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**Interactive, Participatory Educational Spaces in Denver Art Museum's
Martin Building**

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Julia Frances Davis

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Dedication

For my parents, who have no idea what my research is about but still support it and me unwaveringly. Thank you for your encouragement and love.

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Abstract

Interactive, Participatory Educational Spaces in Denver Art Museum's Martin Building

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The staff of the Denver Art Museum (DAM) has embarked on a project of reimagining the integrated education spaces inside their renovated galleries in the Martin Building, which I explore through this study. I'm using the Denver Art Museum and the Martin Building as a case study to investigate the rationale behind interactive and participatory educational spaces and how they are being incorporated into the institution. By inquiring into the design and planning process, the emphasis was on hearing from staff about how they want to take these spaces forward in the future. My study searched for and found areas in which the Martin Building renovation aligns with the DAM's priorities since the revitalization has enabled staff to reconsider and rework how the building is used. The study provides a focused view of the importance and influence of these interactive, participatory educational spaces as staff looks to the potential that the redesign offers. By looking at examples of the previous educational areas and at the construction of upcoming spaces in the Denver Art Museum from the eyes of people who work with them, I can explore the strengths and challenges of this design process.

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Chapter 1: Introduction to the Study

This research examines the process of reimagining new integrated education spaces at the Denver Art Museum (DAM). Over the past three years, museum staff has embarked on the process of renovating permanent collection galleries in the newly renamed Martin Building. Since the 1980s, the Denver Art Museum has consistently dedicated resources to innovative and reflective practice in their educational programming and spaces; education is a vital part to the museum's purpose seen and felt throughout the facilities. They also have a history of challenging what an art museum should be and how museum behavior can look.

Over recent decades, the field of museum practice has been shifting away from the stereotype of being stagnant, old, or boring educational institutions and towards the goal of becoming active learning sites in which people can challenge themselves (Falk & Dierking, 2000). Since it has been shown that visitor learning hinges on the museum's ability to bridge the gap between the historical contexts of museum objects and the visitors' everyday lives that provide their context, museums are trying to find solutions (Froes & Walker, 2011). Interactivity is an essential tool with which museums are attempting to attract visitors back to the museum through hands-on activities, programming involving play, and fun adventures (Adams et al., 2003). As more museums are devoting physical spaces to visitor learning and educational experiences within the galleries, the question becomes not why they are doing so but how they are doing so. This research investigates how the staff at the Denver Art Museum is approaching interactivity

and dedicated educational spaces as they glean information from the past and look towards new spaces in the renovated building.

The Denver Art Museum is presently in the middle of a \$150 million renovation project and set to fully reopen on October 24, 2021, coinciding with the building's 50th anniversary.¹ I am utilizing the Denver Art Museum and the Martin Building as a case study to examine the reasoning behind the interactive and participatory educational spaces and see how staff put ideas into action. This case study provides a unique opportunity as the building is currently under construction, allowing staff across departments to reconstruct and reconceive these spaces completely. This revitalization of the beloved 1971 North Building is being renamed the Martin Building due to the gift by Lanny and Sharon Martin. The 210,000-square-foot building, designed by Italian modernist architect Gio Ponti and local architect James Sudler to house much of the museum's collection, has been closed since the beginning of 2018 (*Martin Building Project*, 2019). The Denver Art Museum has released the following statement addressing the purpose of this project:

Key project elements include bringing the museum's renowned educational programs to the center of the campus, expanding gallery spaces for growing collections, including design and western American art, completing Ponti's original vision for visitor access to stunning 7th-floor views, exterior site

¹ The museum planned to initially open the Martin Building in waves in 2020, starting from lower floors and working up, before the COVID-19 pandemic hit in March 2020. Now, the entire building is opening at once.

improvements, and updating environmental and other key systems to current-generation technology (*Martin Building Project*, 2019).

This thesis focuses on how educational programming is being brought to the forefront of the renovation and how the other changes to the building's spaces, such as the added "33,000 square feet," will impact the interactive and participatory educational spaces of the museum (*Martin Building Project*, 2019). My focus is on the different ways the museum has created dedicated educational spaces moving forward and the impact of past projects such as the Create Corners and Discovery Library on this current phase of the development of educational space at DAM. By interviewing staff about the lessons and experiences from the past and current planning, this study considers how they prioritize educational spaces as they look ahead to the reopening of the Martin Building with new areas, opportunities, and challenges to explore. This research confronts how the design intentions, past experiences, and educational motivations converge to create spaces that foster impactful and meaningful visitor experiences.

CENTRAL RESEARCH QUESTION

How has the Denver Art Museum approached its interactive and participatory education-focused spaces in the Martin Building?

PROBLEM STATEMENT

The purpose of this qualitative case study is to understand the approach the DAM's education staff has taken for renovating the Martin Building. The focus is to understand how museum staff is taking these spaces into the future. Interviews with staff members addressed the design and planning process, the set-up and purpose of the previous education spaces, and the past and future flexibility of the spaces. The interviews catch museum staff at a critical moment where they are looking back with fondness and ahead with anticipation before the building is open to the public. Looking at this museum, in particular, is intriguing because the DAM has consistently placed education at the forefront of its focuses. My research identifies how they are continuing to do so since the Martin Building renovation is a significant undertaking that has allowed staff to rethink and rework the utilization of the building. Looking closer at this process is beneficial because it will show how prior research, evaluative and design skills, space limitations, and department motivations have impacted the final product. The study helps examine the impact and influence of past interactive, participatory education spaces as the staff looks ahead to the renovation's new opportunities.

My study builds off the existing research surrounding interactivity and participation in the art museum while looking at the unique example of the DAM as they design for the future of their institution. The DAM has done their own research about their past educational and interpretive projects, making these reports available to the public online in a remarkable effort to make their actions and findings accessible. It is both exceptional and unique for a museum to display such a commitment to self-research

over the past thirty years in an easy-to-reach format on their website. These reports give context to what the museum has done and the mindset and goals of the staff. Some examples, in particular, include "Kids & Their Grownups: New Insights on Developing Dynamic Museum Experiences for the Whole Family." This study looks at past Create Corners, which were interactive, participatory educational spaces integrated into the gallery spaces within the previous iteration of the Martin Building (Denver Art Museum, 2013). "Enriching Visitor Experiences" looks at the implementation of the Discovery Library, a room situated within the European and American art collections with interactive elements (Denver Art Museum, 2001). Although this space changed throughout the years while open, this research looks in-depth at what was included in this first iteration. Another vital research study by the museum to consider is "New Angles on Interpretation" because it looks at how they created art-making and interactive spaces that flowed in their new building, the Hamilton Building, upon opening (Denver Art Museum, 2007). This study is noteworthy because it shows the interest, on the part of the museum, in evaluating how they thought about interactive spaces in a newly designed building. My research builds off this idea by examining how the museum is rethinking its spaces in the redesign of the Martin Building.

There are also examples of other institutions renovating their spaces that lack this kind of in-depth look at how the staff has taken past knowledge to make changes. These examples include the expansive renovation of the Detroit Institute of Art in 2007 and the current renovation of the Philadelphia Museum of Art. Museums are looking to the future in the same vein as the DAM, and this research illustrates an example that contextualizes

these changes in the midst of the process. Shedding light on the DAM staff's interpretation of their interactive, participatory educational spaces provides a greater understanding of these types of spaces for those other museums in the future. My research is a productive addition to the field of art education because it combines the reflection of past experiences with the forethought that is required for such a significant undertaking in a valuable and enlightening manner.

MOTIVATIONS FOR RESEARCH

Personal Motivations

I can still remember how I imagined everyone else in the room glaring at me, sensing my extreme discomfort and self-consciousness as I stood there staring blankly at "Oedipus at Colonus" by Giroust. It was my first essay assignment in my first art history course. I was sure it would be so much easier to just Google the piece and try to find some context for it online. However, in those moments when a passerby just saw an awkward college freshman, expressionless before another neoclassical painting, I saw, for the first time, Giroust's strong lines. I saw the Greek and Roman mythological themes coming to life. I saw the composition, and I saw vivid colors. More importantly, I felt something. I felt pride in my ability to understand what I was looking at and have a response to it. I felt perceptive and amazed, applying skills I had only learned or read about in a classroom. And because of this, I honestly felt a connection to "Oedipus at Colonus" in that very moment. It was amazing, and that was when I knew I wanted to

share that emotion. From there, I became interested in creating opportunities for visitors to interact directly or indirectly with art regardless of prior knowledge.

My personal beliefs about art museum education hinge on seeking growth and asking questions because I believe that understanding the needs of your audience should stay at the forefront of thought when developing and designing interactive tools and engaging spaces. I want the experience of connecting to art to be as inclusive as possible and understand that this involves creating materials that reach people where they are at with art. Interactive educational spaces are unique in their hands-on approach to independent learning regarding art and their ability to reach people directly without the human interactions or engagement that come with tours. The way a space is organized and designed, in particular, has a profound impact on my response to it. I want visitors to feel confident and comfortable with their time in the art museum because of their ability to make meaning from the space around them.

Within my experiences in art museums, I have begun to see the importance of growth as an educator, which has shaped my focus on examining museum spaces. I have translated this focus into previous museum work, beginning with my time at the Denver Art Museum. I saw how museum staff approached educational spaces and conducted research on visitor interactions with the interpretive tools seen in the museum while at the DAM. I compiled notes on an interpretive project that involved visitors interacting with the design of two chairs and identified the next steps for this project from the data collected. Additionally, I observed the path of visitors within an exhibition to see how they interacted with the pamphlet found on the wall, which cemented an interest in

understanding how people react to the interpretive objects provided in a space. During my time at the Meadows Museum, I also researched visitor interactions within the gallery spaces since I grew interested in conducting surveys and observing visitors. I am interested in evaluating spaces within the art museum and seeking out institutions that blend intentionality, flexibility, and education through their interactive experiences. This research is of personal and professional interest because of my desire to understand interactive, educational spaces and to acknowledge the design process in action.

Professional Motivations

This research is important to the field and my professional growth because it seeks to understand the past and future of interactive, participatory educational spaces that make the museum approachable to every visitor. At the end of the day, each art museum is for the visitors, so the educator's job is to create a space in which the visitor is welcome, accepted, and comfortable. The goal should be to improve constantly by asking the needed questions, creating solutions, and continuing the cycle of progress with every visitor in mind. The DAM is currently in this cycle of progress as they renovate their spaces, which makes my research of value to the field of art education. It will help those in the field see the cycle of change and progress as it is occurring while highlighting the process the DAM has undertaken.

Other studies have looked at similar interactive spaces in art museums like that at the ArtSparks Interactive Gallery at the Speed Art Museum and the Family Room at the

Getty Museum in Los Angeles (Adams et al., 2003; Edwards, 2005). The former examines the dilemmas that arise with interactivity, including those pertaining to the inclusion of technology and touch. The latter more directly aligns with my research since it looks at the development process for the renovation and redesign of the Getty Museum's family-oriented interactive space known as the Family Room. Each of these studies lays the foundation in understanding how institutions have addressed the objectives, priorities, and audiences of their interactive, participatory spaces. My research fills in the gap by looking closely at the DAM as a case study for understanding how they have approached their new project.

RESEARCH METHODOLOGY

I conducted my research as a case study consisting of multiple interviews of museum staff. Yin (2014) defines a case study as “an empirical inquiry that investigates a contemporary phenomenon (the ‘case’) in-depth and within its real-world context” (p. 16). The phenomenon in this research is the state of the educational spaces in the Martin Building amidst the building's renovation. I believe a case study is the best methodology for my investigation because case studies analyze a chosen subject matter in order to capture the dynamics of a case, including temporal shifts, and investigate the contextual circumstances of a case (Yin, 2014). My case study research seeks to connect the context of the past with the changes embarked in the building's revitalization. The interviews will address the "how" or "why" questions concerning these changes to better understand the

phenomena in question. Wolcott (1988) argues that using varied perspectives is useful "for cross-checking, or for ferreting out varying perspectives on complex issues and events" (p. 192). I am using these interviews to inform my interpretation of the spaces. Interpretation is the process of explaining an event, giving context and conditions to make an experience more vivid, and providing reasons for practices as defined by Eisner (1991). Interviewing museum staff allows me to better understand how the museum approaches its available space and how their choices forge change.

Location of Study

I am examining interactive, educational spaces in the Denver Art Museum that are not currently open and available because of the ongoing renovation. Due to current COVID-19 public health restrictions, I conducted virtual interviews from Austin, TX, with museum staff in Denver.

Participants

I interviewed seven museum staff in the Learning and Engagement Department that deal directly with the spaces in question and create programming for museum visitors throughout the museum. These staff members ranged across the department, which is divided into the following four divisions: Interpretive Engagement, Creative and Public Engagement, Youth and Community Programs, and Lifelong Learning and Accessibility. In choosing interviewees, I looked to include people involved in different aspects of the spaces, such as department heads, interpretive specialists, and educators.

Each interviewee provided unique insight that pertained to their role in the museum and the role of the spaces.

Data Collection Tools

The data collection tools include semi-structured interview questions. I meant the interview questions to be somewhat flexible depending on the subject so I would be able to tailor the questions to the duties and role of each interviewee and gain a wider breadth of information.

Data Analysis

I used coding to analyze the set of data from each interview. I looked for patterns or concepts that are often hidden, like repetitive words or ideas through coding. I combined the analysis from coding the interviews with my interpretation as a researcher. I was looking at different perspectives from the museum via the different interviewees. Then, I deduced what their goals are to see how that informs the redesign of the spaces.

LIMITATIONS OF STUDY

I conducted research in a way that approaches the space from the viewpoint of the staff. The range of interviews allowed for more data while remaining a manageable endeavor when in the analysis stage. However, there are limitations with the scope, generalizations made by the research, and methodology. Since I am exploring one organization from the staff's perspective, the scope is limited even though that is the purpose of the case study. The limited scope means that I will be unable to make claims

directly applicable to all art museums. Instead, I am focused on connecting staff sentiment to the spaces within the DAM to show an example. I could not visit the building or observe visitors because the building is currently closed and because of the limitations surrounding COVID-19. The findings of this study cannot be generalized to include all other art museums but rather will serve as a guideline to inform of the DAM's practices for creating and reshaping their educational spaces.

BENEFITS TO THE FIELD OF ART EDUCATION

My research seeks to better understand what has been considered by the museum in designing the future of the interactive, participatory education spaces in the Martin Building. I provided evidence gathered through interviews that shows how analyzing and understanding past ventures can impact future progress. Interviewing people with different perspectives has helped paint a larger picture of how people evaluate and synthesize successes when looking to future endeavors. Through these interviews, I have found themes, patterns, and similarities in museum staff motivations that I then analyzed to see how art educators could structure interactive and participatory spaces in a manner that is responsive to the past and innovating the future. A better understanding of art museums' choices regarding their spaces is essential for museum educators and staff in considering where the field is going. These spaces are not one-size-fits-all; they are special to the museums they belong to because each museum has a unique environment, different available resources, and specified focuses. Looking at the examples of past and

upcoming spaces in the Denver Art Museum through the lens of those who work with them provides a focused understanding of the impact of interactive, participatory educational spaces to be used by museum educators as they reexamine the spaces around them.

DEFINITION OF TERMS

Denver Art Museum: The DAM was founded in 1893 and has a collection of over 70,000 works in the ten permanent collections housed within the museum complex covering more than 350,000 square feet. Educational areas and activities make up almost fifteen percent of the gallery space (McDermott Lewis, 2013).

Interactive: Labeling something as "interactive" refers to a myriad of experiences within an art museum. The DMA defines interactivity as "an elevated form of engagement in which one person responds to something created, said, or done by another. It may involve a call to action (a.k.a. "proaction") or questions that invite people to come to their own conclusions" (Denver Art Museum, 2017, p. 11). The report includes that an interactive element encourages visitors through "the design and creation of opportunities for them to contribute their own actions or thoughts, thereby connecting in meaningful ways to their museum experience" (Denver Art Museum, 2017). Interactivity, essentially, emphasizes the role that participants play in reacting to provided tools. It involves "flexible formats, flexible outcomes, conversation, and contributing to something larger than oneself"

(Denver Art Museum, 2017, p. 45). Interactivity is considered important in promoting interpretation and creating engagement within the museum (Heath & Von Lehn, 2002).

Participatory: This term refers to "methods of teaching and learning" that "actively involves and motivates learners by drawing upon their own experience and skills in solving problems, using examples and situations of interest to them in their daily lives, and using a variety of new, enjoyable, and often visual teaching methods" (Bradley, 1995, p. 2). Macbeth (2020) notes that participatory learning empowers people to "share, analyse and enhance their knowledge of their life and conditions, and to plan, act, monitor, evaluate and reflect." Within the context of this research, participatory refers to the ways in which visitors are encouraged to participate within the educational spaces.

CONCLUSION

This study studied the workings of one art museum to create engaging, interactive, participatory education spaces. I utilized a case study research approach in this research, emphasizing the specific nature of this renovation. In my practice, I am grounded in a personal passion for evaluation and a professional belief in the cycle of growth in art museum education. This research confirmed the value in looking deeper at the design process for education spaces.

Chapter 2: Review of Literature

This research pulls from sources in various fields to ground the study in established theory and practice. Texts concerning the pedagogy for art museum education, interpretive strategies in the art museum, interactive spaces in art museums, curator-educator partnerships, and design thinking help answer the central research question. The sources and scholars included below position my investigation within a wider framework of current museum conversations. The literature helps in comprehending my research findings involving the new interpretive, participatory education spaces in DAM's renovated Martin Building.

PEDAGOGY FOR ART MUSEUM EDUCATION

Art museum education plays such an essential role within the museum. The field has made strides in developing theories to support it. Art museum education blends museum education with art education to find a balance that evolves with time. The 1990s saw a shift towards visitor-centered experiences based on the idea that the museum was meant to be for the people instead of the objects, as articulated in Stephen Weil's article, "From Being about Something to Being for Somebody: The Ongoing Transformation of the American Museum" (1999). The evolution in the field saw ideas such as shifting authority in museum spaces, visitor-center learning, and a focus on interpretation supported by "postmodern art museum pedagogy" theories. Danielle Rice (1995) saw these emerging ideas as an interpretive discourse concerning the objects and art, the

context around, and the viewer. When people draw correlations between what is visible in front of them and the information they already have regarding both life and art, they create interpretations. Even though they may be contrary, multiple meanings combine to activate a work (Hubard, 2007). With this new postmodern pedagogy, meaning-making in the museum became focused on visitors' personal experiences through their construction of meaning (Mayer, 2005). Museums, at their core, are educational spaces. Since the early nineteenth century, this has been recognized (Hooper-Greenhill, 1991). *Excellence and Equity: Education and the Public Dimension of Museums* (American Association of Museums, 1992) declared the educational side of the museum as the core to serving the public in its 1992 report. The report "speaks to a new definition of museums as institutions of public service and education, a term that includes exploration, study observation, critical thinking, contemplation, and dialogue" (American Association of Museums, 1992, p. 7). This report is crucial because it marks a shift in thinking within the field, making it clear that museums were meant to focus on educational programming, outreach, and investigation.

In considering the design of interactive spaces, the museum staff and experts tend to use discovery and constructivism as the pedagogy to create interactivity within the museum's context. Discovery implies that learners use active means of learning to inform external knowledge, whereas constructivism argues that there is not external knowledge and the learner constructs knowledge. The discovery approach encourages the visitor to consider open-ended responses and to place emphasis on exploration. Andrea Witcomb (2003) has coined the term "dialogic interactivity" to describe the effort to blend the

background of the visitors with a more open-ended narrative in hopes of connecting to a greater audience. Constructivism has also become important in the field of museum education. Institutions needed to conceptualize and construct exhibitions and spaces differently to promote meaning-making in visitors. George Hein (1995) applies this constructivist-learning model to museums by posing the following question: how can the museum accommodate the learning process of its visitors during the short time they are at the museum? Constructivism works for museum education since it allows for a wide range of diverse visitors to create understanding and learn new information as they approach the museum. The constructivist theory is rooted in the understanding that each person constructs learning from previous knowledge and new information they come across. According to Hein (1995), institutions are designing a growing number of museum spaces with multiple ways of approaching the exhibit to give the visitor a range of ways to gain new information and engage with the content.

In examining constructivism and the field's acceptance of postmodern pedagogy, I am exploring how the staff at the DAM is executing this theory in the field. Discovery and exploration are each tenants of past projects by the museum so my research will confront how those projects impact future ventures. The DAM is centering these interactive, participatory educational spaces around the visitor's learning and engagement, which will allow my research to build on constructivism and the current pedagogy in art museums.

INTERPRETIVE STRATEGIES IN THE ART MUSEUM

Traditional museum interpretation techniques focus on what the museum considers to be relevant to the visitor. The museum then offers materials for visitors to consume in traditional galleries and programs based on what has been deemed noteworthy (Simon, 2010). One issue museums have faced throughout history was the dampening of the authoritative voice of the curator to allow for and encourage visitor comments (Nashashibi, 2003). Curators group objects together and associate them with texts and information, resulting in selective visitor interpretations (Hooper-Greenhill, 2000). Hooper-Greenhill stated, “single fixed meaning, among almost always relating to an academic discipline, has seemed the correct and only way in which the object should be interpreted” (2000, p. 119). As a result, there is no space for interpretation beyond what the curator considers essential knowledge.

Since museums have identified meaningful experiences as being more effective than defining a clear outcome with the content, George Hein (2004) raises the thought that exhibits have to discover ways to guide visitors to inquiring further. The practice of creating meaning is also significant because it applies to visitors’ everyday problems. Interpreting art involves creating meaningful connections between their past experiences and what they experience in the art museum (Barrett, 2002). It includes how the museum communicates with its audience and how the museum delivers the content. Visitors to the museum can use interpretive resources to find the significance in their interpretation, which is unique to them (Carter-Birken, 2008). A participatory organization gathers and exchanges varied, customized, and evolving content co-

produced with visitors rather than providing the same content to everyone (Simon, 2010). Moving towards this active learning approach has led to visitor-focused museum outreach.

My research reinforces and adds to these claims of the importance of active learning in interpretation by asking the interviewees how they address and utilize these interpretive strategies. I am exploring how the museum communicates with its visitors and how the education efforts are focusing on the visitor.

INTERACTIVE SPACES IN ART MUSEUMS

Art museums are beginning to create interactive, educational spaces within their walls to give their visitors a new and exciting way to learn about art. The interactive experiences are different from the rest of the museum because they allow visitors to engage in activities. They can be permanent interactive displays that allow the audience to touch items or screens, watch videos, make art, respond to a prompt, read, and so much more. Interactive spaces allow visitors to control how they experience the museum and find inspiration in the art around them. “Engagement in interactive spaces over time provides visitors of all ages with inquiry and looking skills needed to have their own dialogue with objects of art” (Adams & Moussouri, 2002, p. 3). Falk and Dierking (2000) raise the idea that museum learning is essentially a social experience impacted by those around you, storytelling, modeling, and culture in their Contextual Model of Learning. The design of a space or exhibition impacts learning and how visitors interact with the

museum. Activities in the museum encourage interaction with the environment and with one another, forming social bonds. The physical space of learning is vital because it allows visitors to create meaning and a meaningful experience (Falk & Dierking, 2000).

According to Kathryn Blake (2005), interactive spaces for children and families attempt to have the experience of live facilitation without the facilitator. A family gallery aims to help groups that are new to the museum gain trust in their abilities to access every gallery (Blake, 2005). Moving away from the traditional interpretive strategies in the art museum, where the museum was the source of knowledge, interactives allow the visitors to learn in a new way (Witcomb, 2011). Art museums are developing spaces dedicated to these interactives to combat the stereotype of not being family-friendly (Blake, 2005).

These dedicated interactive educational spaces are an attempt to increase visitor engagement, especially with families and young children. Museums' increased interactivity has launched, reflected, and led to the public's greater engagement in interactions that go well beyond gazing or listening (Adams et al., 2004). Utilizing interactive spaces allows the audience to partake in a collective state of awareness and consciously partake in creating and developing creative interpretation (Ascott, 2002). Research shows that these spaces increase participation and bring visitors together to create a shared place for community and learning. The importance of having interactive spaces cannot be understated as they give visitors a way to find inspiration, further their knowledge, engage their creativity, and make memorable experiences.

The museum has recently had the opportunity to rethink the way they approach and design these spaces. My research explores this process deeper by contextualizing it

within the available research throughout the field and past resources from the museum itself. I am building upon the research done regarding interactive spaces by taking a closer look at the DAM's approaches in their spaces. This research addresses the museum's priorities regarding the interactive spaces that are changing with current renovation plans.

CURATOR-EDUCATOR PARTNERSHIPS

As museums are focusing on outward engagement in the community, the roles of staff members are also shifting to creating new opportunities for engagement. The American Association of Museum task force report, *Excellence and Equity: Education and the Public Dimension of Museums* asserts:

Museums can no longer confine themselves simply to preservation, scholarship, and exhibition independent of the social context in which they exist. They must recognize that the public dimension of museums leads them to perform the public service of education—a term that in its broadest sense includes exploration, study, observation, critical thinking, contemplation, and dialogue. (American Association of Museums, 1992, p. 9)

Henry (2006) states that accessibility, relevancy, and inclusiveness are at the heart of museum education, making it a critical part of developing civic engagement endeavors. However, there is a need for educators to also work with others in their institution. Interpretation is the central factor that connects museums with the public

expression of artwork. The need for curators and educators to work together is born out of a shared interest in the public presentation of exhibitions, according to Toohey and Wolins (1993). Ultimately, there is a shared responsibility for the audiences within the entire museum, especially with the curators and educators, to tackle interpretive efforts.

Educators and curators have differing yet interdependent roles within the museum. These roles have shifted over the past few decades, stoking between these fields that have a shared interest. Toohey and Wolins (1993) detail the differences between art museum curators and educators by laying out the typical responsibilities of each.

Curators are the primary stakeholders for products involving temporary exhibitions, the collections' installation, the collections' presentation, and published research. Educators are often the primary stakeholders in training docents, outreach to teachers and schools, outreach to the community, and installed programming. Looking deeper at the role of the curator, Schertz (2015) cites the following quote from the Association of Art Museum Curators (AAMC) in their Foundation Strategic Plan for 2009-2012 to outline his definition of the field:

Curators have a primary responsibility for the acquisition, care, display, and interpretation of works of art. . . . As museums face new and challenging realities, curators must work with their institutions to develop programs that maintain the integrity of collections and exhibitions, foster community support, and generate revenue. (p. 277)

As a curator himself, Schertz (2015) believes that the job manifests itself most clearly in the responsibility of displaying objects in the museum and temporary exhibition. In

displaying objects, curators produce interpretive texts such as wall labels, work labels, and panels to help guide visitors. They also engage in the act of interpretation through the selection and arrangement of objects for a display. In addition to being interpreters of the collections, curators are tasked with being the caretakers and stewards of the collections. The job includes building the collection, which is often a part of the job that the institution and other colleagues mark as being critical. In the end, Schertz views his work as a bridge between academia and the general public, which is an important point to note. As a curator, he wants to connect the academic side of art with those who visit the museum in the community; he is focused on the public and outreach, making interpretation the keystone to his job. This focus is interesting since outreach is also the keystone responsibility of the educator.

Much like the curator, the art museum educators' roles are continuing to expand as their institutions ask them to assume greater responsibilities that focus on making their museum more public-oriented and socially responsive. Concurrently, there is a lack of understanding of the qualifications and roles of museum educators (Reid, 2014). Museum educators are the voice and face of their institution's mission, according to Nolan (2009). Nolan believes that art museum educators are the human connection between the collections, visitors, and community outside. He also says that they can quantitatively and qualitatively measure their impact on the formal or informal learning experience. Reid (2013) states that educators assume the role as being the primary link between the museum and their public, a similar role that Schertz also assumes as a curator. As the

whole of the art museum looks to engaging the public, staff must work together towards those shared goals.

One issue that arises between curators and educators is the sharing of authority and responsibilities of the interpretive functions of their jobs (Toohey & Wolins, 1993). There are deeper issues and challenges of these departments coming together that go beyond these tensions around the presentation and interpretation of the artwork. Stephen Dobbs and Elliot Eisner researched and reported on the state of the museum education profession in 1987. Their study exposed that the colleagues of museum educators often had a negative attitude toward the profession and limited comprehension of the field. Although we are now over thirty years later and the situation has somewhat eased, the field of museum education has had a long history of being regarded as “not quite a true museum job” by their colleagues (Talboys, 2005, p. 19). Understandings of the profession are still weak for many, and educators’ voices have often been pushed to the sidelines of the institutions as a result (Nolan, 2009). There are often issues within the museum culture and division of labor within departments that cause tensions on the surface. Looking beyond these issues, the financial and academic strains on the field of art museum education create deeper tensions between curation and education.

One of the challenges of effective collaboration between educators and curators is the culture of their institution. If there are divisions and tensions within a museum, they must be recognized and confronted. One of Nolan’s recommendations for educators attempting to assert their place within their institution is to take a step back and examine organization’s culture. She encourages educators to review how programs and exhibits

are developed and tested across departments. The question she asks educators to pose is, “In what ways are the systems interconnected within and between ‘buckets’?” (Nolan, 2009, p. 176) By asking this question, the departments can focus on their shared interests rather than differences. Another challenge that may cause issues on the surface is the lack of codification around curator-educator partnerships, making it challenging to collaborate across areas (Toohey & Wolins, 1993). Since audience focus divides the responsibilities of many education departments, the curator-educator partnership is strained since curators think about a single collection area and educators are assigned to think about an audience in many collection areas. The differences in these structures amplify the roles of each field, with the primary concern for the curator traditionally being the collection and the primary concern for the educator being the audience. Toohey and Wolins suggest restructuring the education department to mimic the structure of the curatorial department to combat any issues. However, I believe that this is not the solution since it would cause education to bend to the needs of curation when, in reality, training is different for each department. It makes sense why how institutions have structured the departments. Nevertheless, this is a hurdle that needs to be addressed and tackled, much like the museum's culture.

Some deeper tensions are also present between educators and curators that go beyond frank conversations with staff members. There appear to be waves of crisis in the history of the profession of art museum education, with museum educators constantly having to define and assert their place. This feeling manifests itself in uncertainty with the financial and academic future of the art museum education profession. In tough

economic times, nonessential expenses are the first to go, and the education department seems to fall into that category for many institutions (Nolan, 2009). The Museum Research Associates' survey demonstrated that museum educators are the "largest segment of museum staff to lose their jobs in this current financial crisis" and the "ones who have been left behind have to do more with considerably less" (Reid, 2013, p. 228). Toohey and Wolins (1993) call on the museums to have equality between education and curatorial departments in number of staff within each department and departmental budgets to reach the full potential of the partnership. A disparity between the departments in an institution can immensely increase tensions, making the education staff feel less valued. A more even playing field with both departments can minimize those institution tensions.

During the COVID-19 pandemic's financial hardships, museums have had to consider ways to cut back spending. The president of NAEA, Thom Knab, outlined the need for museums' continued support of the education staff, saying, "I ask you to take a stand for museum education and ensure that, even amid difficult budget decisions, a continued commitment to retaining museum educators remains a priority" (Knab, 2020, p. 2). Knab is firm in his and the NAEA's stance that terminating museum education staff will significantly impact the visitors' connections to the artwork and the availability of impactful learning experiences. He calls on a continued investment in museum education by imploring that museum education departments not be any more negatively impacted than other departments during the challenging financial period. This call for continued investment in education is crucial. Knab is calling for institutions to value and respect

education as a means to create greater partnerships throughout the community and the museums' departments.

Beyond a pervasive financial strain, there is also underlying tension with the academic qualifications required in the art museum education field. A survey completed by Chen Cooper proves that there is a growing weight being given to experience in education and the fine arts for museum educators, according to Reid (2014). This trend supports the rise of museum education being treated as a distinct profession that is separate from the curatorial world (Reid, 2014). Historically, the academic qualifications for museum educators reflected that of curators with an emphasis on art history but at a lower academic level. Ebitz (2005) reviewed the American Association of Museums' (now the American Alliance of Museums) monthly newsletter from 2002 to 2003 and found that art history was the most prevalent academic qualification requested in museum education postings. The survey suggested that many museums required museum educators to have a similar background to curators. However, the educators were not required to be as advanced in the academic endeavors. This discrepancy is distressing since museum educators' roles and responsibilities are typically quite distinct from those of curators. Reid (2014) conjectures that postings for art museum educator positions still call for degrees in art history too often when considering that the skills gained in a degree focused solely on art history do not adequately prepare individuals for the museum education profession. He suggests that specialized degrees can help professionalize and strengthen the field, a request that Dobbs and Eisner made back in 1987. Reid also believes that museum learning specialists will be able to better excel in their efforts to

reach the public when they are better respected, valued, and supported by their colleagues and institutions. In having clear distinctions in the qualifications of both curators and educators, both fields will have different strengths and perspectives that they can combine in a positive way.

Understanding what is considered the standard and exploring the history between the curator and educator is useful when looking at the DAM and seeing how they structure their institution. The relationship between colleagues and the distribution of labor are important factors in the DAM's design decisions. The DAM has made efforts to bridge this divide between curators and educators by creating jobs specifically surrounding interpretation. These "Interpretive Specialists," which were formerly known as master teachers and will be discussed in greater length in the following chapter, connect the departments and ensure that they are working together. Stefania Van Dyke, the Associate Director of Interpretive Engagement and the Interpretive Specialist for Textile Art and Fashion at the DAM, has given her perspective on colleague partnerships and collaboration (2017). She suggests having more informal conversations with staff members on the exhibition teams to understand each other better and get to a place where collaboration can thrive. She also outlines the following ways educators can reach across inter-departmental lines: encourage different perspectives, highlight personal passions, have self-awareness, and provide relevance. In considering how collaboration plays out, Van Dyke (2017) writes the following:

There is power in the holistic vision of the individual team members' contributions that ultimately come together in a cohesive, harmonious way. Our

roles may be well defined on the surface, but if we apply what we know so well about visitors and museum practice to our internal collaborative efforts, the lines can—and should—get a little blurry. (p. 236)

She ultimately argues that the same empathy that is used to connect with visitors can be used to connect with colleagues. Empathy is at the core of her model for inter-departmental collaboration.

By interviewing staff members in different departments, including education and curation, I was hoping to see how the relationships between the departments play out at the DAM, considering what strides have already been taken. Establishing this history and research regarding curator-educator partnerships is essential in my research as I analyze the DAM's structure and decision-making process.

DESIGN THINKING

David Kelley, founder of IDEO, and Tim Kelley, his IDEO partner, write of the importance of creative confidence in their book of the same name (2013). The authors outline four critical components of design thinking: inspiration, synthesis, ideation and experimentation, and implementation. According to the text, inspiration involves an empathetic approach to research, discovery, observation, interviews, and comparative analysis. Synthesis or "sense-making" is important for identifying patterns and themes for discovering significant meaning. It also helps in deciding where to place focus by reframing the problem into actionable frameworks. Ideation and experimentation

combine the brainstorming of potential solutions with an immediate testing and revision process to become more user-centered, interesting, and practical. Implementation includes processing feedback, making changes, and finalizing the design of a selected solution. According to the authors, change is a constant in dealing with design thinking within this established process.

Designer and researcher Marty Neumeier (2009) builds on the idea of design thinking in his book *The Designful Company*. He notes that a key difference in the design process, compared to traditional business practices, is that of making for newness to be discovered and explored. He includes that organizations need to be fluid, malleable, and flexible to adjust to the market's needs and stand out from the competition. To rise above the rest, the author identifies four overarching stages in design thinking: discovery, ideation, refinement, and production. He advocates for a time and space for the free flow of imagination to exist in the space between logic and magic. Additionally, he talks of the importance of collaboration and suggests that holistic thinking is needed to combat the culture of over-thinking and arguing. Neumeier highlights that design thinking is more than merely following steps- it is a disposition that allows for adaptability, empathy, curiosity, and depth. To work and think like a designer is both a process and a perspective. Bell (2008) explains how design thinking is very thoughtful and people-focused when approaching a problem resolution. It's about understanding the practices of users or visitors to better design for the experiences in a space. With this, the focus once again goes back to those who will be using the products.

The concept of design thinking informed how I approached the design of these new spaces at the DAM. In my interviews, I was curious to see if the spaces in the Martin Building either reflect design thinking principles of flexibility and reiterations in their creation or their continued presence. I wanted to see how open to change the staff at the DAM is, and that interest was because of my understanding of design thinking.

CONCLUSION

This chapter has examined the pertinent literature for looking at the design process and staff interactions with the DAM's new spaces in the Martin Building. I am trying to better understand the complexities of the museum ecosystem and the unique nature of the design process for these educational spaces that require all of these separate areas of study and pieces of research coming together. This chapter began with pedagogy for art museum education and ended with research on design thinking in an effort to start broader in the available research before purposefully honing in on topics that respond more directly to the case seen at the Denver Art Museum. My study of the design process of the participatory, interactive spaces in the DAM is informed by the pedagogy of discovery and constructivism to think about how visitors learn. The literature surrounding interpretative strategies is also needed to comprehend inquiry and active learning. From the research, interactive spaces are shown as successful tools in engaging visitors, making it clear why the DAM has focused so much time and energy on their educational spaces. Looking at the example found in the DAM more closely opened the idea of exploring

curator-educator partnerships and design thinking. The DAM is distinctive in its approach to inter-departmental collaboration and communication, so it was necessary to provide a larger context for these relationships from the field. It is also essential to provide a background in design thinking before looking closer at the way the museum has applied flexibility and reiteration. Although the DAM is a unique case study, reviewing relevant literature is critical for placing my research within the larger series of events found in the field of museum education.

Chapter 3: History of Education at the Denver Art Museum

The purpose of this chapter is to set the foundation for my research. The DAM has a tradition of research and reflection around visitor learning and experience that has been critical to how they have cemented their role as innovators and leaders in the field. By starting back in 1980, I can better establish the history of the Denver Art Museum and the Learning and Engagement Department within it. Looking more broadly at the field of museum education in the 1980s is needed to comprehend the catalyst that led to Patterson Williams and the DAM's continued prioritization of evaluation, education, and evolution. The push from critics to provide intellectual grounding in the field sparked decades of research involving the DAM analyzing their actions to prepare for the future. This chapter begins by focusing on the changes from 1980 to 2000 that gave way to the findings between 2001 and 2017, as outlined in the second half of the chapter.

DAM HISTORY FROM 1980-2000

The decades from 1980 to 2000 were exceptionally impactful as it covers the beginning of Patterson Williams's tenure as the dean of education at the DAM and a shift in the field. The 1980s was a decade of "uncertainty" according to Barbara Newsom (1980) in her aptly named article, *A Decade of Uncertainty for Museum Educators*, as she looked ahead. Rika Burnham and Elliott Kai-Kee (2014) have retrospectively noted the need for intellectual grounding at the time. Professionals began to question the role of the

educator, which led to the rising notion of the "master teacher" in the museum. This part of the chapter examines the impact of Patterson Williams and the scholarship surrounding her as the Denver Art Museum began looking towards the future placement of museum educators. This chapter examines Williams's pedagogy of object-oriented learning and its benefits as well as the impact of the scholars present at the Denver Meeting of Museum Educators. Together Williams and others sought to solidify the field. From there, the chapter follows the education department at the DAM as they conducted their own research on their interpretive efforts. These reports are included to illustrate how Melora McDermott-Lewis, who joined the education department in 1986 and assumed the position of its director before the opening of the Hamilton Building in 2006, and Williams were making strides towards the future. With these sources, I am delving deeper into how William's support for object-oriented learning and the notion of the "master teacher" led to later interpretive research efforts and a better understanding of the educator's place within the DAM, specifically.

Museum Education in the 1980s

In *Teaching in the Art Museum: Interpretation as Experience*, Burnham and Kai-Kee evaluate the uncertainty of the 1980s in museum education. They describe how there was a "feeling on the part of many museum educators that the field was in dire need of firmer intellectual grounding" (Burnham & Kai-Kee, 2014, p. 39). During the 1980s, criticism prompted the field of museum education to examine itself, and articulate its

goals, and form an intellectual foundation. *The Uncertain Profession: Observations on the State of Museum Education in Twenty American Art Museums* by Eisner and Dobbs in 1986 sought to define the current state of the profession of museum education but instead created a “highly unflattering portrait of a profession uncertain of its own intellectual foundations” (Burnham & Kai-Kee, 2014, p. 40). Although Eisner and Dobbs’ report was controversial due to its critical nature, it was an essential catalyst, in retrospect, that created a spark with professionals in the field, including Patterson Williams.

Burnham and Kai-Kee also explore "object-oriented learning in museums" as a critical theory of this period. In 1982, Williams articulated the process of object-oriented learning as one involving looking closely, making personal responses, placing the art within a cultural context, and making judgments to further understanding. Williams asserted, “The primary aim... must be to bring together people and objects and not people and information about objects” (Williams, 1982, p. 12). Williams’ understanding centers on visitors’ direct engagement and response to art rather than imparting art-historical information. This way of approaching art remains the core of the DAM’s educational philosophy today. It allows audiences to take the time to think about the pieces before they learn more and ultimately come to conclusions about how they feel. Burnham and Kai-Kee (2014) assert that Williams wanted visitors to derive personally significant experiences from interacting with art objects- not from being given information about art objects even though that can serve as important elements. Such information about an artist’s life and additional context was more about introducing visitors to the objects to create deeper connections.

The Denver Meeting

In response to *The Uncertain Profession*, museum educators came together to address the issues raised by the Eisner and Dobbs report and set forth an agenda for the profession. With Susan M. Mayer and Patterson Williams leading the charge, the Denver Meeting of Art Museum Educators gathered at the Oxford Hotel from November 13 to 16, 1987. They set out to define the profession of art museum education, career development within the field, the audience of the art museum, what teaching in the museum looks like, and the future of the field. There was a sense of intention, urgency, and agency with the people who convened and attended this meeting. Mayer and Williams designed the forum to minimize any sense of hierarchy amongst the twenty-five participants (Mayer, 1988). Bonnie Pitman-Gelle's efforts to define art museum education and Danielle Rice's promotion of the museum as a tool in understanding visual literacy, in particular, created a foundation for which future scholarship to build on and growth to occur in the field (Pitman-Gelle & El-Omami, 1988; Rice, 1988). The meeting set out to establish definitions and standards that would cement a foundation for the field and was successful. The meeting was a defining moment for the field because it began building a shared intellectual and scholarly foundation for the field. It was also a defining moment for the education program at the DAM. Significant innovations in interpretation emerged at this time, and they continue to be foundational for the museum today.

Patterson Williams' response within Philip Yenawine's "Master Teaching in an Art Museum," an article in the *Journal of Museum Education's* debrief of the Denver Meeting, sets forth the DAM's approach to master gallery teachers (1988). These master teachers were the blueprint for what they are known as today- interpretive specialists. She outlines that these master teachers serve as the education representatives on the exhibition and reinstallation teams consisting of curatorial, publications, and design representatives. The master teachers set out to give the team insight into how people interact with materials and learn in the museum and are the "primary resource on our interpretive teams for advice and implementation of visitor interpretive services in exhibitions" (Yenawine et al., 1988, p. 21). Williams created the position for contributing to label copy, specifying interpretive themes for exhibitions or installations, and developing programming like tours. Williams believed the following:

The most important idea here is that the master gallery teacher carry his or her insights into the area of gallery installations so that, when visitors visit the galleries alone (not in a guided tour), they can have more rewarding experiences, more choices of interpretive approaches and assistance, and more educational and entertaining experiences. (Yenawine et al., 1988, p. 21)

Burnham and Kai-Kee (2014) note that Williams had previously discussed the lack of rewards for educators and staff teaching, leading to her development of this idea of the master teacher for the Denver Art Museum. In creating this position, Williams was attempting to make strides in professionalizing the field. Burnham and Kai-Kee (2014) add the following:

Williams developed the position of master teacher, boldly reinstating professional teaching at the center of museum education, and staking a claim for the deserved high status of education in the museum. The title Master Teacher was also a reminder that teaching is a discipline requiring dedication and a great deal of knowledge to master. (p. 41)

By creating this position and title, Williams was attempting to further cement the importance of a cohesive and specialized field of museum education.

Melinda Mayer, daughter of Susan Mayer and scholar in the field, argues that Williams' emphasis on an expert teacher and empowering novices to see art like an expert over-valued and privileged the authority of the art historian despite the undertones of visitor empowerment also present (2005). Williams and the field of museum education were grappling with this tension between empowering visitors and imparting expert knowledge. However, Williams' continued valuation of curators as experts does not undermine the work she was also making at the time towards the creation of interpretive liaisons between the curation department and the education department. Mayer's argument does not acknowledge Williams' prioritization of collaboration and teamwork across the departments to bring together the staff's strengths. Mayer (2005) effectively lumps the museum master teacher or interpretive specialist and the curator together despite Williams' distinction between the two and appreciation for insights of each to contribute to different aspects of exhibition planning. While Williams valued providing expert knowledge and giving visitors information about works, I have found that these

actions were more to serve the visitor's needs based on the findings in her evaluative efforts rather than to control a narrative.

At this time, Williams and the DAM staff were still a ways away from where they are today regarding how they approach personal meaning-making in their interpretive materials. Yet, the foundation for these ideas was being formed and became strong enough for the DAM to support decades of growth for the museum. The establishment of master teachers within the context of the DAM signaled a promise to keep visitors at the center of programming efforts and design decisions. It began the era of focused evaluation to improve audience accessibility and understanding. While Williams created the master teacher position to "identify educators who were on the same level in the institutional hierarchy as the curator with whom she or he was paired," the job has changed with time to better suit the prevailing focus on visitor engagement (Van Dyke, 2017, p. 226). In discussing the name change and shifting responsibilities, Van Dyke (2017) says the following:

We believed that 'master teacher' implied only 'education' in an outdated, even negative sense. We suggested changing our title to 'interpretive specialist,' signifying our focus on crafting stories and interpreting art works in ways that take into consideration the whole of visitor experience. (p. 227)

The evolution of the position indicates an openness to change with time, plans to expand the museum's reach, and responsiveness to past lessons. The Interpretive Engagement division, which includes a team of interpretive specialists that each cover different sections of the museum's collections, is a thriving aspect of the DAM's Learning and

Engagement Department today because it has grown to meet the needs of the museum and continued to focus on collaborative efforts.

Innovations in Museum Education at the DAM

In the 1980s, there was “almost no published research into audience response to artworks” (Burnham & Kai-Kee, 2014, p. 44). At the beginning of the 1990s, Williams and the DAM began carrying out a series of visitor studies and publishing their findings, starting with reports on their 1990 interpretive project and research on visitor panels. These studies throughout the next three decades examined audience responses to the interpretive strategies offered at the museum. Thus, the 1990s began the tradition of studying audience preferences and publishing evaluative reports that the DAM continues to this day. The term “interpretation” was not new but became the buzzword of the 1990s since scholars did not debate it and it helped museums emphasize “visitor-centered” learning. The DAM embraced the idea of interpretation as they reinstalled galleries, enhanced existing installations, and expanded programming.

Denver Art Museum Interpretive Project (1990)

"Making the Human Connection," an article by Patterson Williams within the DAM's 1990 Interpretive Project, sought to define the “human-connection label” in the ongoing effort to make distinctions and clarifications between an art expert and the average museum visitor or the art novice. With Williams’ leadership, the museum focused on ways to give novice museum visitors the knowledge and interpretive skills to

access the human quality of art. 71% of respondents to the museum's study discovered that "making a human connection— providing information about the people who made, used, or owned an art work— was one way to enhance the visitor's experience" (Williams, 1990, p. 77). This study also found that "both novices and experts consider looking at a work of art a rewarding way of getting in touch with another human life" (Williams, 1990, p. 77). The human-connection label involved looking deeper at the individual people connected with the artworks- whether they are the artist, patron, or users. It attempts to add a different perspective on how people valued objects to establish the "aesthetic quality, technical virtuosity, or iconography of the object from the perspective of those who made or used it" (Williams, 1990, p. 78). In a way, these labels replaced the curator or educator as the expert. Instead, they elevated the agency to the contemporaries of the artwork in an effort to add a human touch. The designers of the human-connection labels created paddles hidden in a pocket so that these interpretive materials could be tacked onto an already installed gallery without being distracting or intrusive. In regards to the human-connection labels, Loomis (1990), an outside expert on museum evaluation technique, comments the following:

These not only encourage more active looking, but developed visitor abilities to look at art, to better understand the human background behind art, and to experience features like color in a more direct way. They also attempted to help the viewer see orientation within a collection, make comparisons, recognize how art makes one feel, learn about a curator's perspective towards objects, and

develop perceptual awareness of art objects and designs through games and puzzles. (p. 134)

The human-connection labels were a notable innovation in the museum as they mark a long history of infusing art with a human touch. It touches on an idea at the core of the museum's beliefs: human connections to art and one another create meaningful experiences.

As an outside researcher looking at the Denver Art Museum, Loomis made some keen observations about the staff and the visitors to the DAM in "Impressions of the Denver Art Museum Interpretive Project," another section within the larger report. Loomis approached this interpretive project as a way "to develop a model or conceptual scheme that can guide practitioners in creating interpretive opportunities for gallery visitors" (Loomis, 1990, p. 133). From here, he took notes on the exceptional components of the DAM. He noted, "I felt a key aspect of this project was staff willingness to look at visitors and try to define some audience characteristics that might challenge conventional thinking about visitors" (Loomis, 1990, p. 133). "Visitors seem to accept and enjoy interpretive features in galleries," Loomis stated, "as long as they're done in good taste and don't compete directly with the objects" (1990, p. 134). Another key takeaway Loomis (1990) had was regarding the role of formative evaluation: "It seemed that one important outcome of the project was that the Denver Art Museum staff increased their confidence and respect for formative evaluation" (p. 134). He also added that the iterative approach to developing products before they are complete is very helpful in visitor studies. Loomis seemingly confirms multiple aspects of the DAM that they continue to

prioritize to this regarding evaluation and provides a segue to the findings in the DAM's subsequent research report.

Visitor Panels: A Handbook for Improving Interactive Materials through Audience Input (1993)

In 1993, the museum published *Visitor Panels: A Handbook for Improving Interactive Materials through Audience Input*. The report details the visitor panels and other audience studies the museum embarked upon for the reinstallation of the Asian collection and the Pre-Columbian and Spanish Colonial art to get a more complete understanding of the interpretive program. The report found that “exhibition planning hinges on long-term relationships between curators and educators who focus on the same areas of the collection” (DAM, 1993, p. 1). This quote confirms the inter-department collaboration that had previously been touted by Loomis in the 1990 report when he said, “Actually, this observer was impressed at the amount of team interaction he noticed. A number of curators, educators, designers, and editors worked on the project at different times” (Loomis, 1990, pp. 135-136). The 1993 report asserts, “the visitor panel process suggests that an exhibition is never really finished until it is removed from the galleries” (DAM, 1993, p. 2). Viewing exhibitions as mutable rather than stagnant highlights the iterative nature of the interpretive materials and spaces designed by the teams at the DAM. The report notes that the information gained aided in creating more accessible, reflective labels and other interpretive materials. It also details the process of putting together a successful visitor panel. The elements include treating the panelists as experts in being visitors, having panelists return to advise multiple times, facilitation by a

practiced moderator, paying panelists for their time, and developing trust between the panelists and staff. The report outlines how the visitor panels allow staff to directly hear the opinions of visitors and create positive changes to exhibitions and interpretive materials based on the newfound understanding of the visitors' needs. This informative study on visitor panels shows development in theory and practice at the DAM. These foundational ideas were built upon in the new millennium.

DAM HISTORY FROM 2001-2017

In 2000, planning began to expand DAM's campus, including the Hamilton Building, which opened in 2006. These plans prompted the museum to establish a research agenda. Between 2001 and 2017, when the Martin Building began closing for renovations, DAM staff conducted series of critical research studies and authored reports of their findings. Across these reports, there are common goals to find "human connection," provide comfort and choice, collaborate, and foster creativity. This period saw the museum build onto its previous evaluative findings and perception of what education should be in order to grow. The DAM experienced a period of constant change through an intense prioritization of experimentation and evaluation. Following is a discussion of the key findings from these reports and their implications for the development of the educational practices at the DAM.

Enriching Visitor Experiences: The Reinstallation of the Denver Art Museum's European and American Collections (2001)

This 2001 report feels like an apt way to begin the twenty-first century at the DAM, especially when considering my research's focus on the reinstallation and renovation of the entire Martin Building just two decades later. The report begins with a clear harken back to the previous research done regarding “novice” and other levels of visitors by addressing how they are creating materials to target all three audiences. It is made known that the earlier report on novices and other visitors was integral in the reinstallation of the European and American collections in 2001. This later report states, “Like our earlier installations, it builds on what we’ve learned and experimented with to date— and hopefully will provide inspiration and insights for future projects” (DAM, 2001, p. 2). The interpretive team for this reinstallation project included the master teacher for European and American Art at the time, Melora McDermott-Lewis, two curators, an exhibit designer, a graphic designer, and a writer. Curator, Gwen Chanzit, noted, “We didn’t really worry about departments. We just erased all those boundaries and all worked together. No decision was made without teamwork”(DAM, 2001, p. 4). This cross-departmental approach to creating interpretive spaces and materials at the DAM continues to this day and provides multiple perspectives to any issues. The report also cites visitor insight through formative feedback as impacting the interpretive strategies for this space. This is important to note, even though it will continue to be common practice in the DAM throughout the reports.

The report asserts from the beginning that they want more sophisticated visitors, novices, and families to have more meaningful interactions with art at the DAM. To

achieve this, staff created a deliberate range of strategies targeting adults instead of using a single method. This range included hanging art by themes instead of periods, a random-access audio program, and hands-on activities. The report says that the core team wanted to emphasize the pleasure of looking, a tactic that could appeal to a wide array of audiences. To do so, they decided to arrange art by themes. The decision to display art in a thematic approach was to best serve the nature of the collection and make the art less daunting to novices when trying to create connections to the pieces.

In response to the 1990 study of visitor experiences, the reinstatement team decided to also include “human connection” labels for thirty objects in the installation. The study’s findings showed that it is advantageous to service novices and more sophisticated visitors by developing a deeper understanding of the humans behind the art and the creative process. These labels hinge on the idea that making a “human connection” can create better experiences with art. The labels helped visitors feel like they were getting inside information about the works and artists behind them. They were placed inside wall boxes directly beside the works they were referencing so that visitors could look back at the artworks with ease and the boxes could remain an unobtrusive aspect of the gallery space.

There was also a focus to create adult-focused activities with the reinstatement that gave older visitors the chance to contribute and express their own opinions. These activities were meant to highlight that experiencing art does not always involve being given information. The activities included a writing activity, a drawing activity, and a “Create Your Own Exhibit” activity. Both the writing and drawing activities were later

reworked for other exhibits in the museum and involved responding to works in a public forum setting. This allowed visitors to look at others' comments or creations in an effort to create a connection to others. The "Create Your Own Exhibit" activity allowed visitors to arrange artworks in the collection in a new manner. It showed how people all approach art differently and shed light on the museum staff's decision-making process in designing galleries. The focus on adult visitors is one that the DAM continues with later projects, seeking to understand and target a group that often shies away from interactive activities in a way that children don't.

The Bernadette Berger Discovery Library, in particular, was created with innovation in mind. Touted as a "new kind of gallery," the library was meant to be unlike any other part of this and other museums. The DAM meant it to be an area where visitors could stop, stay, and enjoy more personal experiences with surrounding paintings, prints, and objects. The library also included books, computers, a costume closet, and a game that was later added in 2013. The library became a mainstay and staple of the DAM, being reimaged and revamped for the western art galleries shortly after its opening. There were hopes to have variations of mini-libraries scattered throughout the Asian collection as well. Although other publications were calling the DAM "a model of a comfortable, user-friendly museum," the museum understood that there was still a lot of work to be done and a lot of room to continue to grow. This idea of being a "comfortable" space for visitors is one that staff continues to grapple with to this day in their engagement and design strategies.

As an introduction to the twenty-first century, this study did not disappoint in its multi-faceted approach to the reinstallation of the European and American Art galleries and the acknowledgment of future growth. At this time, the museum was already planning for the addition of the Hamilton Building that would open in October of 2006. The end of this report notes the need to build on what was started in this project to make galleries that are even more visitor-focused and inclusive. In addition, this report showed the staff's ability to recognize the importance of collaboration across departments and include varied interpretive strategies to target different audiences and provide the visitors with choices for approaching the art.

Visitor Panel Study of Poetry Writing Activities in the Special Exhibition, Frederic Remington: The Color of Night (2004)

This 2004 study serves as a guide on achieving successful visitor panels and asserting their importance. Williams asked for advice and guidance from outside consultants in preparing staff to use the visitor panel technique with the opening of the Hamilton Building, and this report is the result. While great points were made regarding the perception and use of language in written museum materials, a big takeaway is the focus on creating a better understanding of how visitor panels can be helpful to staff members. This study provided professional development for the staff on how to analyze the findings of visitor panels in the hopes of expanding their usage in evaluative techniques. When analyzing the transcripts, researchers asked staff members to put comments into five filters that they then explored using the following action areas: things

we will continue, things we will modify, and things we will explore. By creating these lists, staff was actively thinking about how to take the findings to the next step and putting them into action, an idea that extends past this study.

The five areas of emphasis extrapolated from the findings included change, comfort, choice, communication, and collaboration. The need for change asked the following of staff:

Look for ways to encourage risk taking and make it clear that the museum is a safe environment for experimentation, actively and articulately promote the benefits of new ways of looking, share testimonials about where and how adults play, and encourage creative play for all ages throughout the museum. (DAM, 2004, p. 22)

The need for people to feel comfortable in the museum is something that the DAM continually feels compelled to mention and address. This study notes the need to develop more ergonomically designed and user-friendly interactive formats to increase comfort level while also encouraging visitors to step outside of their comfort zone. An important point made by the report is that choice and comfort are directly related; a certain level of comfort is necessary before people can utilize the provided options and customize their experience in a meaningful way. Communication refers to both the communication between the museum and visitors as well as the communication between visitors with other visitors. Creating a dialogue between visitors is not a new concept and was seen in the 2001 report. Yet, the museum wanted to continue to find new ways to foster at this point. Additionally, this shows the museum's continued focus on considering visitor

feedback when shaping labels and other interpretive devices. Finally, the report notes the need for collaboration between staff members of the DAM, a concept that is continually addressed throughout the DAM's history.

The period that this report falls in sees the museum continue to set the DAM apart from any other experience in both offerings and community perception. The report encourages staff to define the DAM as a different space for people to go that prioritizes interactive elements: "Even before they get to the front door, the public needs to know that interactivity is one of the things that sets the Denver Art Museum apart from other museums they've visited" (DAM, 2004, p. 23). Most importantly, the five areas the study addresses are ever-present in the ethos of the Denver Art Museum throughout its history but especially today as the museum looks to prepare for the future. Staff members continue to apply change, comfort, choice, communication, and collaboration to their decisions today.

New Angles on Interpretation in the DAM's New Hamilton Building (2007)

This 2007 report is important in outlining the interpretive explorations provided by the new opportunities from the 2006 opening of the Hamilton Building. The study breaks up the interpretive explorations into the following categories: connecting with artists, engaging visitor response, engaging visitor creativity, and incorporating multiple voices. These four interpretive explorations are meant to replace the four ways visitors approach and get meaning from art from Williams' object-oriented learning approach.

The four object-oriented ways of approaching art involve seeing and perceiving visually, reacting, thinking, and making judgments. Although the report is making the clear distinction between the new experiential approaches and the object-oriented approaches, it also addresses the similar underlying belief- people connect with art in multiple ways. There is also another reference to the importance of choice, saying that educators continue to cite a comment made in the 2004 report that visitors want to be “served with choice.” With this reference and the four new approaches, it is apparent that providing people with different choices and ways to engage with art was a central element in designing the installed interpretive for the opening of the Hamilton Building.

The report defines connecting with artists as allowing visitors to “make ‘human connections’ with the art on view by providing them access to insights about individual artists and their creative processes” (DAM, 2007, p. 4). This quote is a direct reference to the “human connection” principles first outlined by Williams in 1987. The museum is making it clear that they are learning and growing from their past discoveries by including “Easter eggs” like this one in their research reports. The report goes on to explain how staff has built upon the “human connection labels” by “refining a successful prototype” in their design. The expressed need to connect with living and local artists is a new take on an old concept that becomes a growing theme for the next decade of programming and research. It breathes new life to the need for “human connection” outlined twenty years prior. The other three exploratory approaches also identify key aspects of the DAM as they moved forward. Engaging visitor responses was not a new

concept in 2007 but the continued dedication proves how the DAM reimagines and revitalizes past ideals.

Another important thing to note is that the report cites Williams as the Education Department's in-house evaluation coach in this report, proving the skills she took decades honing and her continued importance to the museum's growth through prioritizing evaluative practices. Her presence and the presence of McDermott-Lewis as constants in the Education Department of the DAM prove not only their respective capacities for change but also the museum's appreciation for growth and retrospective analysis. Williams takes time to note the importance of in-house staff conducting research as a way to internalize the results. The research, then, becomes part of the staff's reflective process, and they, in turn, become better educators. This concept may be a big reason why it feels as if staff is continually building on and taking lessons from previous research endeavors. The following excerpt makes it clear that Williams also understands that research does not always look the same:

The combination of small-sample, in house research with larger-scale, outside research affirms that we trust our own experience but that we do listen to visitors first and we don't trust ourselves so completely that we're not open to more objective perspectives on our work. (DAM, 2007, p. 32)

Williams espouses the advantages of bringing in outside experts when needed to aid in conducting evaluative efforts and double-check the findings. She understands that asking for outside help is an imperative tool to take advantage of.

The DAM takes pride in its ability to address adults and integrate creative activities in a way they believe is unmatched, which is seen in the Hamilton Building from the beginning. DAM expresses their interest in being a museum that is different from any other kind of place for adults as well as kids to explore here as well. The question of “What if the DAM became a forum for voices rather than being the sole authority?” is even more present in the creation of the new spaces being designed with the current Martin Building renovation. Nevertheless, the Hamilton Building’s opening shows a new and growing focus on bringing in different voices and perspectives from the creative community. The report views the Hamilton Building as a giant undertaking that allowed staff to reflect on the past and gave many new, exciting opportunities for applied growth.

Creativity Resource for Teachers: The Story of Putting Together an Online Teacher Resource (2009)

This 2009 report outlines the two yearlong journey of developing a web-based, curriculum-integrated classroom resource center for teachers based on works in the DAM. Essentially, the museum wanted to apply what they had learned from their experiential and inquiry-based tours, hard copy resources like the Family Backpack program, and other installed interpretive materials to its online database of curriculum. They wanted to go online to meet teachers wherever they are. Referencing past lessons and the museum’s focus on fostering individual experiences with art, the online creativity resources represent a culmination of years of work predating the inception of the website

and a promise to add to it as time progresses. The opportunities for growth are seen today on the site with the inclusion of new web quests referencing elements of the Martin Building that have yet to be opened and a growing variety of online activities available that go beyond lesson plans.

Creativity, Community, and a Dash of the Unexpected: Adventures in Engaging Young Adult Audiences (2011)

This 2011 study sought to better understand the museum's young adult audiences ranging from nineteen to thirty-five. The study found that the best way to think about people is not by restrictive age brackets but by the style of the audience. The audience found a formal tone to be off-putting, indicating that the audience did not want the museum to address them in a formal or authoritarian manner. The programs geared toward this audience prove that variety and hands-on activities are important for all ages. The report's focus area proves the museum's fascination in engaging the adult audience and creating experiences that appeal to a variety of people beyond kids.

Kids and Their Grownups: New Insights on Developing Dynamic Museum Experiences for the Whole Family (2013)

Even in the title, this 2013 project makes sure not to leave out the adults that accompany kids to the museum. This inclusion of adults proves to be an important theme to the report. The researchers show an interest in designing for both kid and adult comfort in the activities and furniture. In their quest to find a balance between the needs of the

adults and the kids, staff members are creating spaces for conversations that engage with the art and can't happen elsewhere.

The report is valuable in clearly outlining the Family Backpacks, Create Corners, and Games Spec Sheet. This study saw the previously mentioned inclusion of a new game, the Arcimboldo Portrait Building, in the Discovery Library for European art. The Arcimboldo Portrait Building invites families to create their own versions of the portraits that hang on the nearby wall with magnet boards and everyday objects. For the purposes of this research, the Create Corners are of most interest as they were permanent, installed interactive spaces that were found throughout the Martin Building when it was known as the North Building before it closed for the renovation.

- The Bosch Create Corner: “This cozy corner in the gallery immerses families in the fantastic creations of the Follower of Bosch painting nearby. With whimsical activities and a story-starter flipbook, families use imaginative play and humor to build their own puppets inspired by the painting. This space also uses previously developed interpretive information to support adult engagement. We had family comfort and design in mind when developing this space, as is reflected in the oversized armchair, larger-than-life wall graphics, and tree-stump stools, all of which contribute to an environment prepped for intergenerational play” (DAM, 2013, p. 32). In my conversations with staff, I learned that this Create Corner, in particular, would not be present once the building reopens.

- The Looking West Create Corner: “Harnessing the essence of the Western landscape, this create corner explores layering of skies and panoramas from the paintings in adjacent galleries. Families mix and match transparencies, which are printed with foregrounds and backgrounds of paintings and different mood shades, on a light table to replicate works they may have seen in the galleries or create one from their own imagination. Parallel play abounds in this space as furniture fits everyone and the open-ended activity engages all, from preschoolers to grandparents” (Ibid., p. 33). The transparency table found here will be changed and placed within the new Western Studio in the Martin Building.
- The Southwest Saints Create Corner: “Nestled in the corner of the Southwest gallery, this create corner capitalizes on imaginative play with miniature mannequins and play clothing that recognizably mimic those on the Santos in the surrounding space. The attention to detail in all of the clothing and accessories develops a strong foundation for connection and exploration of the art of the Santero” (Ibid., p. 33).
- Creative Crossroads Create Corner: “Offering a density of activities and information in one space, this corner of the Peru gallery invites families to discover the creative explosion of colonial South America that merged the influences of Europe, Asia, and indigenous artists. With a mural-sized map of the transfer of artistic and theological ideas across the oceans, this space explains main themes of the gallery in a family-friendly way. To illustrate the

blending of cultures, a folding paper treasure box with embossed details, inspired by a Columbian treasure chest, and three large-scale objects with motifs to mix and match encourage the merging of different culturally inspired designs” (Ibid., pp. 33-34).

The report clarifies how it is building off and reinforcing past successful strategies for serving families by referencing past focus groups and grants at the DAM that have paved the way. The project also follows the structure that DAM utilized and perfected up to this point. Staff created design teams comprised of individuals spanning multiple departments, utilized visitor panels and surveys to gather information, and prototyped to obtain feedback. The report calls the prototyping process an iterative cycle that improves with each round and calls the final products “refined prototypes” instead of finished. The plans to continue testing prototypes show the experimental nature of the DAM that I noticed in my interviews. Staff continues to rely on incorporating feedback and improving the visitor experience with each iteration.

Tapping into Creativity and Becoming Part of Something Bigger (2014)

The chapter titles of this 2014 report state outright the noteworthy focal points for the study as the following: the ongoing journey toward creativity, learning from listening to visitors, and maximizing the capacity to foster creativity. The road map concluding the report sets out the guidelines for fostering creativity that can be felt today in the museum. The museum found a need to instill a creative culture within the museum that risks failure

on the path to learning and embraces multiple perspectives. This culture prompted the decision to design for creativity to give opportunities for self-expression and reflection since creativity on personal, institutional, and community levels can add richness to peoples' lives. The questions posed by the study are later addressed in the 2017 report on the Creative-in-Residence program and continue to be considered in the revitalization of the Martin Building. This report wondered not only how to spark creativity in individuals but also, "Where do we fit into the local 'creative ecosystem' and how can we best contribute to its growth?" and "How can the DAM build on this creative momentum to strengthen its relationships with co-creators, sustain the planned and unplanned outpouring of creativity, and build on new perceptions of the museum as a hub of creative community activity?" (DAM, 2014, p. 76) The second question is particularly interesting because of how directly it relates to the upcoming Creative Hub in the Martin Building.

This report sees the DAM's continued efforts to include living artists into its programming- an endeavor touched upon in the 2007 report and outlined in the 1990 report on the need for "human connection." After the 2007 report, the inclusion of living artists and creatives from the community in both the design process and the programming is a major aspect of the museum's work. This report, the 2011 report, and the 2017 report all touch on this important outreach initiative. Fostering creativity by including creatives is obviously of great importance to the museum as they moved closer and closer to the renovation of the Martin Building and spilled over into the design process of the Creative Hub, in particular. This report sees the solidification of "creativity" as an added element

to the other “c” words emphasized in the 2004 study- change, comfort, choice, communication, and collaboration.

Down the Rabbit Hole: Adventures in Creativity and Collaboration (2017)

This 2017 report outlines the Creative-in-Residence program at the DAM and the important role creatives play in bridging the gap between personal meaning-making and art in the museum. One finding is that the co-creative experiences that creatives facilitated led to visitors seeing themselves as a part of Denver’s creative community. This report also tackles the idea of comfort in the museum once again by saying that the museum seemed to provide visitors with a safe environment and invitation to try something new or engage in difficult conversations with this program. The program appears to address the previous questions from 2014 of how the museum fits into the creative community in Denver and leaves room for growth, which can be found in the strategies for creating the Creative Hub in the Martin Building. This report is an important one to end this pre-renovation era with because of the tone it sets. The groundwork for the inclusion of creatives in the design process for the renovation is complete with this study; it finally solidified the DAM as an institution that is integral to the creative community surrounding it. The tone going into the renovation was one of intense community collaboration and creativity, as the title of this report suggests.

Conclusion

The DAM has a history of utilizing architectural changes, reinstallations, and exhibitions to conduct research that assesses their successes and informs their future plans. My research falls within this tradition since the renovation of the Martin Building builds on the work done from 1980 through today. The twenty-first century, for example, began with the reinstallation of the European and American Art galleries in 2001, saw the museum double in its footprint with the opening of the Hamilton Building in 2006, and continued with a newfound dedication to the DAM's community. With each of these milestones, staff members at the DAM have recorded the process in their research reports, which have proven to be essential to this research.

Chapter 4: Interviews

This chapter describes my position as a researcher to provide a framework for my approach to this research. Establishing my position is needed to ground the data analysis of the semi-structured interviews conducted for my investigation. The purpose for collecting the data was to investigate the central research question: How has the Denver Art Museum approached their interactive and participatory education-focused spaces in the Martin Building? Through conversations with seven staff members, I sought to understand the perspectives held by these participants to better comprehend the creation of the Martin Building's educational spaces. Chapter 4 provides my positionality to the research, a summary of the way I conducted interviews, a look into the sample interview questions posed to staff members, and a brief description of my interviewees.

RESEARCHER POSITIONALITY

Objectivity in research is considered "one of the most cherished ideals" (Eisner, 1992, p. 9). Researchers cannot avoid incorporating their memories, viewpoints, and prejudices into their study, despite the original aim of objectivity. While the researcher's subjectivity is often viewed as a weakness in qualitative research, researchers that desire absolute impartiality overlook the fact that people inevitably infuse their work with their unique perspectives on the world, despite any attempts to eliminate these biases. As a result, researchers must acknowledge objectivity as an "unrealizable ideal" (Eisner, 1992, p. 14) and aim to recognize the unique outlook they contribute to their study. For me, I

need to acknowledge that I worked at the Denver Art Museum as a Visitor Evaluation & Research Intern under the supervision of Patterson Williams in the summer of 2017.

Studying visitor activities in correspondence with interpretive specialists and curators in addition to teaching students in the galleries piqued my curiosity in learning about various pedagogies and how to engage guests in different ways. This segment discusses my biases and beliefs that inform my understanding of educational spaces in art museums. While my personal beliefs are a part of my everyday life, I was mindful of my assumptions, beliefs, and educational theories as a researcher.

Subjectivity requires a direct and clear description of the investigator's research philosophy and its effect on the whole investigation. The investigator needs to define the research theory on which he or she bases the concepts before designing a research strategy or choosing particular data collection methods. It is essential to establish a degree of openness in the analysis by establishing and asserting this theoretical framework from the start, allowing one to pursue the research from a place of thoughtful subjectivity. Denzin and Lincoln (1994) argue that self-investigation and reflection are essential before interpreting the research results. Therefore, I examined how I view myself as a researcher and how I think learning occurs in the world. When conducting interviews, my knowledge of the participants' language and workplace culture aided in developing rapport with participants and familiarity with the environment referenced. In terms of experience, I think people draw on what they already know, and learning progresses in a spiral. I believe in constructivist and social constructivist learning. These

frameworks believe that people reflect on their own experiences and provide meaning and understanding to their lives.

Many qualitative researchers adopt a social constructivist research framework. According to social constructivists, individuals pursue knowledge of the world and create personal meaning through their experiences (Creswell, 2014). These viewpoints are distinct, varying, and numerous, with the researcher's objective being to allow these perspectives to influence the analysis. Individuals' interpretations of their experiences are often contextual and socially constructed, making the researcher's environment especially important to the study (Crotty, 1998). The formation of meaning can be seen as a collective process and social activity that develops through interactions with others in this framework. Interpretivism, a concept where researchers "attempt to understand phenomena by accessing the meaning and value that study participants assign to them," is often coupled with constructivism (Lapan et al., 2012, p. 8). In essence, the ultimate aim of the research philosophies is to learn more about the way people perceive and comprehend the world they work and exist in. By conducting interviews with staff at the DAM about their work, I am employing social constructivism and interpretivism theories in looking closer at the perspectives of those currently experiencing and forming the meaning of the Martin Building educational spaces.

PROCEDURE OF THE INTERVIEWS

The primary data-collecting tool used in this research was interviewing. Interviews have ways to collect insightful data from insiders to the situation in question in case study analysis. This study approach allows the researcher to dig further into the research subjects' lives, eliciting personal accounts that explain more about the investigated phenomena than observation on its own. Interviews were the key source of knowledge in this analysis because qualitative scholars conclude that truth is socially constructed and aim to use the insiders' viewpoint to interpret a problem (Lapan et al., 2012).

Depending on the research, interviews may take a variety of forms. Interviews are used in the majority of qualitative studies to gather insights, thoughts, and opinions on the study's focus. In semi-structured interviews, the interviewer asks direct questions but keeps the interview's general course and framework open. The interviewer is willing to deviate from the scripted questions to allow the participant to expand on various subjects that come up during the discussion. I used semi-structured interviews because they helped me have a reference while still allowing me to ask more questions and develop a more natural conversational style. This strategy worked well for my case study method. I designed the interviews to sound more like discussions and gave interviewees the ability to steer the dialogue to be applicable to their particular viewpoints.

Even though these interviews were fairly open-ended, I created an interview protocol to navigate the course of my interview discussion before each one. Making these guidelines assisted me in thinking about the general knowledge I hoped to glean from

each discussion. Participants in the study were able to provide information from their point of view thanks to the use of open-ended questions because I understood going into the interviews that they wouldn't be one-size-fits-all discussions. We spoke about various subjects that resulted from my original questions regarding their job descriptions, design thinking principles, the design process, and challenges. I realized that every person would provide a distinctive insight, so I tried to interview several museum representatives to collect a range of narratives from which to derive meaning. I expected that every interviewee would have a unique experience with and interpretation of the DAM's educational spaces and that the perspectives would vary based on the participant's relationship with the DAM. From a variety of insider viewpoints, the semi-structured interviews I conducted with DAM employees revealed vital details about the institution's design process.

Participants

For this study, I performed nine semi-structured interviews with museum staff. I chose each individual based on their participation in the design of spaces at the DAM and their availability. I was able to talk to people with the most exposure to the museum's renovation of the Martin Building and who could have a wide variety of perspectives on different new or reimagined spaces. In particular, I interviewed at least one person from each of the four sub-departments within the Department of Learning and Engagement. Although I will go into more detail about the content of these interviews in subsequent

chapters, I will provide a concise overview of each person to give the reader an understanding of the diversity of voices that led to this research. Each interviewee gave their consent for their name to be included in this report.

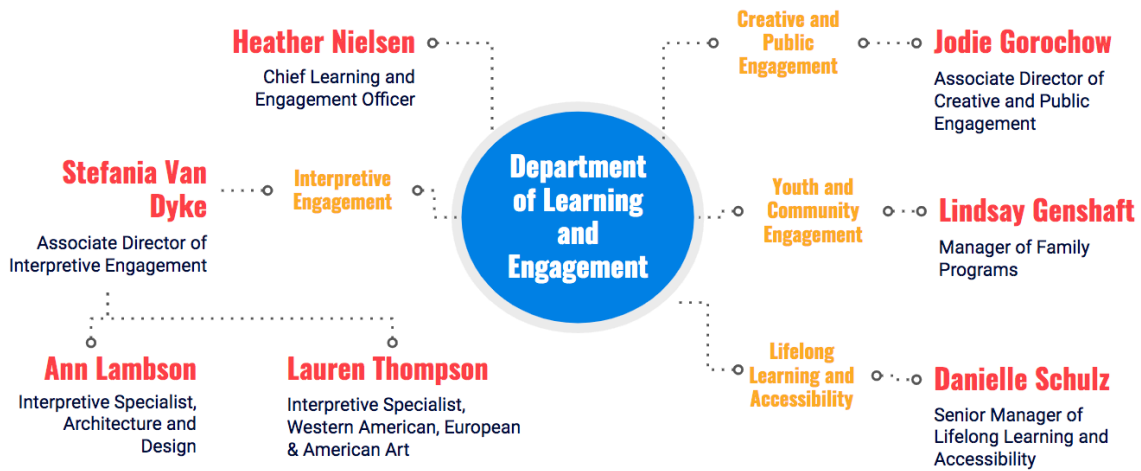


Figure 1: Graph outlining the participants in this research and their position within the Department of Learning and Engagement

Heather Nielson. Heather is the Chief Learning and Engagement Officer, having been appointed to the position about a year and a half ago when Melora McDermott-Lewis stepped back. She began at the museum in 2002 as the Master Teacher of Native Arts (which would be called an Interpretive Specialist today). Since then, she jokingly claims to have held most positions within the Learning and Engagement Department, including head of community programs, head of family programs, associate director, and Director of Learning and Community Engagement. During our phone conversation on April 8, 2021, she shared her insights as the department head. She spoke to the evolution of the museum from the time of Williams to today, how the department is planning for

future evolution through the design process, and the impact of bringing different voices into the decision-making process.

Stefania Van Dyke. Stefania is the Associate Director of Interpretive Engagement while also being the Interpretive Specialist for Textile Art and Fashion. As the Associate Director of Interpretive Engagement, she oversees the team of six Interpretive Specialists. According to Stefania, the Interpretive Specialists work closely with exhibition development teams to develop the storyline of an exhibition or gallery and the strategies for communicating those stories. The Interpretive Specialists, in particular, are meant to bring an audience advocacy lens to the project while the curator serves as more of the content expert. Although installed interpretation is their primary arena, Interpretive Specialists, including Stefania, also work on live programming and the training of docents. I spoke with Stefania virtually on April 2, 2021, about the Thread Studio's new focus, the changes staff across in her department are implementing, and other aspects of the role of the Interpretive Specialist.

Lauren Thompson. Lauren is the Interpretive Specialist of Western American Art & European and American Art before 1900 within the division of Interpretive Engagement. She has been working on in-gallery spaces for the Martin Building, including the Discovery Library and Western Studio. When speaking to Lauren virtually on April 12, 2021, I learned more about the re-imagination of these spaces, the design considerations, and the efforts to bring the spaces into the future by infusing them with new perspectives and concepts.

Ann Lambson. Ann is the Interpretive Specialist of Architecture and Design within the division of Interpretive Engagement. She was integral to the conceptualization of the Learning and Engagement Center, Creative Hub, and Design Studio- all of which are new spaces in the Martin Building. In our virtual conversation on April 13, 2021, I was interested in hearing more about the design considerations for the Design Studio and the role of experimentation in the museum. I also reference her chapter "Designing with Community Revitalization: A Creative Hub at the Denver Art Museum in Colorado, US" within *Contemporary Museum Architecture and Design: Theory and Practice of Place* in my understanding of the Creative Hub and my data analysis.

Jodie Gorochow. Jodie is the Associate Director of Creative and Public Engagement within the Creative and Public Engagement division of the department, where she oversees a team of three. Her team works in three spaces, in particular, across the museum in creating interactive programs that connect to the creative community. The first is the 3000 square foot studio space in the Hamilton Building that rotates once a year to focus on a different theme that connects with the exhibitions. In the second space, Jodie and her team work with a different artist every two or so years to create the contents of the Precourt Family Discovery Hall, an immersive exhibition installation space geared towards families. The third space is the new Creative Hub that will house a changing series of installed activities, different creative-in-residences, and programs for families and adults alike. In our virtual conversation on April 2, 2021, Jodie spoke about integrating the creative community in the Creative Hub, her focus on sparking creativity in visitors, and the complex design process for the spaces.

Lindsay Genshaft. Lindsay is the Manager of Family Programs in the Youth and Community Programs division. In this position, she is in charge of making sure families of all ages feel welcome and engaged by trying to have something for kids in every appropriate exhibition. She oversees the installed and live elements for families, including break-week camps and writing audio guides geared towards young people for temporary exhibitions. In addition, her job entails writing and publishing information in blogs or magazines about the DAM's programs. Because of her theater and theater education background, she also started a museum theater program at the DAM that she hopes will resume after the COVID-19 pandemic. During our virtual conversation on April 5, 2021, she shared her insights on the considerations made when designing the classrooms, the challenges with multi-use spaces, and the opportunities in youth programming that come from the educational spaces.

Danielle Schulz. Danielle is Senior Manager of Lifelong Learning and Accessibility in the Lifelong Learning and Accessibility division of the Learning and Engagement Department. She oversees a team aimed at designing arts experiences that support the well-being of older adults and supporting the accessibility of the DAM's programs, exhibitions, and public spaces. In an email response to my posed questions regarding her role in the renovation, she spoke to the measures the museum is taking to integrate practices relating to accessibility into the design process for the Martin Building.

Sample Questions

I've included a list of questions below that influenced my thought process during the semi-structured interviews.

- What is your job, and what does it entail?
- Could you give some context to what sort of spaces are being created in the Martin Building with this renovation?
- What has the design process with the renovation for the interactive, participatory education spaces in the Martin Building been like? What has your role been in the design process? Who had a hand in making decisions? How, if at all, has the design evolved within the process?
- What is the intention behind each of these spaces? How, if at all, has the purpose of these spaces changed over time?
- What interactive and/or participatory elements will you have within the spaces? How, if at all, do the incoming interactive and/or participatory elements differ from those that were previously within the spaces before the renovation?
- How many different changes have there been in these spaces over time? Would you say these spaces have been flexible to change? Are these spaces being redesigned with the renovation with flexibility in mind?
- How have you seen these spaces change over time? What lessons have these spaces given you and/or the museum as a whole?
- What role does the visitor play in these design decisions? Where does visitor

information come from? What advantages, if any, have you found from doing visitor studies?

- What challenges, if any, have these spaces posed? How, if at all, did you overcome the challenges or learn from them? How, if at all, have you addressed the challenges in the renovation?
- How do you define education at the DAM? In your opinion, what role does education play in the museum?

SUMMARY OF EDUCATIONAL SPACES

The interactive, participatory educational spaces in the Martin Building are at the heart of my research, making it necessary for me to outline each of the spaces discussed in my interviews in detail before going deeper into the data analysis. In my conversation with Heather, she noted how the presence of these spaces has been a 20-year process involving institutionalizing learning commitments. Today, there is more of an assumption that these spaces will be present rather than objections at different stages of the process. This shift is due to the deeper institutional changes over time throughout the museum. Ann noted how special it is that the DAM has these interactive, participatory spaces throughout the museum. They are not just concentrated into a single education space. In my conversation with Ann, she noted the following:

We've really broken out of this concept that being interactive is relegated only to an education space, right, but it's instead in the spirit of who we are and how we

invite audiences to engage with art, and so you really get that spread throughout the museum.

From this interaction with Ann and discussions with others, I understood how important it is that these spaces are such a key and integrated part of the Martin Building's structure.

In my interviews, I learned about the Learning and Engagement Center and the Creative Hub within it. I also received information on four of the in-gallery spaces being created by Interpretive Specialists. However, it is important to note that these are not all of the interactive, participatory educational spaces being created in this building with the renovation. These in-gallery spaces are present on each floor. As result of the interview participants chosen, I was only able to look more closely at the Discovery Library on the sixth floor, the Western Studio on the seventh floor, the Thread Studio on the sixth floor, and the Design Studio on the second floor. Below I will look deeper at the structure and purposes of each of these spaces to lay a foundation from which to draw conclusions in my analysis.

Jana & Fred Bartlit Learning and Engagement Center. The Learning and Engagement Center is an expansive, two-floor space containing classrooms, the Creative Hub, and more. Jodie's interview and Ann's 2020 article provided the most information that informed my research on this space. Ann was more involved in the design process of the overall space, while Jodie has focused more on the installed programming and uses of the Creative Hub. Lindsay also provided more information on the early learning classroom and family programming. The lower level of the Learning and Engagement Center is geared more towards early learning with a Montessori-style classroom. The

lower level also includes the Singer Pollack Family Wonderscape, a new space to support community showcases equipped with ways to hang and display art made by visitors. The Creative Hub, the central “hub” within the overall L&E center, has three classrooms built out from it like spokes from a wheel. On this first floor, one of the classrooms is explicitly designed for adults as a fine arts studio, and another is more multi-generational and cross-functional. New technologies, projectors, and dimmable lights to better suit the different needs of teachers are layered into each of the classrooms.

- ***Morgridge Creative Hub.*** The Creative Hub, a 6000 square-foot space, was designed to be a center for people to gather. The functions and design of the space support the four principles of connection, dialogue, community, and creativity. Jodie cited the idea of the space being an adult playground as her inspiration. To achieve this, she worked to bring sparks of childhood and youth into an adult-focused space. Bringing in experts from multiple fields has helped the Creative Hub come alive. The Creative and Public Engagement division, in particular, implement live programs, artist programs, and installed programs into the space by working with artists in the community. The space will house series of installed activities, and the Creative-in-Residence will be housed there. DAM staff in Jodie's team will work with two artists every two years to develop new activities that fit within the larger framework of the space and the larger framework of the creative practice. Upon opening, the currently installed activities will center on the creative practice by including a reflection

activity, an experiment activity, an inspiration activity, and more.

Additionally, Jodie outlined how the staff has been working with an international design firm to custom-create the infrastructure and furniture of the space. They also will continue to work with local graphic designers to apply the spirit of the space into the signage for the actual activities.

In-Gallery Spaces.

- ***Bernadette Berger Discovery Library.*** The Discovery Library retained its name from before the renovation but changed its content and location within the gallery. The DAM's 2001 report, *Enriching Visitor Experiences: The Reinstallation of the Denver Art Museum's European and American Collections*, initially spoke on when the galleries were last reinstalled and the first iteration of the library space was created. As the Interpretive Specialist for this content area, Lauren spoke of the new space's design and purpose in great detail. Located at the front of the gallery now instead of the end, Lauren wanted to provide a deeper foundation for different aspects of an artist's process to better tie into the greater concept of the surrounding art being displayed. The theme or story being told in this space has to do with the artist's studio by looking at the materials, techniques, and influences of European artists in or around the 1700s. The first wall gives an introduction to wealth and privilege surrounding the art; the purpose is to help visitors see that this aspect of the art doesn't reflect a necessarily inclusive or broad history. The next wall looks at the way pigments and materials traveled across the world to get to Europe. Other walls focus on the interdisciplinary

nature of art at the time and tools of the trade needed to create a composition.

Lauren brought up that this space is focusing on global connections in an attempt to recognize that Europe did not exist in a vacuum and that there were global influences in terms of materials and techniques at play. In the center of the space, a monolith structure with a painting displayed on it blocks a seating area located behind. This structure helps those sitting in the area to feel less exposed to incoming guests. This area also has an exploratory element and books for visitors to read. Works of art from the Berger Collection are peppered throughout the Discovery Library as a renewed focus on creating a more cohesive experience that ties together with the surrounding art.

- *William M.B. Berger Western Studio.* While still in the planning stages as of April 2021, the Western Studio will be a reimagined version of the old Discovery Library on the seventh floor within the Western gallery. The new Western Studio has undergone a lot of changes. Not only has the name changed to convey the purpose better and avoid negative perceptions, but the location within the galleries has also changed from a far corner to a more central location. Beyond these changes, its focus has shifted, as well, to be more relevant. With the conservation labs moved from the seventh floor in the revitalization, the Western galleries could inhabit the entirety of the floor, focusing one half or tower on historical works and the second tower on more contemporary works. This growth of the galleries across the entire floor has allowed the Western Studio to move to the space between the two towers that Lauren calls the "hinge space." Although

the footprint of the Western Studio is smaller than its predecessor, Lauren is thinking intentionally about what needs to be addressed. Regarding the new focus of the studio, Lauren, as the Interpretive Specialist leading the project, conveyed that she is thinking of the space as a way of investigating the idea of belonging in the West. She felt it was imperative to bring in more contemporary and indigenous voices to inject some fresh perspectives. For activities in the space, Lauren is planning on having an interactive area around an indigenous photographer, a reimagined version of the light table seen in the Looking West Create Corner involving layering themed maps of the West, and an activity surrounding silver in the West where kids can create their own designs based off of templates made by indigenous artists. Lauren is also working on an additional interpretive zone within the Western gallery centered on the diversity in the West, focusing on the black experience.

- *Nancy Lake Benson Thread Studio.* The Thread Studio kept its name and location to the previous iteration but changed its focus to be more relevant to audiences today. Stefania has been the Interpretive Specialists working on the Thread Studio since before it first opened in May 2013. As such, she has seen the space since its inception and now into its next phase. Stefania explained that the concept for the space changed within the past year to be more responsive to larger global contexts that have arisen from the COVID-19 pandemic. The Thread Studio was originally a craft approach to textiles with the nuts and bolts, and Stefania wanted to shift the focus to the life cycle of the textile with the

renovation pre-pandemic. Stefania decided, however, to make the new main focus about the role textiles play in human well-being and connection. She saw the role textiles played for people; people were making masks, taking up a new craft for meditative purposes in self-care, and finding comfort in family traditions or textiles.

- *Ellen Bruss Design Studio.* The Design Studio is an entirely new space carved out within the design galleries on the second floor of the Martin Building. People are already interacting with design and making design decisions in their everyday lives, but Ann and her team want to make people more cognizant of that process. Ann, the head of the project, labels the design process as the focus of the space. The words try, collaborate, reflect, and explore are prominently displayed on the wall in the entrance, setting the tone and purpose of the space. The space is meant to evoke that of a studio by allowing visitors outlets to make and providing an archival function where visitors can explore what other designers have done. Upon entering, a lounge area is blocked off from the rest of the studio with a moveable wall. This wall is both flexible in its location and its contents. Objects from the collection like shoes and posters as well as inspiration for materials are on display with the capability of being switched out and changed to focus on different themes or concepts. There is also a wall dedicated to the design process of a local or international firm that will switch out periodically. It is a case study look, of sorts, into a real-world project with the first one looking closer at the process of the design firm working on the Martin Building. The back wall behind

the larger studio space with dispersed tables has storage and a sink for more hands-on activities and another wall featuring a screen with surrounding cabinetry. The first hands-on activity in the central studio part of the space will be a button-making activity where people can look at how design allows us to communicate a message.

CONCLUSION

With this chapter, I have provided a detailed definition and description of the specific investigative method utilized in my research. In particular, I used semi-structured interviews and my positionality as a researcher within the theory of social constructivism to inform my understanding of the data. Compiling information on the participants, outlining a set of sample interview questions, and illustrating the Martin Building's spaces were necessary to establish the research's footing. By providing this information, I have set the foundation for my findings. After having given a better idea of my research approach, I can discuss the results and insights. I examine the data analysis method and the resulting thematic threads in the following chapter.

Chapter 5: Data Analysis

This chapter first explores how I analyzed the data before looking closer at the themes from the research. By coding the interviews I conducted and synthesizing the data collected, I extrapolated five themes that have emerged. Each of the following themes sheds light on different key aspects that have impacted the design of the interactive, participatory educational spaces in the Martin Building: choices in creativity; creating community connections; collaboration for community input; communicating accessibility, inclusivity, and equity; and challenged with change. From these themes, I looked deeper and divided three into sub-divisions to better make distinctions. These themes provide an understanding of how the museum has approached the design of the renovated spaces by examining what staff members have valued.

DATA ANALYSIS

Since so much of qualitative research is dependent on the researcher's positionality toward the data, there is no one-size-fits-all approach. In qualitative analysis, interpretation of the data encourages and personal meaning over global meaning. I found that coding takes time and patience to execute due to my growing understanding of the data analysis process and my approach to it in this research. The researcher can use data analysis to discover the main topics, concerns, and insights present in the data. This discovery process entails dismantling the raw data collected throughout the interviewing process and reassembling it in meaningful ways (Creswell,

2014). Stake (1995) alleged, “analysis essentially means taking something apart” (p. 71). In analyzing the data, the researcher aims to rebuild what she has dismantled to find significance in the studied case.

Creswell (2014) provides a thorough structure for qualitative data processing. This procedure entails collecting and reading the researcher's raw data, coding the data for themes, combining the insights from various sources, and analyzing the significance of the important concepts. Coding is the most time-consuming and essential phase in the research process. It's an iterative method for noting recurring themes that are based on several close readings of the interviews. Coding creates comprehensive interpretations, provides thematic divisions and makes correlations grounded on the discovered themes.

I started transcribing the recordings of each interview as they occurred and rereading all of the gathered content once completing the interviews to get a holistic understanding of the details I collected. Interview transcriptions aided me in clarifying concepts and topics that arose from the discussions. When I began coding, I possessed a general idea of some topics I was watching out for. Rather than entering the data with no idea what I could discover, these pre-defined concepts that I covered in my interview questions gave me a place to start. By defining these topics ahead of time, I could read each interview transcript and supplemental text with purpose and attention. A careful reading of the materials, however, revealed a host of new, exciting ideas and concepts. Content analysis is the process of evaluating and interpreting narrative information (Taylor-Powell & Renner, 2003, p. 1). When looking for commonalities in a large number of details, content analysis proves beneficial (Stokrocki, 1997).

Then, using the coding process, I started a more in-depth review of my results. Coding is the process of grouping data "into chunks or segments of text before bringing meaning to information" (Creswell, 2009, p. 186). I then compiled a list of notable condensed quotes from each interview and discovered a surprising amount of correlations. Investigating every line for thematic meaning, creating a dynamic scheme of themes to categorize and arrange this data, and making links between different sources were all part of my coding process (Lapan et al., 2012). Every theme was "display[ed] multiple perspectives from individuals" and was "supported by diverse quotations and specific evidence" (Creswell, 2009, p. 189). My coding system developed to represent the emerging themes of utmost importance throughout these close readings—and re-readings—of the data. I was able to organize the concepts found across the seven interviews into themes and sub-themes, thinking about how each of these results fit together to form a comprehensive picture of the research.

CHOICES IN CREATIVITY

The Learning and Engagement Department staff members, like Jodie, understand that creativity is all around you and embedded into who you are. People make creative choices every day in how we dress, think about our homes, and more. She wants to create spaces that'll demonstrate that creativity is an important skill to form creative solutions in our community and spark well-being. She speaks of sparking creativity as being at the heart of all aspects of these educational spaces. The staff at the Denver Art Museum has

realized that sparking creativity is made possible by allowing for different choices. Being able to give options relies on both the furniture and spaces to be versatile and capable of evolving to solve future problems. Stefania, specifically, made a point to call flexibility the key to conceptualizing the spaces during this renovation. In learning from the past, staff members have designed with flexibility and responsiveness in mind by creating furniture with multiple functions, spaces for multiple uses, and the capacity for enduring solutions.

Functional and Operational Versatility

There is a focus in the renovation on creating multi-purpose furniture pieces and multi-use spaces for functional and operational versatility. These two elements go hand-in-hand. Jodie mentions that a lot of the custom-designed pieces either have dual functions or can be joined with other pieces to create something else in the Creative Hub, especially. The furniture can form more of a performance atmosphere or smaller zones and pods of discussion for people to gather. There are also abilities to create different experiences by rearranging the furniture. Additionally, Jodie states that the operational strategy was of importance for her in her planning. She wanted to build flexible things in the spaces and wanted to be able to move these things to rearrange the spaces. Everything is on wheels or can be broken apart in the Creative Hub. For example, there are carts with the installed programming built-in that staff members have move occasionally, so they are wheels to allow the space to have different functions. Another example is the movable wall in the Design Studio that staff members can push back if they are using the

space for larger workshops or classes. Ensuring that staff could move these things themselves was an important aspect to consider when designing for operational versatility.

For the Thread Studio, Stefania knew that she needed to make the structure of the space more flexible than the first iteration. When the space opened in 2013, inflexible cubbyholes were present, according to Stefania. She said that these cubbies could not be changed once filled. The only flexible aspects were the added activities in the space relating to the surrounding gallery. This time around, Stefania says that she is translating the idea of the cubbies to a pegboard wall that can change more easily to fit different materials or uses. Stefania cites the mechanism of this pegboard display as essential to move things around as needed or as things come up in the world. She is also considering how to make seating areas flexible to provide opportunities for different programming and functions.

For Jodie, it's not just about the dual purposes of each of the pieces or how they can function with each other. It's also about the many different layout options that can support everything from small gatherings to zones of activities with performances, art-making, community gatherings, and more. Lindsay echoes this sentiment. She is excited about the classrooms' ability to be split into different sections, such as an art-making section, a storytelling section, or others. Lindsay wants the people who work in the spaces to have the freedom to organize them however they want and need for their programs. She sees the whimsical and movable furniture, the new technology, and the flexible spaces as great ways to give choices in the creative uses of the classrooms.

Heather is incredibly grateful that flexibility was such a vital aspect of the design process since things are up in the air still about how the world will look post-COVID-19. She doesn't know how exactly the spaces will be utilized but she knows that they can be used for intimate or massive gatherings. She doesn't know if people will want to come with more homeschool groups than they initially thought or if school groups will also need to have a technology aspect to reach those at home. These are all behaviors that have started to emerge with the pandemic, but she isn't sure how it will play out in the future. She understands that all she and the staff can do right now is design so that the furniture and spaces can be versatile and flexible to the necessary uses to maximize creativity.

Enduring Solutions

There is excitement and forethought in designing spaces that will change as they become more lived in and experienced. Staff seems to understand that nothing is permanent, but long-lasting, forward-thinking design is crucial for a large-scale renovation like that in the Martin Building. Lindsay addresses this with the Discovery Library, while Lindsay and Heather speak of the importance of designing for enduring solutions from each of their vantage points.

Lindsay believes that leaving things up for interpretation and making things flexible for visitors is extremely important for people to consider in the design process. During her time at the museum, she has seen visitors use items and spaces in ways that she and other staff had not originally intended or imagined countless times. Lindsay

guaranteed that there will be different tangents that will come of the space once it is in use; she's excited to be surprised by the possibilities that arise. She went as far as to say that the creativity will be endless, and I think this is a testament to the education staff designing spaces that will adapt with time and be responsive to future needs. Lindsey is confident that the new spaces will be flexible and will be able to serve different needs for different programs. These ideals were very important to her as she focuses a lot of her time on summer and break camps where teachers come in and need to make the space their own.

The early generation of the Discovery Library made it clear that designing for enduring solutions was key. The previous Discovery Library had built-in cabinetry with spaces specifically for computer monitors and keyboards that quickly became outdated. For Lauren, this is an example of an inflexible model and something that she was conscious of not repeating this time around in the design of the Discovery Library. She does not want to be stuck with something that cannot be changed or messed with down the line. Therefore, she is designing a space that is not constrained by having shelving that only fits one thing and cannot be changed. She made the activities more modular and easier to be arranged, rethought, or taken down. Although the elements of the Discovery Library will not change out as often as in some of the other spaces, they can be removed, if necessary, and do not inhibit future design options. It is reasonable that staff like Lauren are not thinking about how to change things next because they want to design something that will stand the test of time and will not need to be swapped out when technology changes. Lauren states that, while switching out activities in the discovery

library will be doable, redoing the entire space is not something that is or should be planned right now.

When asked about plans for future changes, Heather instead said that she wanted to focus on the evolution, iteration, and responsiveness of the spaces they are currently designing instead. These qualities were a part of the design process and were influential in building a Learning and Engagement Center that would evolve with its audiences and communities. An interesting point that Heather made was that it would be the worst thing to "design a center that was completely programmed and completely tied up with a pretty little bow." She went on to add that the spaces will, of course, be beautiful, well designed, and well thought out, but they are also able to change and grow to address future problems. Designing for enduring solutions is possible by integrating flexibility into every aspect of the process.

CREATING COMMUNITY CONNECTIONS

The interactive, participatory educational spaces in the Martin Building and the Creative Hub, especially, show the museum's efforts to define their role in the community, renew or prove their commitment to the community, and embrace their platform to benefit the community. Ann has seen how the museum can create these community connections by defining its role in the community for the Design Studio, and Heather sees the Creative Hub as a proven commitment to the community. Jodie focuses

on how to share authority to best utilize the platform through the artist-in-residence program in the Creative Hub.

With the Design Studio, Ann was concerned with providing a space that met the community's needs. Previous reports and research by the DAM indicate this growing awareness of how the Denver Art Museum is situated within its surrounding community. This awareness makes it no surprise that Ann was concerned with what the Design Studio needed to offer. She originally thought that the space would be a "makerspace" but she realized that the Denver Art Museum had something else to offer to visitors after talking to designers and seeing what was already available in the community. With its exposure to a large number of visitors and expansive collection, the DAM needed to take advantage of what it has. Therefore, this idea of a "makerspace" shifted to that of the Design Studio, where people could come in and take part in hands-on activities, see examples of work, learn about the design process, and hear from designers in the field. The thinking behind this space is evidence of the community impact and community awareness that staff considers. For the Design Studio, Ann brought in opinions from community members and designed the space to build exposure for artists and designers.

Heather sees the Creative Hub as a representation of the museum's commitment to the creative community by bringing them into the process. She speaks of how the museum is continuously making efforts to engage the community with the work that they are doing, especially in the Creative Hub. She details how the museum has interrogated their classic behaviors to see how they could create new systems and ways of functioning that would allow the community to be with them in the space instead of watching them

prepare it for them from afar. An extension of this renewed commitment is the capacity to engage in new partnerships with the community in these spaces. Despite previous successful partnerships, Ann looks forward to building new partnerships and having new collaborations with designers that the museum hasn't worked with yet. The Design Studio and other spaces have created a greater capacity for these collaborations because they have given space for them to happen.

Embracing the platform to benefit the community takes the form of including artists and creatives in the spaces whether it's in co-creating to design a program or including their voice in other ways. In the design of the Creative Hub, Jodie wanted to address the following questions:

What are the needs in the creative community? How can the Denver Art Museum further the goals of the Denver, Colorado creative community? What assets does the Denver Art Museum have that are unique to the DAM that we could use to further provide a platform to the creative community?

To address these questions, Jodie spoke of the importance she places on the idea of co-creation with the creative community and sharing authority. This idea is a significant part of her practice and the practice of her department. This model revolves around sharing the museum's resources with the community to better engage and inspire creativity. She also wanted to address her department's principles of "being a platform for the creative community, fostering connection, promoting dialogue, having creative experiences" with the hub's design. Using the museum's platform to connect with the surrounding

community is an ideal that the museum is bringing into not only the renovation but also the following decades.

COLLABORATION FOR COMMUNITY INPUT

Collaborating with community members was and still is essential in the design process for staff in the Learning and Engagement Department. Stefania assured me that nobody went into the design process blind, meaning that input was collected and utilized for the renovation. Additionally, Jodie made it clear in our conversation that she and other staff members try to think intentionally about what data they are looking to collect from participants, whether from the creative community, visitors, stakeholders, or other staff members. Jodie tries to collect input when she is in a place to make decisions or changes so that the data collected is ethical and authentic to the purpose. Keeping this in mind, I noticed how varied input collection looks depending on the person doing the research and the intended purpose. From my conversations with staff, I saw that the community input came from three main places: staff, stakeholders, creatives, and visitors.

Staff Participation

Collaboration between staff in the Learning and Engagement department and other departments helps the entire museum become more outward-facing and responsive to their community. Ann wanted to make sure it came across to me how collaborative the design process is between different people working with and in the museum to create these interactive spaces. It is a huge undertaking that requires input from a variety of

people behind the scenes, including fabricators, curators, preparators, and more. Heather noted how curators and other staff are being brought into the evaluative process and hearing visitor feedback. She says that it makes the results hard to ignore if more people see, process, and analyze them. Everyone becomes more invested in the process and the mission if they gather data and analyze it.

The spirit of experimentation present at the DAM is made possible by the collaboration between staff members. Ann loves this spirit of experimentation at the DAM and believes it is built into everything they do. If there had not been an inter-departmental approval of smaller-scale experiments and trying new things, none of this would be happening. The environment of the museum is reliant on the communication and collaboration between staff behind the scenes. Indeed, it is essential to first look within at those internal structures to truly understand why and how the museum has been so successful in the educational outreach efforts. The community built between staff members, which allows for input and collaboration, defines the capacity for growth and change.

Integration of Stakeholders and Creatives

Collaborating with experts, whether they are stakeholders or other community members, is an important tool from which staff could gather input to be applied to the design of the educational spaces. Although I did not talk to the interpretive specialist from every department, Heather was able to tell me how different departments are utilizing stakeholders as a part of the input they are gathering from the community.

According to Heather, the Indigenous Arts of North America galleries are including community labels in collaboration with the Indigenous Advisory Council. During the week of our conversation, the interpretive specialist for the Latin American Art collection was bringing together a group of stakeholders to review the interpretive plan.

The creative community was also an essential research resource for staff to consult. Leading up to the building's closure, Stefania talked with people from the textile community in focus groups to get feedback about the Thread Studio to be used in future designs. After changing her original plan during the pandemic, she has also consulted with three local creatives to finalize the theme of well-being within the space. Ann, on the other hand, had a Design Advisory Group to assist with the Design Studio and consulted the creative community for Creative Hub's design. She says that this practice of consulting the community is built into the DNA of the DAM and the Learning and Engagement Department, in particular.

Jodie considers the audiences of the Creative Hub to both be the creative community and the visitors who come into the space. Because both are the target audiences, she says they are constantly getting feedback from both and more specifically when they're at a point when they know what data they need to collect to make decisions. In the Creative Hub, they are working with artists to dig into their creative practices and how they can be applied to inspire visitors. Creating installed programming that is authentic to the residing artists involves communicating and collaborating closely with them. She considers her department to be deeply involved with the creatives that come into the space both before and after the programming is installed. They take the time to

reflect and debrief with the artists so that they can better support them in the process of working with an institution and working with a variety of visitors. The collaborative efforts with the creatives are a defining factor of the success of this program in Jodie's eyes. Jodie considers the collaboration to be integral for current processes and for planning for future successes.

Visitor Feedback

Seeking visitor feedback is truly at the core of the Denver Art Museum's practices. This renovation is no exception. Staff in the Learning and Engagement Department has collaborated with visitors before the building closed and in the past three years while it's been under construction. Stefania noted that visitor research was well underway before the Martin Building closed. It was important for staff to embark on these focus groups and other evaluative efforts while people were experiencing the spaces as they were so that staff could see what things could be improved upon for the next iteration. Staff across the department has been engaging visitors to better understand what they needed to address and how to create the best possible outcome.

The use of visitor feedback has been widespread, but the form has varied across staff members and their needs. This feedback can take the form of small sample studies, visitor panels, focus groups, prototyping, and other forms of evaluation. It all depends on the needs of the researcher and the necessary means for collecting the applicable information. When asked about the inclusion of visitor evaluation, Jodie said, "We more think about an iterative practice with how are we just always getting feedback from

visitors of what's working and what questions they have.” From there, the team places importance on continuous improvement addressing their feedback. For example, she wants to hear about what is and isn’t working so that, when the activities in the Creative Hub rotate every two years, staff can provide iterations within those years and learn lessons to inform the development of future activities.

One example of using evaluation as an iterative practice is the way staff engages with small sample studies. Ann, in particular, is a fan of the small sample studies that originated from Patterson Williams' time at the DAM. Williams was an advocate for these studies as they helped advance understanding without investing too much time or money. Although the sample size is small with only around ten people, educators can see and look more closely at a particular aspect of the thing in question. It is not a definitive study that tells staff precisely what everyone is thinking. Still, it allows the researcher to start to see some patterns or relationships that can inform thinking. It helps shape the direction that the educator can move in because they’ve heard from real people, so it takes off the weight of having to do an expensive year-long study that is too structured. Ann believes that these studies are an important aspect of the environment within the DAM as they help foster experimentation and iteration throughout the process.

Lindsay, Ann, and Lauren outlined how they were using different tools such as visitor panels, prototyping, and focus groups to gather feedback. Lindsey spoke of her current Youth Advisory Group comprising of 15 families and educators that are meeting at least four times this year. She believes that this is an appropriate and excellent evaluative tool for her because it allows her to meet with the same people throughout the

year, build relationships, and form a new community that yields better results for her needs. On the other hand, Ann used prototyping for her button-making activity for the Design Studio by placing it on the floor of the Hamilton Building and having people test it out. She did this multiple times with different instructions in different variations to be confident that people could complete the activity on their own once the design studio is open.

By utilizing focus groups, Lauren hoped to better understand what visitors wanted versus what they were getting before the renovation from the Discovery Library and Western Studio. Takeaways from these focus groups were an integral part of the design process and how she approached reimagining the focuses of the spaces. They felt like they didn't understand the intended theme and that the spaces were not particularly purposeful in their messaging. In the Discovery library, visitors wanted a stronger connection to the surrounding artwork and galleries. Visitors also had questions that they wanted the spaces to answer, such as the artists' techniques, how these works were made, where the materials coming from, and other behind-the-scenes information about the process of making. Lauren took this feedback and applied it to both spaces. In the Discovery Library, she redirected the focus to be on the artist's process. The Western Studio now has a clear theme involving the feeling of belonging in the west. Visitor feedback directly informed these decisions.

COMMUNICATING ACCESSIBILITY, INCLUSIVITY, AND EQUITY

With the renovation, the education staff is thinking about how they can communicate accessibility, inclusivity, and equity throughout the design. Ann, Heather, and Danielle spoke to the ways staff members have utilized inclusive language, included diverse perspectives, and integrated accessibility into the framework of the design process. Firstly, staff has utilized language as a tool for inclusivity and accessibility through the use of community input. Ann sees language as a tool for inclusivity and accessibility, which she cites as an integral part of everything the museum does. From her experience, there's a lot of back and forth as educators develop prompts that help people know how to interact with things. The staff has harnessed the power of feedback and evaluation to better suit the needs of the visitors and the language that they use. The evaluative nature of the museum helps in thinking critically about the implications of the words props and labels. Additionally, everything is bilingual in the Design Studio, and some of the other galleries include labels geared towards kids at their height.

The interpret specialists, in particular, worked to bring diverse perspectives into their conceptualization of the galleries. As mentioned previously, interpretive specialists were very keen on bringing in stakeholders that had a better understanding of the subject matter to better speak to the implications of their work. Heather noted the intense desire to bring these diverse voices into the room so that staff members could make informed decisions. Heather also spoke of how the interpretive specialists have worked very hard in this renovation to bring these diverse perspectives into their conceptualization of the galleries. By that, she means that there was a lot of work leading up to the galleries'

redesign involving different focus groups, affinity groups, community advisors, and stakeholders that were a part of the decision-making process.

Accessibility for different needs and audiences is now a more central component of the exhibition design from the beginning. Danielle spoke to the way that staff has integrated accessibility into the design process. Although accessibility efforts were already in motion, Danielle helped convene an interdepartmental group tasked with creating a three-year accessibility roadmap in 2018. This group provided recommendations and decided on priorities that the departments in the museum needed to adhere to in order to increase the accessibility of the program spaces and exhibitions throughout the museum. Danielle recognizes that designing for accessibility means supporting staff and improving the staff's skills to engage visitors of all abilities better. Instead of tacking on accessible elements after the fact, education staff is trying to think about them from the beginning of the design process to create a more integrated accessible space without the need for adaptation or specialized design.

CHALLENGES WITH CHANGE

As with any large-scale renovation, the DAM's renovation process has not been without its challenges. Change in any form is challenging, but this process has revealed other challenges that are more personal to the DAM. The key to these challenges is that they have each helped staff members think more critically and work to solve the problems. Staff have not cowered from the challenges outlined below but have seen them

as opportunities to find a better solution. The complications from COVID-19 have led to reversible options to protect the health of visitors. Having staff consider the context of the galleries has created spaces that are more cohesive with the surrounding art. By addressing concerns with creating buy-in with visitors, staff members have crafted more successful and energetic spaces in the long run.

COVID-19 Complications

As I mentioned earlier, the pandemic has caused a shift in the timeline for the reopening. Instead of opening in waves giving staff time to focus on different floors at different times, now the whole building is opening up at once. Stefania cited this as a challenge because it means that everyone is working hard on all of the different aspects involved in repopulating at once, spreading people thinner than they would have been in the original plan. Staff members are now completing all seven floors of this building at once despite each of these floors containing different galleries with different needs. While the original plan would have diminished this pressure, the Learning and Engagement Department members that I spoke to are confident that everything will be ready by October 24, 2021.

Heather touched on another aspect of this shifting timeline- challenges with setting plans. Heather affirms that educators are planners, making the timing of the pandemic a real challenge when these educators are in the thick of the planning process and trying to nail things down. The pandemic has created tension because educators cannot set the plans and timelines that they need to be able to thrive. Although the

uncertainty for the future looks much different than it did in the 1980s, there is still a sense of unknown with how the world will be post-COVID-19.

Despite Heather's sentiments about the pandemic, Ann detailed how staff can modify the activities, layouts, displays, and more, if needed, for the opening. Ann is confident that the Design Studio, in particular, has retained its original plan but with the addition of modifications if there are restrictions on what can be touched or where people can be. They have Plexiglas for incasing objects on display if they need to be covered, plans to not roll out the iPads in the lounge area to prevent people from spreading germs, and the ability to take out tables to leave more room between people doing the button making activity. A key part of these modifications, according to Ann and other staff members, is that they are all reversible so that when health restrictions are lifted and things are safer the spaces can be more immersive and tactile. Ann claims they are ready to go with a variety of options and are prepared to pull anything that puts visitors in danger. Though COVID-19 has understandably challenged not only staff but also the world, those that I spoke to have done all they can to set tentative plans and make the necessary efforts to protect visitors this fall.

Gallery Context

Taking the context of the surrounding galleries into consideration when forming these educational spaces is very important for staff and interpretive specialists. Lauren, Ann, and Stefania spoke of this issue, with Lauren and Ann focusing more on the placement of the spaces within the gallery and Stefania thinking more about the

contentment of the curators of surrounding galleries. Ann made a point in our conversation to show where the Design Studio space is located within the Design Gallery on the second floor. She felt it was imperative to give a contextual understanding of how dynamic and active the Design Studio is since it is near the elevators when visitors want to go up or down into the building and on the footpath between the Hamilton and Martin buildings. The location of the space made Ann more aware of the need to be clear about what can and cannot be touched. She also had a good understanding of when and how people would be entering the studio, which impacted how she approached the design process.

For Lauren, the placement of the Discovery Library and Western Studio was an integral aspect and big consideration in the design process since they were being moved to different areas. The Discovery Library moved from the end of the European gallery to its beginning, meaning that its purpose also had to change. Visitors might end up at the library once completing their time in the galleries before, but this time around, Lauren had to think about designing a space visitors might begin their journey in or end their journey end. This consideration meant that the space needed to be flexible in thinking about the visitors' experience throughout the galleries. Lauren designed the space with the idea that it would help prime and support visitors, whether they were stopping there first or last, in their understanding as they go throughout the galleries.

The change in the location of the Western Studio also posed its own set of challenges for Lauren. It moved from a place in the back of the gallery to a place in the convergence between the two sections of the floor. Previously, Western art was relegated

to only one tower with the other being a place for conservation, but the Western gallery grew to occupy both towers with the renovation. Therefore, the Western Studio was moved to the space that joins those two towers together- the hinge space. Now, it's more centralized and merges the two towers by integrating aspects of both into the design. One tower focuses more on the history of the West, and the other focuses more on contemporary artists in the West, so the Western Studio includes information that melds these two areas together. An additional challenge with taking the context of the gallery involves considering the architectural features that come from the building itself. Lauren spoke of the unique Gio Ponti windows in the Western Studio as being an exciting challenge to work with in the design. Although an initial challenge, the relocation of the discovery library and the western studio provided new design opportunities in the end.

For Stefania, there was a focus on making sure the in gallery educational spaces were satisfactory and cohesive with the surrounding galleries and the curators who designed them. Because the spaces are attached to the galleries, they need to make sense in conjunction with them. The gallery spaces are, in a sense, the curators' domain. Therefore, there needs to be a connection to the surrounding art and a consultation with the curators according to Stefania. The DAM has a history of collaboration across departments to infuse different perspectives and ideas, so it makes sense that Stefania would emphasize the satisfaction of the curators that they are working with and alongside as a way to connect the museum. Considering the context of the galleries can be a challenge that leads to more fruitful and thoughtful solutions as evident in the examples shown in Ann, Lauren, and Stefania. The challenges posed by the greater gallery context

of these spaces have led to solutions that created a more integrated space and interconnected staff.

Creating Buy-In

Of the staff I spoke to, Jodie and Stefania were the most concerned about creating buy-in with the new spaces. Jodie spoke of building alongside and with both visitors and staff in the Creative Hub and the new Learning and Engagement Center. She cited both as being necessary for the space to come alive once it's opened. Jodie was already thinking about how to make people understand what the Creative Hub is and how it could be used. From the beginning, Jodie was concerned with how they could build buy-in for the space into its vision since it's a mixed-use space for a mixed audience. She wanted to make sure that the museum's intentions were clear so that people would feel comfortable using the space in whatever form they wanted to. Particularly, she was worried that adults would not feel comfortable in the space, which was a challenge since the space was designed with adults in mind. Since interactive spaces have been historically focused on kids and families, she felt challenged to show how the Creative Hub was meant for the entire community, including adults. The Creative Hub, according to Jodie, is a very joyful, bright, and colorful space, so she's had to think about how to balance that joy with the overall design and messaging in a way that makes adults eager to interact with the space. In regards to creating visitor buy-in, Stefania also spoke of the need and challenge in making a meaningful space for not just the typical or traditional audience but also a new and expanding audience. She sees relevance as the key to combat this challenge; she

wants to create spaces that are geared to reach visitors that go beyond their current audience. Integrating a new focus on adults in such an interactive space was a challenge, but staff believes it will help to expand the museum's audience by creating more comfort in the space.

Jodie also had concerns about building buy-in among visitors with the furniture. With upwards of 99% of the furniture in the new Learning and Engagement Center being custom, Jodie expressed concern over the challenges of putting these new and exciting pieces out into the wild for visitors to use. She believes that there could be a learning curve of people getting used to the new furniture. Helping the public see how it can be used could come down to the staff. She's also confident, however, that the payoff for having the special, flexible pieces will be worth it. She calls retrofitting the furniture after people interact with it "part of the game in creating custom new pieces of furniture that don't exist in the world yet." Along these lines, Jodie believes that creating buy-in with the staff is crucial because they engage and guide visitors in the space. The Creative Hub and the entire Learning and Engagement Center are designed to be a shared space with all of the staff, especially those in the Learning and Engagement department. Jodie has been contending with this challenge to share the vision of the space with everyone at the DAM so that they can confidently buy into it. She understands that the spaces will only be a successful as the people who bring them to life with programming. This awareness makes buy-in crucial because it will determine the programs such as workshops, performances, classes, courses, showcases, events, and more that staff feel comfortable creating. Staff and visitor buy-in are vital in making the spaces come alive, and Jodie has kept this idea

in her head throughout the design process. She is aware of these challenges so that she can combat them and challenge them moving forward.

CONCLUSION

These five themes seen in the museum's current efforts go beyond the renovation. There are plans to continue gathering community input, allow for choices in creativity for future programming, make strides in accessibility efforts, further connections with the community, and combat future challenges that arise. These pillars have been disseminated before the renovation and will continue after. The renovation, however, is an excellent phenomenon from which to observe how these themes play out in the design process. In looking at the renovation of the Martin Building, it becomes more apparent how deep these themes run in the DNA of the museum. The efforts to provide choices, connect with the community, collaborate, integrate accessible and equitable resources, and overcome challenges date back to the research reports from the 1990s but are at their best here and now. The extrapolated themes prove that this renovation is merely a microcosm of the larger context of the Denver Art Museum's history.

Chapter 6: Conclusions

INTRODUCTION

To explore how the interactive, participatory educational spaces in Denver Art Museum's Mart Building facilitate learning and reflect the museum's practices, I used qualitative case study research. Since the spaces are not yet open and still within the design phase, I designed the study to be exploratory. I used interviews to collect data and hear from staff in the Learning and Engagement Department about their perspectives on the design process and the environment behind the scenes at the DAM. These interviews took place in April 2021 and were then processed to analyze the data and interpret the gathered insight. From these conversations, I gained a keen understanding of the motivations behind these spaces regarding staff input, evaluative efforts, and underlying principles. This study reveals the process and thinking behind the DAM's dedicated efforts to expand their educational outreach and carve out learning centers within the museum. These efforts to grow and evolve reflect a more extensive commitment across the museum to dedicate and provide spaces for rich, creative experiences that serve both the creative community and visitors. The benefits and challenges that arise with these spaces are also addressed in this research as a means to further illustrate all aspects of the process. This research ultimately examines how the DAM has established itself as a welcoming space for their community by creating areas within the museum for meaningful gatherings, engaging programming, and creative experiences.

RESEARCH PROBLEM

My research sought to shed light on the process and thinking behind interactive, participatory educational spaces in the Denver Art Museum. I conducted this research to stress the benefits of including these spaces within the art museum by allowing staff members at the DAM to reflect on their practices. In establishing the underlying purpose of this study, I hoped to prove how looking at the function of interactive, participatory educational spaces in the Denver Art Museum from the eyes of those who interact with them offers a detailed perspective on the impact of these spaces for outside museum educators. My study ultimately sought to inspire museums to reexamine their practices and realize the richness available from dedicated spaces within the art museum with interactive, participatory educational experiences.

CENTRAL RESEARCH QUESTION

My thesis' central research question asks the following: How has the Denver Art Museum approached their interactive and participatory education-focused spaces in the Martin Building? This question addressed my interest in examining the process by which staff members at the DAM have utilized in the renovation. It does so by keeping the question open-ended in an attempt to explore a variety of different aspects concerning the role of education within the institution. Throughout this research, I returned to the question to direct my investigation and guide the research.

KEY FINDINGS

The DAM has a tradition of conducting research that evaluates their successes and advises their future goals surrounding architectural modifications, re-installations, and exhibits. Since this restoration of the Martin Building builds on the work undertaken from 1980 to the present, my topic of study fits into this history. DAM staff members have documented their methodology for each of the advances undertaken in the museum's history within their research reports. These reports have shown to be an essential factor for this project. Evaluating these reports proves how linear and reinforced the museum's thinking is regarding visitor learning and engagement. In my research, I found that process of creating the interactive, participatory educational spaces in the Martin Building involved the following themes that tie in with findings from past research reports: choices in creativity; creating community connections; collaboration for community input; communicating accessibility, inclusivity, and equity; and challenged with change.

With creativity being at the heart of the museum, it was important for staff members to give options and choices for different ways to engage with it. In talking to staff members, I learned that the strategy to doing so involved designing for functional and operational versatility. Ultimately, the purpose of designing with flexibility in mind is to provide the opportunity for enduring solutions. These spaces need to take the museum into the future and be adaptive to the changes that will come in the future. Flexibility and design thinking are what will allow them to be successful. It may seem simple for staff to provide multi-purpose furniture and design rearranging spaces, but it is

a crucial part of this design process that cannot be overlooked or downplayed. I am personally highly impressed with the way staff is thinking about the future. Designing with the forethought that there are things that you cannot plan for is what makes these spaces so important to discuss. For staff at the DAM, there is not a fear of the unknown but excitement for how the improved spaces will change and mold to fit the community's needs.

Creating spaces that welcome the community and allow them to give meaning is made possible by the groundwork staff has laid in forming connections with their community. The Creative Hub and the other new spaces focus on sharing authority, being responsive to community needs, and embracing the museum's ability to make change with their platform. Staff planned for the existing partnerships and the possibilities for new partnerships in the thought process behind the spaces. It was not an afterthought but rather a consideration staff noted from previous research and the team's passion, as seen in Jodie and Ann. With the spaces, the museum is showing that they care about the community and that they are actively seeking to answer their internal question concerning their role within it. This level of self-awareness is a strength for the museum that they have now leveraged into creating spaces that excitingly embrace their creative community.

Collaboration happens in many forms behind the scenes and is required to provide the input needed to create meaningful spaces. There is input gathered from staff across departments, stakeholders, the creative community, and visitors to the museum. Even within these categories, staff uses a multitude of different strategies to gather relevant and

authentic input. The spirit of collaboration and experimentation that happens behind closed doors between staff members at the museum infiltrates other areas of thinking and the environment of the museum itself. It makes everyone aware of the issues at hand and a part of the solution. There are efforts to make staff feel like a cohesive team and not groups of departments and divisions. Looking outward, the inclusion of voices from stakeholders and creatives was essential in this renovation. Staff wanted to hear from the people who have a background in these areas. I find it refreshing that staff members can recognize their shortcomings and reach out to the appropriate parties who can help fill gaps and give needed insight. It is also of no surprise that visitor feedback was key when thinking about the design of these spaces. Whether through prototyping or focus groups, I found Stefania's statement that "nobody went in blind" telling. Collaboration is at the core of the way the DAM structures itself, and there's no surprise that it played such a significant role in the design process.

Efforts to be more accessible, inclusive, and equitable are critical for museums to consider in every aspect of their structure and programming. I appreciated hearing the internal efforts occurring to be more aware of these issues. A hallmark of these interactive, participatory educational spaces is that there is no facilitator on site. This lack of supervision brings up issues in communicating and conveying the purposes of different activities and uses of the spaces. Giving thought to how to communicate with all audiences ultimately benefits all audiences. The efforts to increase awareness, comfort, and skill among staff to positively engage visitors of all abilities were evident from my conversations. The most prominent marker of this is apparent in staff reaching out to

stakeholders and others in the community to gain insight that they would not otherwise possess. Acknowledging a lack of understanding is not a fault but an opportunity to learn and grow. Staff at the DAM understand this and recognize that designing spaces to be used by all people without the need for adaption or specialized design is only a positive. Building these practices into the design from the beginning is so important.

Evaluating the challenges staff has faced proved to be insightful in seeing how they have been able to adapt and be flexible in their thinking. Shifting timelines due to COVID-19, considering the location of the spaces within the larger scheme of the galleries, and conveying the purposes and uses of the spaces to both visitors and staff provided roadblocks for staff. While situating the educational spaces within the context of the galleries will be resolved by the time the spaces open, the other two challenges could follow staff into the reopening. The future of the COVID-19 pandemic is still unknown at this point, and creating buy-in with participants will evolve as people can be present within the spaces. As a researcher and outsider, both the challenges themselves and the reactions to these challenges are interesting to observe. The willingness to be flexible and to be open to change is the notable takeaway. The underlying principle of experimentation and evolution could be a factor when considering how the staff members have had to think on their feet and react to obstacles.

The museum's efforts, as seen in these five themes, extend past the renovation. These ideas were implemented before the renovation and will continue following. The renovation, on the other hand, is a fantastic example of how these themes play out in the design process. When considering the revitalization of the Martin Building, it becomes

clear how deeply these themes are ingrained into the museum. The strategies employed to offer choices, engage with the community, collaborate, incorporate equitable and flexible resources, and tackle obstacles can be traced back through the research reports. Still, they are at their most effective today. The interpreted themes and findings demonstrate that the current renovation is simply a manifestation and reflection of the Denver Art Museum's development over time.

IMPLICATIONS FOR THE FIELD

Museums are looking for solutions to merge the divide between the cultural contexts of the artwork and the implications to visitors' daily lives to enhance visitor-learning experiences (Froes & Walker, 2011). Interactivity is an essential technique with which museums can entice visitors to the museum through hands-on experiences, play-based programming, and exciting adventures (Adams et al., 2003). When more museums devote physical spaces inside their galleries to visitor learning and educational programming, the question becomes how instead of why. This study looks at a particular example, the Denver Art Museum's Martin Building, to examine how the staff has approached interactivity and visitor learning in their educational spaces by gleaning insights from the past and looking toward new opportunities. For museum educators and staff contemplating where the field is heading, a better understanding of the decisions being made by art museums about their spaces is critical. These spaces are not uniform in their design or function. They each meet the needs of the museums to which they reside

since each institution has its own mission, facilities, and limitations. Looking at the implications of interactive, participatory educational spaces can be used by museum educators as they reexamine the spaces around them. Examining the Denver Art Museum, in particular, offers a concentrated picture of these spaces through time as they make strides toward the future.

LIMITATIONS

While this research is a first move in developing guiding principles for interactive, participatory educational spaces that suit the museum's interests, it does have some limitations. First, the decision to focus on a single incident, the renovation of the Martin Building, limited the scope of the study. This decision was due to time limitations, health concerns linked to the pandemic, and the exploratory focus of the research. Any extrapolations on lessons learned should be considered conditional without a comparative review across different locations. Furthermore, the complexity with which each issue could be investigated was restricted since I intended the research to examine a variety of spaces inside the Martin Building. My choice to interview only employees in the Learning and Engagement Department, whose experience I felt was most applicable to my initial research query, also limited the reach of the research. As a result, the conclusions of the research on the advantages and guidelines of these spaces should not be regarded as comprehensive. The value of replicating and emulating the DAM's methods is also constrained for other museums looking to it as a template. Because of the

DAM's foundation, copying and pasting the DAM's strategies and practices to another museum will not work. Nonetheless, while the museum's methods appear to be different now than they were in the 1980s or 19990s, their core principles and fundamental strategies have remained surprisingly consistent. They can undoubtedly benefit similar initiatives, new and old.

RECOMMENDATIONS FOR FUTURE RESEARCH

Given the paucity of existing research on this particular phenomenon, there are many avenues for future research, some of which will answer the current study's limitations. My research pre-pandemic involved addressing these limitations by visiting multiple sites and conducting observations in addition to staff interviews. Comparing the Denver Art Museum's educational spaces against those of other outstanding institutions would be a significant next step toward developing a data collection that would assist in a wider understanding of underlying principles and establish a framework for development. A comparative study of several spaces and institutions is needed to begin drawing more concrete conclusions about best practices in these educational spaces inside art museums that engage visitors. Another facet to explore from this research involves bringing in other perspectives in addition to those from the Learning and Engagement Department at the DAM. In a world without COVID-19, observing visitors in the spaces and interviewing them would add depth to the research that would inform the effectiveness of educational spaces in art museums. The visitors' perspectives would add insight into how

they operate in these spaces and how successful they are in practice. Seeking the perspectives of those brought into the design process like stakeholders or the creative community could also add a unique perspective to the collaborative efforts of the DAM. Finally, an obvious next step in this research would be to follow up with the Martin Building and staff once the building has opened to the public to reflect on how sentiments recorded in April 2021 match up with the realities of the spaces once public. Visiting the museum once the building is complete and going back multiple times throughout the subsequent decades would allow the researcher to observe and analyze the evolution of the spaces to see how they fare over time. Future research involving either a comparative study or a more in-depth investigation of the Martin Building once opened would serve to establish a more in-depth understanding of interactive, participatory educational spaces within the art museum.

FINAL THOUGHTS

With each of my interviews with staff members, I had a prevailing feeling of awe. I sincerely appreciated the opportunity to hear from staff so engrossed in this process about the exciting things ahead for the Denver Art Museum. I was and still am inspired by each of the spaces being built into the Martin building. I hope that this research concerning the DAM's work is also inspiring to other educators looking to make room for educational spaces either within their galleries or a separated area. It is still remarkable to me how this practice of providing spaces to learn and participate is so widely accepted

within the museum. There have been misconceptions that interactive or participatory learning takes away from the seriousness of art, but I think applying meaning to art makes it that much more applicable or serious in society. Interactive, participatory educational spaces are already proven to be beneficial for engaging visitors and helping them create meaningful experiences.

For me, the deeper lesson beyond the usefulness of the spaces is the Denver Art Museum's prioritization of and openness to growth and reiteration. The museum has shown that collaboration, designing for flexibility, creating connections with the community, integrating accessibility and inclusivity, and being challenged can lead to innovative changes in the field. The power of the spaces to do good was never in question for me as a researcher, but the museum's steps over the past 40 years to get where they are today were in question. This research has not only answered my questions regarding the design process but has also provided unparalleled insight into the inventive thought process that these educators possess.

Appendix

Non-Human Research Determination



The University of Texas at Austin

Office of Research Support & Compliance
Institutional Review Board
P.O. Box 7426, Campus Code A3200
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T: 512-232-1543 F: 512-471-8873
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NOT HUMAN RESEARCH

March 10, 2021

Briley Rasmussen
2301 SAN JACINTO BLVD
AUSTIN, TX 78712

bar3563@eid.utexas.edu

Dear Briley Rasmussen:

On 3/10/2021, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	Interactive, Participatory Education Spaces in Denver Art Museum's Martin Building
Investigator:	Briley Rasmussen
IRB ID:	STUDY00000780
Funding:	None
Grant Title:	<Indicate "None" if there is none.>
Grant ID:	None
IND, IDE, or HDE:	None
Documents Reviewed:	• Proposal Exempt Submission Form, Category: IRB Protocol;

The IRB determined that the proposed activity is not research involving human subjects as defined by DHHS and FDA regulations. The activity was determined to be

IRB review and approval by this organization is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If you have any additional questions regarding whether future activities would be considered human subject research, please contact the Office of Research Support and Compliance at irb@austin.utexas.edu.

Sincerely,



The University of Texas at Austin

Office of Research Support & Compliance
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Institutional Review Board

University of Texas at Austin

cc:

Briley Rasmussen (PI), Julia Davis (Primary Contact)

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