovers between the fields of art and science, and how one can use this collaboration in a museum

setting. This will allow me to showcase examples of evidence of putting theory into practice for further research, as well as to complete my project proposal.

Finally, Joshua Gutwill, Nina Hido, and Lisa Sindorf in their 2015 *Visitor Research & Evaluation*, by the Exploratorium Tinkering Studio, describe the exploratory factors and processes that go into learning during the tinkering studio experiment where researchers observed visitors in their Tinkering Studio – “a permanent on-floor environment featuring playful, collaborative design activities” (Gutwill, Hido, Sindorf, 3). The observations consisted of viewing visitors’ process through creating, experimenting, and overcoming challenges throughout the session. At the Exploratorium, there is a focus on the process of making itself, rather than the end result of making. This learning setting creates possibilities for trial and error, as well as the addition of curiosity (Gutwill, Hido, Sindorf, 2015). I look forward to learning more about how visitor research and evaluation will play into further research and the development of my project proposal. The Exploratorium is a great example of a combining of art and science in a museum setting. They are involved in groundbreaking and informative research, which helps ground my research.

Conclusion

In conclusion, I hope to continue my research into the positive effects that museum-school partnerships provide for students. The following chapter will shed light on the process of implementing this with students and educators. I look forward to acquiring new information regarding these partnerships through discussions with current practicing educators in both museums and schools, and see how I can implement my own

partnership framework for current and future students who walk through the doors of the Museum of Craft and Design.

Chapter 3 | Post-Research Project Proposal

The Project

The purpose of this project is to develop lesson plans alongside state standards that can be integrated into a collaborative curriculum between educators, teachers, and the Museum of Craft of Design that can be implemented as a part of School Programs tours and workshops.

Connection to Literature Review

My research shows that there are many museums who have partnered with schools to foster an enriching learning environment for students and their educators. I hope to continue the dialogue surrounding education within museums, and hope to bolster a growing program at the Museum of Craft and Design.

Connection to the Museum of Craft and Design (MCD)

- The Museum of Craft and Design was founded in 2003 by Executive Director JoAnn Edwards. It was first located in downtown San Francisco, and then moved to the historic Dogpatch district in 2013, where it is currently located at 2569 3rd Street.

- This project would strengthen the School Program for MCD within their tours/workshops options for children and their educational caretakers in San Francisco and throughout California.
 - MCD has hosted schools within San Francisco Unified School district, as well as others in the Bay Area. They are hoping to extend their program, allowing for free access to tours and workshops to all educators and their students for all who visit. Typically tours last for 45 minutes, with a 15 minute introduction, bathroom break and belongings drop-off, and a 30 minute tour or tour/workshop.
 - My proposed lesson plans will serve as a curriculum enrichment or tour enrichment for students and their teachers, as well as a collaborative effort between teachers and MCD educators. My hope is that it will open dialogue between multiple types of educators, and expand the learning for students and learners.

Project Needs for MCD and the Museum Field

This project proposes to fulfill, in partial, the need of the Museum of Craft and Design in its attempt to build the School Programs Tours and Workshop Program that aligns with SFUSD curriculum, as well as common museum educational theories.

The Current MCD Program

Mission | “The Museum of Craft and Design offers a variety of museum experiences for K-12 students from public and private schools, homeschooling groups, summer camps, and other groups, including:

- Guided exhibition tours that provide age-appropriate explanations to help youngsters “see” what is on view and engage with the concepts and issues being explored by artists and designers.
- Hands-on workshops in MCD’s MakeArt Lab, customized to the age and interests of your group. See our upcoming kids programs for a sampling of the kinds of workshops we offer.” --- sfmcd.org

Needs This Project Meets

This project strengthens the School Programs tours by aligning the curriculum with SFUSD standards, and also provides a stronger partnership between museum educators, docents, and the students and educators in San Francisco and throughout the Bay Area.

Project Goals and Objectives

Personal Goal | I hope to put research into practice by developing lesson plans and curriculum for the Museum of Craft and Design Student Education Program which aligns with tours, workshops, and their exhibitions.

- I will research standards for curricular development including support material for teachers, Common Core standards and STEAM models, and Meet with prior Dual Degree in Teacher Prep Counselor, Mary, USF School of Education.
- I will research best practices in school-museum collaboration, as well as meet with educator Fraidy Aber to learn more about school/museum collaboration, and developing curriculum through a museum and copyright issues/etc.

MCD Goal | I hope to increase collaboration between educators in the Bay Area, their students, chaperones, and the Museum of Craft and Design to help grow the Student Education Program and its impact.

- I will create a list of all past tour/school programs requests, and find any holes, or audiences that have yet to be reached – spreadsheet of info, etc. Talk to Charlotte about format, etc. make categories of current educational programs, and who they will flourish.
- I will meet with MCD staff to assess their roles in the development of this program, and how to best support MCD in its goals.
- I hope to create a design-integrated curriculum package as my culminating project.

Stakeholders

- SFUSD
- Teachers, students, and the schools they serve
- Greater San Francisco Community

- Members of the community, parents, and caregivers of children served in educational programs
- Organizations in the community that are gaining traffic from the influx of people participating in tours
- Museum of Craft and Design
- Educators, Docents and other volunteers that give tours
- MCD resident artists and other instructors that facilitate workshops

Resources Needed to Implement Project

- Financial information
- School tours are free to students, educators, and their chaperones
 - Transportation is not coordinated by the museum, so it costs our visitors money to come here via public transportation or bus.
 - The cost to MCD in staff time and resources
- Team Members and their Roles
 - Education & Programs Manager, MCD
 - Education Assistant, MCD
 - Docents, MCD Volunteers (those who give the tours to students)
 - School Liasson/Family Coordinator at each school/program within SFUSD or other educational spaces

Checklists

- Guidelines
 - California State Standards
 - Curriculum Development Standards
 - Include STEAM models
 - Include goals from Charlotte, etc.
 - Specific guidelines from MCD that dictate format, content, language, promotion of the museum, etc.

- Tasks/Steps to Take to Enact Program
 - Send rough draft to Charlotte, Education and Programs Manager at MCD.
 - Meet with Charlotte regarding rough draft, and begin implementing timelines
 - Once timelines are created, I will research standards and guidelines, and create templates to develop curriculum and lesson plans for students/programs in the Bay Area and beyond.
 - I will research school programs at San Francisco Heritage, and use that as a model. I hope to develop a Teaching Collection of materials, as well as a teaching trunk to use before, during, and after the program.

Chapter 4 | Summary and Conclusions: Criteria for Success and Evaluation Strategies

As mentioned in my Literature Review, a partnership allows for creative discourse between two or more entities. By fostering creative conversation surrounding collaboration between museums and schools, impactful resources can be developed to enrich student learning. From education theory, to museum education, research to practice, and case studies, I have learned much about student development and fostering a positive learning environment. Through my research and education consultations, I have gained many insights into the world of museum programmatic development, and how to build upon already-created relationships between that of museums and schools.

I greatly enjoyed the process of researching, analyzing, and proposing resources for my topic. Throughout the duration and scope of this project, I gained more insight into where I hope my career will progress – meshed in between the worlds of schools and museums. I also gained insight into the creative voices of educators past, and how their legacies and passionate theories live on today.

Questions that still remain for me include:

- How would this post- during- and pre- lesson format take shape as a school format, where museum and school educators collaborated each week, or each month with fresh content?
- How can museum and school educators continue to grow from one another?
- How can these programs assist with student knowledge retention and growth?

- How can I use what I have learned to build a career?

I was surprised by how long museums and schools have collaborated with one another, and what impactful projects have come to light from those partnerships. Another aspect of my research that surprised me was to find out that a couple of my classmates were embarking on similar research projects, and how wonderful it was to share ideas and hopes for our work.

As I hope to do with my project, I can offer assistance to museums and to schools about how to build these educational partnerships, and grow their educational models (for museums) or enrich their classes (for schools). This venture will of course be two-way street, as I know I will continue to learn about this field from other educators who can share their own insight and valuable knowledge with me. It is my hope that I can continue to grow in this area, and absorb all of the knowledge that I can through these collaborative processes. It is another goal of mine that through the development and possible implementation of this project that I may connect with classroom educators, and increase the community presence at the Museum of Craft and Design. Another area I hope to explore is to conduct research on which programs they use for their students, and how their teaching styles have changed or stayed the same.

With regards to next steps for my project, I will proceed with the following steps, as best I can within the scope of my project and time:

- Send Charlotte Jones, Education and Programs Manager the final draft of the Exhibition Resource Guide

- Once notes are received, and corrections are made, I will coordinate a Development Meeting between myself, Charlotte, and Rachel Shipps, the Education Assistant
- Post-Development Meeting, Charlotte can coordinate a Marketing Meeting, in which myself, Charlotte, Rachel, and Sarah Beth, the Marketing and Communications Manager can all sit down and discuss the aesthetics, language, and mission-related content of the Exhibition Resource Guide
- Post-Marketing Meeting, with approval, Charlotte and I can reach out to SFUSD teachers and other local educators to see if they would like to participate in a focus group. A focus group would entail the presentation of the Exhibition Resource Guide, along with other developments in our proposed program, and we would receive feedback from the educators on how we can collaborate, and how our program might be of assistance to them and their students
- Next, having completed focus groups, we would reach back out to teachers and their classes to set up professional development and programmatic planning meetings
- Next possible steps might be to set up site visits within those classrooms that wanted to participate in our joint program, as well as inviting those students and educators for a tour and workshop at the Museum of Craft and Design
- We would then present this partnership program to the Directors of the Museum of Craft and Design, as well as the Board of Directors for their approval

- The final step would be to further develop the program, and set in motion an implementation plan for Spring 2019, as noted in Appendix C: Gantt Chart

In final closing thoughts, with regards to social justice, I hope that partnerships such as those between museums and schools continue to gain traction and grow. It is also my hope that these entities can grow in their resources and financial support so as to develop more programs like the *Rock Family Program* at the California Academy of Sciences where students and their educators have free access to transportation, as well as free classes and materials.

This experience has taught me a great deal of respect for teachers and educators, as well as for those who have been spearheads and driven the way for education as it is today. I am grateful have been able to be in the MA Museum Studies program, and feel that it was one of the best decisions I've made to apply to this program. I have gained valuable skills and insights learning alongside my professors and colleagues, and am excited to see where my career takes me.

Appendix A | Annotated Bibliography

Education Theories/Making Meaning

1. Dewey, John. *Art as Experience*. New York: Capricorn Books, 1958.
 - Dewey explains that making meaning and developing understanding are both derived from attaining context. Dewey further explains that exploration and curiosity about a topic, and learning more about it is when further understanding is developed. This in turn can craft a solid foundation of knowledge.
 - This relates to my topic of museum/school collaboration, as it provides grounding for why student learning can be expanded and enriched in a museum environment due to the contextual information that flows between museum educators, students, and exhibits or engagement materials. The experiential exchange between these three parties provides context and a broader depth of knowledge for student learning and attainment.

2. Kuhlthau, Carol C., Leslie K. Maniotes, and Ann K. Caspari. *Guided Inquiry: Learning in the 21st Century*. Westport, Connecticut: Libraries Unlimited, 2015.
 - Kuhlthau, Maniotes and Caspari discuss a learning theory called guided inquiry, a strategic and thoughtful way to provide a framework for students to seek out knowledge for themselves. The authors visually depict the stages of learning that that occurs during guided inquiry with what they call the *Guided Inquiry Design Process* (Figure 5.2. Guided Inquiry Design Framework. Source: Kuhlthau, Maniotes, and Caspari (2012). The steps the framework describes are as follows: Open, Immerse, Explore, Identify, Gather, Create, Share, and Evaluate.

- This source is relevant because it is based upon a theory of learning that is actively growing in the educational community, specifically in schools where “teaching to the test” was prominent. “Teaching to the test” consists of teaching students information that will be found on state mandated tests, and only providing that knowledge for the end goal of passing a test. Guided inquiry is replacing this learning style, and is something that has been used in museums for some time to introduce their exhibitions/museum experiences. Guided inquiry was widely used at the California Academy of Sciences as a framework to assist docents in engaging with their guests, and is also similar to VTS, or Visual Thinking Strategy, which is used in art museums such as Fine Arts Museums of San Francisco. This source is also relevant because it reflects a healthy thought-process for which students can use to absorb incoming knowledge, as bolstered in museum education. I will use this source to connect various museum education practices together.

3. Gardner, Howard. *Intelligence Reframed: Multiple Intelligences for the 21st Century*. New York: Basic Books, 1999.

- Howard Gardner discusses the ways in which people were categorized on how intelligent they were based on the types of intelligences they had. For instance, having mathematical-logical intelligence, or having strengths in the left part of the brain was considered a higher caliber than those whose strengths lied in the right side of the brain, or visual-spatial intelligence. One of my favorite poignant quotes of his from this book is: “We are faced with a stark choice: either continue with the traditional views of intelligence and how it should be measured or come up with a different, and better, way of conceptualizing the human intellect.” This

- quote is poignant because it describes a threshold that educators come to in their teaching style, and how it might affect their students. (No page number available, 2nd page of the section titled: Chapter 1: Intelligence & Individuality.) There are many ways in which a person can have intelligence, and the best educators foster their students' unique intelligences, and help them thrive. Gardner's multiple intelligences are as follows: naturalistic, musical, logical-mathematical, intrapersonal, interpersonal, bodily-kinesthetic, linguistic, and visual-spatial.
- This volume is relevant to my research as a museum is an important space where all types of learners and intelligences are able to grow, as they combine visual, auditory, and tangible stimuli. This volume can bolster why museums are a powerful space for students to learn in. I will use this text to provide a groundwork for common education theories, and how they are used in both the classroom and in museums to support all types of learners.

4. Sheninger, Eric C. *Uncommon Learning: Creating Schools That Work for Kids*. Thousand Oaks, CA: Corwin, 2016.

- This book describes a theory called uncommon learning - a way for students to almost mold their own learning opportunities through thoughtful activities and assignments. In this way, students are able to branch out and be creative in their quest for knowledge, and show how they've learned, rather than every student completing the exact same activity, and perhaps not being able to dive into the meaning-making as much as if it were customized. Through further reading, this practice is very similar to the Montessori practice of adapting teaching practices to fit the needs of the child.

- This book is relevant because it provides bolstering for the history of learning styles and education within public schools and museums. It will serve as a backdrop for proposing what I hope to see more of in the future for school/museum partnerships, and what will hopefully be an evolving practice to help increase student confidence in their learning. This will support my other sources and my paper as it will explore various informal learning styles, and how different educational spaces are in full support of providing enrichment to their students.

Museum Education and Learning Practices

5. Hein, George E. *Learning in the Museum*. Abingdon, UK: Routledge, 1998.

- This book discusses historical theories of museum education, and how they can support learning in an informal setting, and works through a historical perspective of museum education, visitor engagement, as well as evidence to support museum education, or learning in informal spaces. It primarily talks about learning through experience. Hein discusses that Dewey believed that anyone can learn from any experience that they have – no lesson goes unnoticed, and museums can have a profound effect on one’s learning due to the experiential attributes they possess.
- This book will ground the chapter of my Capstone that relates to the history of museum education. It will also provide a unique perspective, as it discusses early findings in museum education as it relates to visitor studies.

6. Hein, George E. *Progressive Museum Practice: John Dewey and Democracy*. Walnut Creek, CA: Left Coast, 2012.

- Hein talks about the life and research of John Dewey, and what he's provided for the educational community. To me, "Progressive Museum Practice" makes me immediately think of a visitor-centered museum, and one that is focused on learning and growth and making meaning. To Dewey, being progressive meant putting research into practice, and pushing the mold of educational practices. To be progressive is to be ahead of the curve, and always evolving, and I believe that is a reason why Dewey is so well known for his work and for this passionate educational practice because he took risks with his theories, and made a name for himself in the educational field.
- This volume is relevant because it will further support the case studies that I will bring about in my research that discuss museum educational practices, and current progressive theories that are taking shape in the educational field today. Dewey's work is a great jumping-off point for any further research that I conduct, and what practices I hope to see in the future. This book relates to others that I have in my bibliography because it speaks to educational trailblazers as they stretched the boundaries of educational practice, creating new and unique educational experiences for learners like guided inquiry, uncommon learning, and the Montessori framework.

7. De Caro, L. ICOFOM Study Series. *Moulding the Museum Medium: Explorations on Embodied and Multisensory Experience in Contemporary Museum Environments*. 2015.

- In this article, De Caro explains the importance of exploration in learning, and that how and what we learn depends on not only the content, but our environmental factors as well. Aligning with that thought, making meaning arises from context

from information itself, and being able to process what we learned through our environment. The way that a museum is set up allows for an exploratory experience, as it is multisensory and stimulating for knowledge. Between museum exhibitions, docents, and educational objects, students have a multisensory playground at their disposal to enrich their learning in their environment.

- This article is relevant to my research as it targets exploration as a necessary tool to help make meaning, as is inquiry, of which I've mentioned before in Kuhlthau, etc. "Guided Inquiry: Learning in the 21st Century" (2015). These two principles will be further discussed in my paper as how these are showcased in a museum setting.

8. Gutwill, Joshua. Visitor Research & Evaluation. Exploratorium Tinkering Studio. 2015.

- Gutwill describes the exploratory factors and processes that go into learning during the tinkering studio experiment where researchers observed visitors in their Tinkering Studio. The observations consisted of viewing visitors process through creating, experimenting, and overcoming challenges throughout the session. At the Exploratorium, there is a focus on the process of making itself, rather than the end result of making. This learning setting creates possibilities for trial and error and curiosity. I look forward to learning more about Gutwill's theories, and how visitor research and evaluation will play into my case studies and personal research.
- The Exploratorium is one of the case studies that I would like to use, as it is a great example of the mesh of art and science in a museum setting. They are involved in groundbreaking and informative research, and this article caught my eye while I was scrolling through their academic resources.

9. Leinhardt, Gaea, Crowley, Kevin, Knutson. *Learning Conversations in Museums*, Lawrence Erlbaum Associates, 2002.

- This book discusses that learning occurs during conversation and interaction, and is not a one-way or singular experience. A question also discussed in the book is “*What do people learn from visiting museums and how do they learn it?*” The exchange of knowledge is what deepens our understanding of what we have just learned, and helps us retain what we have added to our knowledge bank. It discusses the *Museum Learning Collaborative*, which was created to support research into museum learning.
- This is relevant because it discusses the various reasons why people visit a museum, and how their various needs as a visitor are met at a museum. This can feed into the needs of teachers and students, and how their educational experience is enriched from interaction at a museum.

Case Studies & Research to Practice

10. Lillard, Angeline Stoll. *Montessori: The Science Behind the Genius*. New York: Oxford University Press, 2017.

- Lillard discusses the importance of the Montessori practice. Lillard describes Dr. Montessori as someone who broke the mold of traditional education to fill a need, and that she “took her cue from children, observing them in her classrooms” and providing a unique experience for them based on their needs. In this learning style, students can craft their educational experience, as it is focused around the particular person, rather than standards, or “teaching to the test.” As Lillard argues, best practice would be to combine attributes of both traditional learning and informal

learning styles to have a comprehensive education. Lillard also talks about cognitive development, that “the best learning is active”, and the role that learning has in that for all people, but especially children as they’re developing and being exposed to the outside world. Similarly to how we try to stimulate

- Other terminology that is discussed are outcomes - what the students learn by the end of the period, or term, and what is attainable. For public schools, and other traditional classrooms, those outcomes are based on facts - academic. However, in Montessori schools, the outcomes are based around the child’s growth and progression, rather than fact or figures. The Montessori theory is less evidence-based and more based in observation. It is important to back up information with evidence, yet this is important to my paper because these school/museum partnerships really are about experience, observation, communication, and curiosity to provide a transfer and exchange of knowledge.

11. Quy, Lisa. Mindset Scholars Network. Leveraging Mindset Science to Design Educational Environments that Nurture People’s Natural Drive to Learn. 2018.

- This article aligns with Gardner in describing that all people learn differently, and the way in which they do, provides them with the richest learning opportunity for them due to motivation. Similarly to what some of the previous authors and journals have mentioned, it is one’s environment and how one learns that can have a great effect on the whole person – how they feel about their learning and their confidence. Quy discusses that motivation is one of the root factors in interest to learn. This motivation and interest can have a domino effect and “change the mindset” of the learner to be more engaged and enthralled in the content of which they are learning.

- I find this very interesting as it is describing how people learn, and how one processes what they are learning in their environment. This is relevant to my research, as I will discuss outside factors to learning such as the atmosphere, stimuli, environment, people, etc. It will ground attractive aspects of a museum as a learning space and provide context for case studies. This is similar to the research of Leinhardt and the Exploratorium in that interactions and atmosphere are crucial factors to the experience of learners.

12. Hussar, Karen, Schwartz, Sarah, Boiselle, Ellen, Noam, Gil G. (Habil). The PEAR Institute. *Assessment Tools in Informal Science*, 2017.

- Hussar, Schwartz, Boiselle, Noam, and Habil discuss ways in which informal science activities and lessons can be assessed using observations of students and their interactions during lessons, and post-lesson content attainment. It provides a structure for teachers and educators to translate science activities and standards into an informal education setting. In this way, it is supporting educators in their pursuits of science, all while researching the effects in the informal space.
- This can provide formative and summative assessment types to educators, as well as provide data for those like me that want to explore the effects of learning in an informal space. On their website, you can search by age, domain (what's being tested), assessment type, or a custom search to view tools that educators have created to help assess students. This will be a wonderful resource for me, alongside Next Generation Science Standards, when I go about creating the curriculum for my project proposal, and need ideas on what kinds of assessments I should place within the curriculum to create an overall balanced lesson.

13. Harrison, Michael, and Barbara Naef. "Toward a Partnership: Developing the Museum-School Relationship." *The Journal of Museum Education*, vol. 10, no. 4, 1985, pp. 9–12. *JSTOR*, JSTOR, www.jstor.org/stable/40478672.

- As the title suggests, this work is about museum-school collaboration, and all that it entails. It explores the role of field trips, educator communication, professional development, etc. This work also describes that traditional learning was thought to only take place inside of a classroom, until informal learning spaces, like libraries, community centers, and museums, became popular spaces for enriching one's knowledge. This study argues that there needs to be more planning, communication, and the development of context around why these partnerships are so important.
- This work will be especially relevant to my research as it is crucial in grounding my special interest in museum-school collaboration, and its importance in the educational field. I can use this work to link together my personal experiences, research that I have done, as well as lessons I have taught or case studies I come across, such as from the Exploratorium, and interviews with educators (some of which still need to be completed).

14. Next Generation Science Standards. 3-LS3-1 Heredity: Inheritance and Variation of Traits. 2013.

- The Next Generation Science Standards (NGSS) were written in 2010 with the partnership of *Achieve* and other organizations such as the *National Research Council*, the *National Science Teachers Association*, and the *American Association for the Advancement of Science* (<http://www.nextgenscience.org/developing-standards/developing-standards>) It was formally adopted in 2013, and is currently adopted by 19 states, according to The National Science Teachers Association. The

standards provide students and educators with attainable educational goals with regards to content and lessons.

- I choose this lesson as it combines both science and art through deciphering patterns and color. This will serve as a concrete lesson example of the crossovers between the fields of art and science, and how one can use this collaboration in a museum setting. This is relevant because I can ground my other case studies of museums that mesh science and art together. It will allow me to add some evidence for putting theory into practice for my research as well.

15. Berger, John. *Ways of Seeing*, 1972.

- As I re-read through my list of sources, I took a couple out, as they didn't seem relevant anymore or I wasn't able to fully thread together the discussions in the books with my paper topic or find full versions of texts. I have another informational interview planned with a friend of mine from Fine Arts Museums of San Francisco who conducts VTS or Visual Learning Strategy, and am hoping to discuss with her about how her work and this book may be relevant to my paper.

Appendix B | Gantt Chart

MCD Exhibition Resource Guide				
Project Lead: Emma Doctors, Administrative Coordinator				
Role	Task Name	Task Breakdown	Start	Finish
Administrative Coordinator	Emma Sends Charlotte Final Draft of ERG	.dock format	Mon Dec 3	Mon Dec 3
Education + Programs Manag	Charlotte Sends Back Draft with Notes	.dock format with tracked changes	Mon Dec 3	Mon Dec 10
Administrative Coordinator	Emma Sends Charlotte Final ERG	.pdf format	Mon Dec 10	Mon Dec 17
Administrative Coordinator	Emma Coordinates Development Meeting	Meet with Charlotte + Rachel, Education Team	Wed Dec 19	Wed Dec 19
Education + Programs Manag	Charlotte Coordinates Marketing Meeting	Meet with Sarah Beth	Fri Dec 21	Fri Dec 21
Administrative Coordinator	Emma/Charlotte Reach out to SFUSD Teachers	Coordinate professional development/programming meetin	Fri Dec 21	Fri Jan 12
Education + Programs Manag	Charlotte invites SFUSD Teachers to MCD to test ERG	Testing begins with final ERG, workshop, tours protocols	Fri Jan 12	Mon Feb 11
Administrative Coordinator	Emma does mock tour/workshop with Charlotte	6th-8th grade students of SFUSD Teachers	Mon Feb 11	Thurs Feb 28
Education + Programs Manag	Charlotte + Rachel + Emma present to Directors + Board	Objectives, goals, actionable steps	TBD	
Both + Board	Directors + Board Strategic Plan (Programming 2019)	Programmatic formatting, development	TBD	
Both	Expected Implementation		Spring 2019	

**MUSEUM
GRAPHIC
DESIGN**

Exhibition Resource Guide

MCD Student Tours + Workshop Program
6th-8th Grade



RAW
DESIGN
JUN 2 - OCT 28



Raw Design

Exhibition Resource Guide
6th-8th Grade

1. EVALUATE | What does the verb *to process* mean to you?

2. PREDICT | Choose 3 of your favorite pieces from the tour. Using your observations and critical thinking skills, describe each piece. Next, predict the process the artists used to create their pieces.

3. PLAN | If you were to put on an exhibition of your own, using objects that you designed and created, what pieces would you display? What would you want museum guests to know about your work?

4. CREATE | Share your ideas with your classmates. Enjoy your *Raw Design* workshop!

Appendix D | Standards & Guidelines

California State Board of Education:
Visual Arts – Content Standards

Relevant Standards Used in Exhibition Resource Guide
<https://www.cde.ca.gov/be/st/ss/vamain.asp>

Grade 6

1.0 ARTISTIC EXPRESSION

- Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to the Visual Arts
- Students perceive and respond to works of art, objects in nature, events, and the environment. They also use the vocabulary of the visual arts to express their observations.

➤ ***Develop Perceptual Skills and Visual Arts Vocabulary***

1.1 Identify and describe all the elements of art found in selected works of art (e.g., color, shape/form, line, texture, space, value).

2.0 CREATIVE EXPRESSION

- Creating, Performing, and Participating in the Visual Arts
- Students apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art.

➤ ***Communication and Expression Through Original Works of Art***

2.4 Create increasingly complex original works of art reflecting personal choices and increased technical skill.

2.5 Select specific media and processes to express moods, feelings, themes, or ideas.

Grade 7

1.0 ARTISTIC PERCEPTION

- Processing, Analyzing, and Responding to Sensory Information Through the Language and Skills Unique to the Visual Arts
- Students perceive and respond to works of art, objects in nature, events, and the environment. They also use the vocabulary of the visual arts to express their observations.

➤ ***Develop Perceptual Skills and Visual Arts Vocabulary***

1.1 Describe the environment and selected works of art, using the elements of art and the principles of design.

1.2 Identify and describe scale (proportion) as applied to two-dimensional and three-dimensional works of art.

➤ ***Analyze Art Elements and Principles of Design***

1.3 Identify and describe the ways in which artists convey the illusion of space (e.g., placement, overlapping, relative size, atmospheric perspective, and linear perspective).

4.0 AESTHETIC VALUING

- Responding to, Analyzing, and Making Judgments About Works in the Visual Arts
- Students analyze, assess, and derive meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities.

➤ ***Derive Meaning***

4.2 Analyze the form (how a work of art looks) and content (what a work of art communicates) of works of art.

➤ ***Make Informed Judgments***

4.3 Take an active part in a small-group discussion about the artistic value of specific works of art, with a wide range of the viewpoints of peers being considered.

8th Grade

4.0 AESTHETIC VALUING

- Responding to, Analyzing, and Making Judgments About Works in the Visual Arts
- Students analyze, assess, and derive meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities.

➤ ***Derive Meaning***

4.1 Define their own points of view and investigate the effects on their interpretation of art from cultures other than their own.

4.2 Develop a theory about the artist's intent in a series of works of art, using reasoned statements to support personal opinions.

4.3 Construct an interpretation of a work of art based on the form and content of the work.

Next Generation Science Standards
Content Standards

Relevant Standards Proposed for Use with Exhibition Resource Guide

Grades 6-8

MS-ETS1 ENGINEERING DESIGN

MS- ETS1-2 *Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.*

MS HUMAN IMPACTS

MS- ESS3-3 *Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.*

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19. San Francisco Heritage, *Heritage Hikes* program structure, Architrunk
20. California State Board of Education, *Visual Arts: Content Standards*, Academic content standards for Visual and Performing Arts in Prekindergarten through grade twelve, adopted by the California State Board of Education.
21. California Board of Education, *California Career Technical Education Model Curriculum Standards: Engineering and Architecture*

Educators Consulted

1. Fraidy Aber, Director of Education, Contemporary Jewish Museum
2. Charlotte Jones, Education and Programs Manager, Museum of Craft and Design
3. Róisín Magee Altreuter, Early Childhood Science Educator, CuriOdyssey